WHC-SP-1101
Volume V

Tank Waste Remediation System Multi-Year Work Plan

Date Published
September 1994

Prepared for the U.S. Department of Energy
Office of Environmental Restoration and
Waste Management

Westinghouse Hanford Company
P.O Box 1970
Richland, Washington

Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL10930

Approved for Public Release

MASTER

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RELEASE AUTHORIZATION

Document Number:	WHC-SP-1101, Volume 1 - 5
Document Title:	Tank Waste Remediation System Multi-Year Work Plan
Release Date:	September 29, 1994

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This document was reviewed following the procedures described in WHC-CM-3-4 and is:

APPROVED FOR PUBLIC RELEASE

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WHC Information Release Administration Specialist:

Kara Broz
(Signature)

September 29, 1994
(Date)

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: DNFSB Commitment 1.10, Issue Quarterly Progress Reports
2) SCHEDULE ID: N4A11A01
3) REVISION: 0

ASSIGNED TO: Program Management & Integration
5) ADS NO: 1130-0A

WBS DESIGNATOR: 1.1.1.2.04.01
7) COMPLETION DATE: 09/30/95

MILESTONE CONTROL NO: T2D-95-154
FDS CODE: 1N4A11

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[X] DOE-RL DNFSB 1.10	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY) _____	_____

Description and what constitutes completion of this commitment:
Provide to DOE-RL quarterly progress reports on Defense Nuclear Facility Safety Board (DNFSB) 93-5 progress. One quarterly report will be sent to the DNFSB board no later than the 15th working day after the end of each quarter. Additional copies will be forwarded to individuals identified for distribution. General outline of the document will include sections on quarterly highlights, DNFSB commitments completed, issues or concerns and progress made during the reporting period.

Acceptance Criteria:
The Quarterly Progress Report will:
* Provide status on the progress of DNFSB 93-5 Implementation Plan task activities
* Identify quarterly highlights
* Describe Characterization issues and concerns
* Include a Tank Characterization Plan schedule
* Characterization Program Schedules
* Include Integrated Sampling Schedule in report
* Data Quality Objectives status
* Analytical Services Schedule

Deliverables:
A total of four (4) reports will be four reports will be issued for fiscal year 1995. The schedule of due dates are as follows:

1.	DNFSB Quarterly Progress Report	January 20, 1995
2.	DNFSB Quarterly Progress Report	April 21, 1995
3.	DNFSB Quarterly Progress Report	July 21, 1995
4.	DNFSB Quarterly Progress Report	October 20, 1995

S. R. Long — Shirley R. Long 9-23-94
Cost Account Manager: Date:

C. DeFigh-Price
Program Element Manager Date:

S. R. Long — Shirley R. Long 9-23-94
Activity Manager: Date:

R. E. Gerton
DOE Monitor (agreement) Date:

R. E. Gerton
DOE Manager (acceptance) Date

MDSs for Technical Development & Applied Engineering (1.1.1.2.04.02)

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE:	DNFSB COMMITMENT 3.13, DEPLOY PROTOTYPE CONE PENETROMETER	**2) SCHEDULE ID:**	N4B290B01
		3) REVISION:	0
ASSIGNED TO:	Technology Development & Applied Engineering	**5) ADS NO:**	1130-0B
WBS DESIGNATOR:	1.1.1.2.04.02	**7) COMPLETION DATE:**	5/31/95

MILESTONE CONTROL NO: T2D-95-128

MILESTONE CLASS:	**DELIVERABLE:**	**ADDRESSED TO:**
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[X] DOE-RL
[X] DOE-RL DNFSB 3.13	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY) _____	_____

Description and what constitutes completion of this commitment:

Commitment 3.13: "Deploy cone penetrometer. Technology development activities are being pursued which may result in the ability to provide some requested data without laboratory analysis. A cone penetrometer and a foil activation technique are being developed. The cone penetrometer is a deployment tool for commercially available sensors. A foil activation process is being tested to assess moisture and transuranic (TRU). Inaccuracies in the moisture measurements from core samples are incurred due to the use of a nitrogen gas flow in the rotary-mode core sampling system, which causes the drying of sample material (as it contained in the sample) as well as potential drying of samples in hot cells. The present method provides conservative values (e.g., potentially lower moisture than in-tank), and may result in unnecessary safety restrictions."

Currently, sensors are commercially available with cone penetrometers for obtaining some physical property data and are included in the cone penetrometer system. Additional sensors will be developed for deployment based on needs documented through the Data Quality Objectives process in parallel with the cone penetrometer development. The design and fabrication of the cone penetrometer will be managed in phases with decision points at completion of conceptual design and at completion of preliminary design. Preliminary schedule estimates from the sole bidder on the contract indicate delivery cannot meet the DNFSB commitment date.

Acceptance Criteria:

Acceptance criteria are documented in the procurement specification (WHC-S-0241).

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

Deliverables:

Finalized schedule for development and deployment of cone penetrometer system.	October 31, 1994
Completion of simulant tests with recommendation on continuation of development and design.	February 28, 1995
Preliminary design with recommendation on continuation of design and fabrication.	May 31, 1995
Final design. September 30, 1995	
Delivery of cone penetrometer system from vendor.	August 31, 1996
Complete Readiness Review and transmit letter to DOE-RL stating readiness to start operations.	April 30, 1997

These dates are based on schedule estimates from the sole bidder. A change request for the DNFSB commitment based on the final schedule will be submitted to the DOE-RL by November 30, 1994.

P. G. Eller 9/27/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

G. D. Forehand 9/27/94
Activity Manager: Date:

R. E. Gerton
DOE Manager (agreement): Date:

R. E. Gerton
DOE Manager (acceptance) Date

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: DNFSB COMMITMENT 3.16, DIRECT DRILL BIT TEMPERATURE MONITORING

2) SCHEDULE ID: N4B260A01
3) REVISION: 0

ASSIGNED TO: Technology Development & Applied Engineering

5) ADS NO: 1130-0B

WBS DESIGNATOR: 1.1.1.2.04.02.04
MILESTONE CONTROL NO: T2D-95-129

7) COMPLETION DATE: 1/31/95

MILESTONE CLASS:

[ ] TPA _____
[ ] DOE-HQ
[X] DOE-RL DNFSB 3.16
[ ] CONTRACTOR

DELIVERABLE:

[ ] REPORT
[X] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)

ADDRESSED TO:

[ ] DOE-HQ
[X] DOE-RL
[ ] OTHER (SPECIFY)

Description and what constitutes completion of this commitment:

DNFSB 93-5 Commitment 3.16 "Direct Drill Bit Temperature Monitoring. This will complete field deployment and testing of a direct drill bit temperature monitoring device. Sandia National Laboratories Albuquerque Office has completed the preliminary design and is developing a full size prototype for field deployment."

A real-time, continuous core sampler drill bit temperature indication system will be developed for deployment on the core sampling trucks. First deployment will be on the rotary mode truck to provide continual assurance that the bit temperature is under the limit and to allow operational flexibility of varying bit speed and purge gas flow. Development began in FY 1994 and prototypes of most components have been fabricated. In FY 1995, prototype testing will be completed, design will be completed and a system for deployment on the rotary mode core sampling system will be fabricated. Installation will be coordinated with the operation schedule for the current trucks and the fabrication schedule for the additional trucks (#3 & #4). Actual deployment is not expected by the DNFSB commitment date of January 1995. The schedule for completion is being finalized from Sandia experience to date (ECD: October 31, 1994) and will be used as the basis for any necessary request to change the commitment date.

Acceptance Criteria:

The monitoring system will provide continuous indication of the bit temperature and a high temperature alarm and shutdown of the sampling system. Performance criteria for the system are documented in WHC-SD-WM-CR-057, Criteria for Core Sampling Bit Temperature Monitor.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

Deliverables:

The final deliverable is the first bit temperature monitoring system operational on a core sampling truck. The other trucks will be equipped on a schedule, to be developed, compatible with the Characterization Program field sampling requirements. Specific items are:

Finalize schedule for monitoring system deployment	10/31/94
Initial prototype testing complete	11/30/94
Final prototype fabrication complete	02/28/95
Complete qualification for routine use	05/31/95

These completion dates are based on Sandia estimates in September 1994. Completion of this milestone will be documented by a formal letter from the Manager, Characterization Program to DOE-RL.

G. D. Forehand 9/22/94 C. DeFigh-Price 5-22-94
Cost Account Manager: Date: Program Element Manager: Date:

G. D. Forehand 9/22/94 R. E. Gerton
Activity Manager: Date: DOE Manager (agreement): Date:

R. E. Gerton
DOE Manager (acceptance) Date

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: RADIOCHEMISTRY IMPROVEMENTS: CALIBRATE ALPHA ENERGY SYSTEM (AEA)

SCHEDULE ID: N4B230G011
REVISION: 0

ASSIGNED TO: Technology Development & Applied Engineering

ADS NO: 1130-0B

COMPLETION DATE: 02/15/95

WBS DESIGNATOR: 1.1.1.02.04.02.03

MILESTONE CONTROL NO: T2D-95-130

FDS NO: 1N4B23

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY)	TWRS Characterization Program

Description and what constitutes completion of this commitment:

An oversight finding recommended the laboratories quantitate alpha measurements with a calibrated AEA system rather than alpha counting and ratioing peak heights from a spectrum using a tracer or internal standard method.

There are several steps in this process with consideration to limitations on available instrumentation and the high-salt content of waste samples. Completion of the task will be marked by calibration of the 222-S AEA detection systems and assurance that the systems provide data comparable to or better than that produced currently.

Acceptance Criteria:

Operating parameters will be established, new software tested, the system documented, and new operating procedures prepared. This task is included in response to a finding of deficiency from a DOE-HQ oversight dated July 14, 1994.

Deliverables: (Describe the specific products or condition)

Transmit a letter from Analytical Services to the TWRS Characterization Program manager documenting the Radiochemistry Improvements Calibrate Alpha Energy System (AEA) task has been completed and met the requirements for implementation on 02/15/95.

The letter will document the following:

1. Consistent, reproducible geometries have been identified and established.
2. Operating software has been procured and tested.
3. The actual calibration process is complete.
4. The system operations have been adequately documented (references).
5. Operating personnel have been trained.

This letter will contain specifics regarding which detectors/systems have been calibrated, the rationale and theory behind the calibration versus internal standard quantitation approach, the specifics of the actual calibration process, the reference numbers of relevant procedures, the name and number of trained personnel and the characteristics of the calibrated system.

M. L. Bell M L Bell 9-22 94
Analytical Services Manager: Date:

C. T. Narquis C T Narquis 9/22/94
Cost Account Manager: Date:

G. D. Forehand G D Forehand 9/22/94
Activity Manager: Date:

N/A
DOE Manager (acceptance) Date:

C. DeFigh-Price C DeFigh-Price 9-22-94
Program Element Manager: Date:

N/A
DOE Manager (agreement): Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: ORGANIC CHEMISTRY: IMPROVE INTERIM OFF-GAS ANALYSIS USING STATIC HEADSPACE

SCHEDULE ID: N4B230F011
REVISION: 0

ASSIGNED TO: Technology Development & Applied Engineering

ADS NO: 1130-0B

COMPLETION DATE: 11/30/94

WBS DESIGNATOR: 1.1.1.2.04.02.03

FDS NO: 1N4B23

MILESTONE CONTROL NO: T2D-95-131

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY)	Characterization Prog. Office

Description and what constitutes completion of this commitment:

In response to a program requirement to assure only water is volatilized during TGA/DSC analysis, this methodology was selected as a rapid, standard technology easily implemented for first measurement. Direct headspace gas analysis has been selected as the interim methodology. It can be implemented rapidly and is expected to provide sufficient sensitivity for Safety Program use. A more efficient methodology for the measurement is proposed in the Inorganic section of the Analytical Procedures development. Both PNL and WHC laboratories have the equipment available but have not implemented the technology.

This task will be completed when the measurement capability is available in the WHC 222-S laboratory.

Acceptance Criteria:

Technology transfer of the methodology will be accepted when the technique has been set-up, tested, and documented with operating procedures.

Deliverables: (Describe the specific products or condition)

Transmittal of a letter from Analytical Services to the TWRS Characterization Program manager documenting the completion of the Organic Chemistry Improvement Interim TGA/DSC off-gas analysis on 11/30/94.

The letter will document the following:

1. The instrumentation has been installed and is operational, including specific location of the instrumentation and descriptions of the testing.

2. Operational procedures have been issued. This will include reference to specific procedures developed as part of this task.

3. Personnel have been trained to the relevant analytical procedures. Identification of trained personnel and key scientist contacts will be included.

M. L. Bell M L Bell 9-22-94
Analytical Services Manager: Date:

C. T. Narquis C T Narquis 9/22/94
Cost Account Manager: Date:

G. D. Forehand G D Forehand 9/22/94
Activity Manager: Date:

N/A
DOE Manager (acceptance) Date:

C. DeFigh-Price C. DeFigh-Price 9-22-94
Program Element Manager: Date:

N/A
DOE Manager (agreement): Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE:	PHYSICAL PROPERTIES: TRANSFER RADIATION SCREENING METHODOLOGY	**SCHEDULE ID:**	N4B230B01
		REVISION:	0
ASSIGNED TO:	Technology Development & Applied Engineering	**ADS NO:**	1130-0B
		COMPLETION DATE:	12/31/94
WBS DESIGNATOR:	1.1.1.2.04.02.03		
MILESTONE CONTROL NO:	T2D-95-132	**FDS CODE:**	1N4B23

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY)	Characterization Prog. Office

Description and what constitutes completion of this commitment:

In 1994 equipment was purchased, assembled, tested, and prepared for installation into the hotcell for screening core segments as they are extruded. This screening will provide the programs an indication of radiation level heterogeneities present within the segment. The milestone will be complete when Analytical Operations personnel are qualified to perform the analyses and interpret results as requested by the programs.

Acceptance Criteria:

Criteria is met when hardware is installed, operating procedures are issued, documentation of the theory and instrument description is complete, and relevant personnel have been trained to the procedures.

Deliverables: (Describe the specific products or condition)

Transmit a letter from Analytical Services to the TWRS Characterization Program stating that the Physical Properties Radiation Screening Methodology Transfer has been completed and the method is ready for implementation. 12/31/94

The letter will document the following:

1. Completion of installation and testing in hotcell operation. This will include specific information regarding location and capabilities of the equipment.
2. Completion of documentation of instructions and interpretation of data. This will include specific procedure numbers and references to other relevant supporting documentation.
3. Completion of training of personnel assigned responsible for producing data. This will include number of personnel trained and responsible scientist contacts.

M. L. Bell 9-22-94
Analytical Services, Manager: Date:

C. T. Narquis 9/22/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

G. D. Forehand 9/22/94
Activity Manager: Date:

N/A
DOE Manager (agreement): Date:

N/A
DOE Manager (acceptance): Date:

WHC-SP-1101

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

.TLE: Prepare Integrated Hot Cell Technology Development Schedule

2) SCHEDULE ID: N4B22A012
3) REVISION: 0

ASSIGNED TO: Technology Development & Applied Engineering
WBS DESIGNATOR: 1.1.1.2.04.02.02

5) ADS NO: 1130-0-0B
7) COMPLETION DATE: 9/30/95

MILESTONE CONTROL NO: T2D-95-133

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	Characterization Program Office

Description and what constitutes completion of this commitment:
The Advanced Hot Cell Analytical Technology Project (AHCAT) primary task is to support and assist multiple technology development efforts in their implementation. Based on the AHCAT strategy, needs report and end use strategy, this integrated development schedule will show early beneficial use dates as well as follow on enhancement opportunities for increased functionality. Specifically the schedule will show how the Four current development technologies (Raman, NIR, Laser Ablation/Mass Spec., Gamma Energy Analysis) will be integrated and deployed to provide screening information on Waste Tank Core mples.

Acceptance Criteria

The schedule will be reviewed by the appropriate development team members as well as appropriate program managers and their comments will be incorporated. Acceptance by the TWRS Characterization Program manager signifies that the schedule contains an acceptable WHC program for this activity.

Deliverables: (Describe the specific products or condition)

Letter with schedule establishing WHC plans for implementation of Hot Cell Screening technologies. 9/30/95

Identify development team members. 3/31/95
Complete Hot Cell Resource Evaluation 6/30/95

W. B. Winkelman 9-22-94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

G. D. Forehand 9/22/94
Activity Manager: Date:

N/A
DOE Manager (agreement): Date:

N/A
DOE Manager (acceptance) Date

D5-10

WHC-SP-1101
WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Establish Strategy for Hot Cell Technology Development

2) SCHEDULE ID: N4B220A011
3) REVISION: 0

ASSIGNED TO: Technology Development & Applied Engineering

5) ADS NO: 1130-OB

7) COMPLETION DATE: 3/1/95

WBS DESIGNATOR: 1.1.1.2.04.02.02

MILESTONE CONTROL NO: T2D-95-134

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	Characterization Program Office

Description and what constitutes completion of this commitment:

The Advanced Hot Cell Analytical Technology Project (AHCAT) primary task is to support and assist multiple technology development efforts in their implementation. This report will identify the strategy that WHC will take in implementing these technologies into the program needs. Specifically the report will address how the four current development technologies (Raman, NIR, Laser Ablation/Mass Spec., Gamma Energy Analysis) will be integrated and deployed to provide screening information on Waste Tank Core samples.

Acceptance Criteria:

The report will be reviewed by the appropriate program managers and their comments will be incorporated. Acceptance by the TWRS Characterization Program manager signifies that the report contains an acceptable WHC program strategy for this activity.

Deliverables: (Describe the specific products or condition)

Letter to Characterization Program Office recommending strategy for implementation of Hot Cell Screening technologies. 2/24/95

Letter identifying potential benefits and applications of Hot Cell screening technologies. 12/31/94

W. D. Winkelman 9-22-94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

G. D. Forehand 9/22/94
Activity Manager: Date:

N/A
DOE Manager (agreement): Date:

N/A
DOE Manager (acceptance) Date

D5-11

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1181

Title: DNFSB COMMITMENT 3.18, DEVELOP MEANS FOR MEASURING COMPLETE SAMPLE RECOVERY

Schedule ID: N4B250A01

Revision: 0

Assigned to: Technology Development & Applied Engineering

ADS No.: 1130-0B

Program WBS Designator: 1.1.1.2.04.02.05

Completion Date: 01/31/95

Milestone Control No.: T2D-95-153

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL DNFSB 3.18	[ ] Drawings	[ ] Other(Specify):
[ ] Contractor	[X] Other(Specify) ____	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

Commitment 3.18: "Develop means for measuring complete sample recovery. Complete engineering study of alternatives, select method and complete design, fabrication and testing of technique."

One technique currently used to retrieve core samples from waste tanks is the push/rotary mode coring system. To date, several sample segments taken contained low or zero volume waste material. This condition remained undetected until the sampler was extruded in the laboratory hot cell.

The objective of this work is to provide Westinghouse Hanford Company (WHC) with a Sample Verification Instrumented Cask (SVIC). The cask will allow WHC to verify coring tool fill using a load cell, acoustics, and neutron absorption.

In FY 1994, WHC requested that Los Alamos Technical Associates (LATA) conduct an initial investigation into candidate technologies used to verify coring tool sample fill. LATA, in conjunction with Southwest Research Institute (SwRI), conceptually evaluated the following technologies to verify core sampler fill; load cell, gamma detector, gamma spectrometer, acoustic probes, temperature, neutron, and piston position. The results of these evaluations were submitted to WHC in a report entitled Proposed Improvements for the High Level Waste Tank Characterization Activity (Scott et al, 1993).

The following technologies were selected for further evaluation and application in an SVIC.

* Load Cell. Determines the weight of the core sampler to verify that some mass of the tank waste has been obtained in the coring process.

* Neutron Absorption. Determines the presence of material in the coring tool along its length. Neutron absorption was chosen over gamma-ray absorption because high levels of gamma ray activity often exist in typical waste samples.

* Dry Coupled Ultrasonic Inspection. Determines the presence of material in the coring tool. However, ultrasonics works most effectively when the coring tool obtains slurry and minimally for dry solid material.

Because the stated technologies are effective in different measurement areas, a logical approach will combine these technologies and integrate the readings for graphical display.

Acceptance Criteria:

The instrumented cask will meet the specifications identified in the Instrumented Cask Statement of Work (T387700-SVC/95) to Los Alamos Technical Associates.

Deliverables (Describe the specific products or conditions):

Develop detailed schedule	10/07/94
Verify sensor technologies	10/28/94
Develop prototype design and drawings	12/11/94
Complete prototype fabrication	01/26/95
Complete prototype testing	03/06/95
Demonstrate prototype at WHC	04/05/95
Modify prototype into production unit	05/29/95

These dates are based on preliminary schedule estimates by the SwRI. A change request for the DNFSB commitment, if needed, will be submitted to DOE-RL by 10/31/95.

P. A. Young P. A. Young 09-22-94
Cost Account Manager Date

C. DeFigh-Price C. DeFigh-Price 9-22-94
Program Element Manager Date

G. D. Forehand G. D. Forehand 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (agreement) Date

R. E. Gerton
DOE Manager (acceptance) Date

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE:	TRANSFER COMPLEXANT ANALYSES TECHNOLOGY AND IMPLEMENT IF VIABLE	**SCHEDULE ID:**	N4B230F031
		REVISION:	0
ASSIGNED TO:	Technology Development & Applied Engineering	**ADS NO:**	1130-0B
		COMPLETION DATE:	10/31/96
WBS DESIGNATOR:	1.1.1.02.04.02.03		
MILESTONE CONTROL NO:	T2D-97-108	**FDS NO:**	1N4B23

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY)	Characterization Prog. Office

Description and what constitutes completion of this commitment:

This task includes formalizing the needs of the characterization program (primarily evidenced in the pretreatment DQO, but potentially other specification documents) and providing the capability to perform the required complexant analyses at the 222-S laboratory. This will include appropriate technology transfer from LANL, PNL or other labs.

Acceptance Criteria:

Clear understanding and development of the actual pretreatment needs for complexant analytical performance will be described. From there, appropriate technology will be identified, focusing on technology transfer from LANL or PNL. Instrumentation will be procured, a responsible scientist will be identified, the instrumentation will be installed and tested, analytical procedures will be written and personnel will be trained.

Deliverables: (Describe the specific products or condition)

Transmit a letter from Analytical Services to TWRS Characterization Program manager documenting the transfer of Complexant Analyses technology for use in the laboratory on 10/31/96.

The letter will document the following:
1. Definition of methodology meeting routine program requirements for complexant analysis.
2. Selection and procurement of instrumentation.
3. The set up and testing of instrumentation. This will include specifics on the location and configuration of the analytical system.
4. Relevant analytical procedures.
5. Specifics regarding number of trained 222-S laboratory personnel and capabilities of the ultimate production analytical system.

M. L. Bell M L Bell 9-22-94
Analytical Services Manager: Date:

C. T. Narquis C T Narq 9/22/94
Cost Account Manager: Date:

C. DeFigh-Price C, DeFigh-Price 9-22-94
Program Element Manager: Date:

G. D. Forehand G D Forehand 9/22/94
Activity Manager: Date:

N/A
DOE Manager (agreement): Date:

N/A
DOE Manager (acceptance) Date:

MDSs for Field Sampling & Measurement (1.1.1.2.04.03)

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1101

Title: Collect Rotary and Push Mode Core Samples from High Level Waste Tanks

Schedule ID: N4C32A112A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.02

Completion Date: 09-28-95

Milestone Control No.: T2D-95-135

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other(Specify):___
[ ] CONTRACTOR	[ ] Other(Specify) ___	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank waste surface to tank bottom core samples will be collected using the Push and Rotary mode coring systems. The number of core samples identified for Push mode sampling is 22 (based on 2 cores/tank). The number of core samples identified for Rotary mode sampling is 28 (based on 2 cores/tank). Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected.

The cost requirement for these sampling events is $5.7M for push and $8.4M for rotary. This is based on rotary truck 2 deploying to the field on 10/03/94 and working days and swings, five days a week, through July 1995. Also assumed is the deployment of trucks 3 and 4 by 06/01/95. Deployment is defined as the truck availability to take samples in tank farms. At present, there are no flammable gas tanks to be rotary sampled in FY 1994/5. Before any flammable gas tank can be added to the schedule for FY 1995, truck 3 or 4 must be available and the safety-related documentation complete. Prior to the rotary truck being deployed into a tank with a hard sludge crust that requires rotary sampling, the ability to have some rotation without nitrogen flow must be present. This will require a change to the safety analysis.

* See acceptance criteria below.

Acceptance Criteria:

Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):

Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on a quarterly and fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young 09-22-94
Cost Account Manager Date

G. A. Stanton 9/22/94
Activity Manager Date

C. DeFigh-Price 9-22-94
Program Element Manager Date

R. E. Gerton
DOE Manager (agreement) Date

R. E. Gerton
DOE Manager (acceptance) Date

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1101

Title: Collect Auger Samples from High Level Waste Tanks

Schedule ID: N4C33A112A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.03

Completion Date: 09-28-95

Milestone Control No.: T2D-95-136

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other(Specify):_____
[ ] CONTRACTOR	[ ] Other(Specify) ____	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank waste surface samples will be collected using an auger sampling system. The number of auger samples identified for auger sampling is 52 (assumes 2 samples/tank) based on sampling schedule 3.0. Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected. The 20 inch auger is required for field deployment on 10/13/94.

The 52 augers will require $2.4M of available funding.

* See acceptance criteria below.

Acceptance Criteria:

Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):

Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on a quarterly and fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young P.A. Young 09-22-94
Cost Account Manager Date

G. A. Stanton George A Stanton 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (acceptance) Date

C. DeFigh-Price C DeFigh-Price 9-22-94
Program Element Manager Date

R. E. Gerton
DOE Manager (agreement) Date

D5-18

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1101

Title: Collect Vapor Samples from High Level Waste Tanks

Schedule ID: N4C34A112A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.04

Completion Date: 09-29-95

Milestone Control No.: T2D-95-137

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[X] Other(Specify): Characterization Program ElementManager
[ ] CONTRACTOR	[ ] Other(Specify) _____	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank dome spaces will be vapor sampled in support of vapor safety issue resolutions, as a prerequisite to core sampling events. Type 3 samples support the Safety Initiative, Type 2 the rotary program. Tanks identified for vapor sampling are 38 tanks (29 Type 3 (truck) and 9 Type 2 (cart)). Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected.

The 38 tanks require $3.1M of available funding.

* See acceptance criteria below.

Acceptance Criteria:

Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):

Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on a quarterly and fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young 09-22-94
Cost Account Manager Date

G. A. Stanton 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (acceptance) Date

C. DeFigh-Price 9-22-94
Program Element Manager Date

R. E. Gerton
DOE Manager (agreement) Date

D5-19

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1101

Title: Collect Grab Supernate and Sludge Samples from High Level Waste Tanks

Schedule ID: N4C35A112A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.05

Completion Date: 09-29-95

Milestone Control No.: T2D-95-138

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other(Specify):
[ ] CONTRACTOR	[ ] Other(Specify)	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank waste supernate and light sludge will be collected using the Grab sampling method. Samples will be collected in support of characterization, process, compatibility issues in addition to 242-A campaign sampling. There are 11 process, 24 compatibility, 6 evaporator and 9 miscellaneous grab samples. The number of samples per tank varies with analysis requirement. Some evaporators take 10 while some process control for pH may only require one sample. At present, the only liquid grab sample that is available contains 100 ml. To support the Pretreatment Program additional volumes of 5.1, and 6.1 litres (AN-107, AP-105 respectively) are required. This equates to 51 and 61 additional bottles. Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected.

To support this grab sampling $2.33M is required.

* See acceptance criteria below.

Acceptance Criteria:
Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):
Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on a quarterly and fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young P.A. Young 09-22-94
Cost Account Manager Date

G. A. Stanton 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (acceptance) Date

C. DeFigh-Price 9-22-94
Program Element Manager Date

R. E. Gerton
DOE Manager (agreement) Date

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1101

Title: DNFSB Commitment 5.14, 2 PAS-1 Transfer Casks will be ready for use

Schedule ID: N4C37A112A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.07

Completion Date: 01-31-95

Milestone Control No.: T2D-95-139

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL DNFSB 5.14	[ ] Drawings	[ ] Other(Specify):_____
[ ] CONTRACTOR	[ ] Other(Specify) ____	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

Completion of (2) PAS-1 transfer casks and to be used for shipment of samples in support of the TWRS Characterization Program. This will include having all procedures to load casks prepared and ready for use.

Acceptance Criteria:

Approval of the NRC relicense by 01/31/95.

Deliverables (Describe the specific products or conditions):

222-S and 325 Laboratory prepare procedures to load casks.	12/01/94
222-S and 325 Laboratory will submit a draft letter report to the Characterization Program for review and comment.	01/03/95
Incorporate comments and submit a draft letter report to the Characterization Program for review and comment.	01/15/95
Analytical Services will submit a letter report via the Characterization Program manager to DOE-RL documenting the completion and readiness of (2) PAS transfer cask for use to support the TWRS waste characterization efforts.	01/31/95

P. A. Young 09-22-94
Cost Account Manager Date

C. DeFigh-Price 9-22-94
Program Element Manager Date

G. A. Stanton 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (agreement) Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-21

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1101

Title: Collect Rotary and Push Mode Core Samples from High Level Waste Tanks

Schedule ID: N4C32A122A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.02

Completion Date: 09-26-96

Milestone Control No.: T2D-96-113

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other(Specify):___
[ ] CONTRACTOR	[ ] Other(Specify) ___	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank waste surface to tank bottom core samples will be collected using the Push and Rotary mode coring systems. The number of cores identified for Push mode sampling is 36 (based on 2 cores/tank). The number of cores identified for Rotary mode sampling is 48 (based on 2 cores/tank). Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected.

This assumes $11.0M of funding for rotary and $6.8M for push sampling. This requires all 4 trucks deployed and working in the field. The safety issues for rotary in a flammable gas tanks will need to be resolved by 2/14/96 (U-107). As of 9/22/94 the first flammable rotary tanks.
* See acceptance criteria below.

Acceptance Criteria:
Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):
Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on a fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young P. A. Young 09-22-94
Cost Account Manager Date

G. A. Stanton Glenn Stanton 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (acceptance) Date

C. DeFigh-Price C. DeFigh-Price 9-22-94
Program Element Manager Date

R. E. Gerton
DOE Manager (agreement) Date

DS-22

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

~~WHC-SP-1101~~
WHC-SP-1101

Title: Collect Auger Samples from High Level Waste Tanks

Schedule ID: N4C33A122A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.03

Completion Date: 09-26-96

Milestone Control No.: T2D-96-114

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other(Specify):_____
[ ] CONTRACTOR	[ ] Other(Specify) ____	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank waste surface samples will be collected using an auger sampling system. Six cores will be sampled by auger method. Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected.

This requires $.3M of funding.

* See acceptance criteria below.

Acceptance Criteria:

Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):

Quarterly performance reports will be transmitted by the Characterization Program Element manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on a quarterly and fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young P.A. Young 09-22-94
Cost Account Manager Date

G. A. Stanton 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (acceptance) Date

C. DeFigh-Price 9-22-94
Program Element Manager Date

R. E. Gerton
DOE Manager (agreement) Date

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1101

Title: Collect Vapor Samples from High Level Waste Tanks

Schedule ID: N4C34A122A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.04

Completion Date: 09-26-96

Milestone Control No.: T2D-96-115

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[X] Other(Specify): Characterization Program Element Manager
[ ] CONTRACTOR	[ ] Other(Specify) _____	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank dome spaces will be vapor sampled in support of rotary core sampling events. 36 tanks will have Type 2 samples performed. Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected. These 36 tanks require $2.9M of funding. All Type 2 samples will be done using the cart.

* See acceptance criteria below.

Acceptance Criteria:

Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):

Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on a quarterly and fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young P. A. Young 09-22-94
Cost Account Manager Date

G. A. Stanton [signature] 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (acceptance) Date

C. DeFigh-Price C. DeFigh-Price 9-22-94
Program Element Manager Date

R. E. Gerton
DOE Manager (agreement) Date

D5-24

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

WHC-SP-1101

Title: Collect Grab Supernate and Sludge Samples from High Level Waste Tanks

Schedule ID: N4C35A122A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.05

Completion Date: 09-26-96

Milestone Control No.: T2D-96-116

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[X] Other(Specify): Characterization Program Element Manager
[ ] CONTRACTOR	[ ] Other(Specify)	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank waste supernate and light sludge will be collected using the Grab sampling method. Samples will be collected in support of characterization, process, compatibility issues in addition to 242-A sampling. There are 2 grab samples in the FY96 window. This will require $.1M of funding. Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected.

* See acceptance criteria below.

Acceptance Criteria:

Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):

Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager. The reports will identify sampling performance based on a quarterly and fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young P.A. Young 09-22-94
Cost Account Manager Date

C. DeFigh-Price C. DeFigh-Price 5-22-94
Program Element Manager Date

G. A. Stanton
Activity Manager Date

R. E. Gerton 9/22/94
DOE Manager (agreement) Date

R. E. Gerton
DOE Manager (acceptance) Date

DS-25

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

Rev. 0

WHC-SP-1101

Title: Collect Rotary and Push Mode Core Samples from High Level Waste Tanks

Schedule ID: N4C32A132A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.02

Completion Date: 09-25-97

Milestone Control No.: T2D-97-109

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other(Specify): _____
[ ] CONTRACTOR	[ ] Other(Specify) _____	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank waste surface to tank bottom core samples will be collected using Push and Rotary mode coring systems. The number of cores identified for Rotary mode sampling is 88 (assumes 2 cores/tank). The number of cores identified for Push mode sampling is 20 (assumes 2 cores/tank). However, other tanks can be substituted via appropriate WHC change control to the integrated operations schedule. Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected.

This assumes $19.7M for Rotary and $4.0M for Push sampling. All 4 trucks are required with 6 crews of operators.
* See acceptance criteria below.

Acceptance Criteria:

Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan (TCP). Sampling must meet recovery requirements specified in the TCP.

Deliverables (Describe the specific products or conditions):

Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on a fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young 09-22-94
Cost Account Manager Date

C. DeFigh-Price 9-22-94
Program Element Manager Date

G. A. Stanton 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (agreement) Date

R. E. Gerton
DOE Manager (acceptance) Date

DS-26

Westinghouse Hanford Company
Tank Waste Remediation System
Milestone Description Sheet

Rev. 0

WHC-SP-1101

Title: Collect Vapor Samples from High Level Waste Tanks

Schedule ID: N4C34A132A

Revision: 0

Assigned to: Waste Tank Sampling Engineering

ADS No.: 1130-0C

Program WBS Designator: 1.1.1.2.04.03.04

Completion Date: 09-25-97

Milestone Control No.: T2D-97-110

Milestone Class:	Deliverables:	Addressed To:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other(Specify):
[ ] CONTRACTOR	[ ] Other(Specify)	

Description and what constitutes completion of this commitment (What work is specifically going to be done to accomplish this milestone):

High level tank dome spaces will be vapor sampled in support of rotary core sampling events. 17 tanks will have Type 2 samples performed. Waste samples will be transported and relinquished to an onsite laboratory. Relinquishment of all required* waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment. In the event any of the above tanks cannot be sampled, contingency tanks will be selected.

These 17 tanks require $0.6M of funding. All Type 2 samples will be done with the cart.

* See acceptance criteria below.

Acceptance Criteria:

Waste sampling in direct accordance with an approved (WHC) Tank Characterization Plan.

Deliverables (Describe the specific products or conditions):

Quarterly performance reports will be transmitted by the Characterization Program Element manager to DOE-RL manager as part of the DNFSB 93-5 Commitment 1.10. The reports will identify sampling performance based on fiscal year-to-date percent complete scheme. Additionally, any non-recoverable schedule variance will be reported and consequential impacts identified.

P. A. Young P.A. Young 09-22-94
Cost Account Manager Date

G. A. Stanton 9/22/94
Activity Manager Date

R. E. Gerton
DOE Manager (acceptance) Date

C. DeFigh-Price 9-22-94
Program Element Manager Date

R. E. Gerton
DOE Manager (agreement) Date

05-27

MDSs for Analtyical Integration (1.1.1.2.04.04)

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

SCHEDULE ID: N4D45C01A

TITLE: TRANSMIT 136 DAY VALIDATED ANALYTICAL DATA PACKAGES FROM EACH SAMPLING EVENT WITHIN 136 DAYS SPECIFIC TO THE COMPATABILITY DQO

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.05

COMPLETION DATE: 9/30/95

MILESTONE CONTROL NO: N/A

FDS CODE: 1N4D45

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	
[ ] Other		

Description and what constitutes completion of this commitment:

Transmittal from the laboratories to the TWRS Characterization Program will include a 136 day analytical data report for Compatability (DQOs) samples received at the Laboratory by May 15, 1995 per Tank Characterization Plans. These reports will be issued within 136 days (annual average, but not exceeding 172 days) after receipt of the last sample from the last core from the tank.

Acceptance Criteria:

The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:

The Laboratory will submit a data package to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of analyses performed on Compatability Data Quality Objectives in support of the Tank Characterization Reports.

TWRS Characterization will issue a letter to RL documenting completion of this milestone for all samples received by May 15, 1995. 09/30/95

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 136-day reporting requirement for Compatability per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory and/or PNL Laboratory).
- Date of sample received at the laboratory.
- Date of when the 136-day data report is due (from receipt of last sample from the last riser to delivery at the laboratory)
- Current status of 136-day analysis and data reporting requirement:
  - 136-Day reporting requirment met or exceeded
  - 136-Day reporting requirement not met. If so, provide reasons/justification.
  - 136-Day analyses and reporting requirements in progress for those samples still within the 136-day analysis and reporting requirement.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

M. L. Bell 9-22-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

D. R. Bratzel 9/21/94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

Schedule ID: N4D42B02A

TITLE: Complete Phase III and start of Phase IV of the Sample Exchange Evaluation Program

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.02

COMPLETION DATE 09/15/95

MILESTONE CONTROL NO: T2D-95-121

FDS CODE: 1N4D42

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

The Quality Triad will compile a quarterly status report consisting of the status of each phase of the Sample Exchange Evaluation (SEE). The quarterly report will be submitted to TWRS Characterization Program Office, Analytical Chemistry Laboratory (ACL) and Analytical Services and any other participating laboratories. A final report will be prepared on the completion of each phase of the program and distributed to the same list as the quarterly report.

Acceptance Criteria:

Scientific principle and data is reviewed by statistical analysis. Corrective actions is determined on a graded approach.

Deliverable:

The Quality Triad will compile a quarterly status report representing the status of each phase of the SEE Program. The quarterly report will be presented to Analytical Integration Activity Manager, ACL Manager, Analytical Services Manager and managers of any other participating laboratories.

01/02/95
04/03/95
07/03/95
09/15/95

The fourth quarter report will summarize all quarterly reports and status of phase reports completed, in process and identification of corrective measures based on comparative analysis of results.

Transmittal of a letter report to Analytical Services, ACL Laboratory, INEL Laboratory and TWRS Characterization Program office on the issuance of each Phase Test Plan and completion of each Phase Report:

Issuance of Phase III Test Plan for Program Review	11/01/94
Issuance of Phase III Test Plan (Requires Program Office/QA Concurrence)	11/15/94
Completion of Phase III Report	06/10/95
Issuance of Phase IV Test Plan for Program Review	11/01/95
Issuance of Phase IV Test Plan (Requires Program Office/QA Concurrence)	05/24/95

A draft of each phase report will be provided for review to the Analytical Integration Activity Manager and management of each participating laboratory, two weeks prior to release.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

A. G. King 9/22/94
ACL Manager: Date:

M. L. Bell 9-21-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Acct Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

DRB
D. R. Bratzel 9/21/94
Activity Manager: Date:

N/A
DOE Monitor: Date:

N/A
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

	SCHEDULE ID: N4D43C01A
TITLE: TRANSMIT A 45 DAY DATA REPORT FOR ALL SAMPLING EVENTS BASED ON SAFETY SCREENING DQOs AS IDENTIFIED IN THE TANK SPECIFIC TANK CHARACTERIZATION PLANS	**REVISION:** 0
ASSIGNED TO: Program Management & Integration	**ADS NO:** 1130-0D
PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.03	**COMPLETION DATE:** 09/30/95
MILESTONE CONTROL NO: T2D-95-122	**FDS CODE:** 1N4D43

MILESTONE CLASS:	**DELIVERABLE:**	**ADDRESSED TO:**
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:

Transmit from the laboratories to the TWRS Characterization Program letter reports which contain the preliminary results and a short descriptive narrative of the high priority safety screening analyses for samples received at the laboratory by August 15, 1995. These reports will be issued within 45 days of receipt at the laboratory of the last segment from the last core of the tank sample.

Acceptance Criteria:

The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:

The laboratory will submit a letter report to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of high priority screening analyses within 45 days of the receipt of the last segment from the last core at the laboratory.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for samples received by August 15, 1995. 09/30/95

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 45-day reporting requirement per guidance from the Tank Characterization Plans (TCPs)
- Identify which laboratories are analyzing the samples (222-S Laboratory, PNL Laboratory
- Date of sample received at the laboratory
- Date of when the 45-day reporting clock was initiated (receipt of last segment form last core to delivery at the laboratory)
- Current status of 45-day report:
  - 45-day reporting requirement met or exceeded
  - 45-day report requirement not met. If so, provide reasons/justification.
  - 45-day analyses and reporting requirements in progress for those samples still within the 45-day reporting requirement.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

M. L. Bell 9-21-94
Analytical Services Manager Date:

P. Segall 9/21/94
Cost Account Manager Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

RRB
D. R. Bratzel 9/21/94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

SCHEDULE ID: N4D43C01B

TITLE: Defense Nuclear Facility Safety Board (DNFSB) commitment 2.3 "Complete Sampling and Analysis of all Watchlist tanks per the Data Quality Objectives" - Analysis Portion Only

REVISION: 0

ASSIGNED TO: Program Managment & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.03

COMPLETION DATE: 09/30/95

MILESTONE CONTROL NO: T2D-95-123

FDS CODE: 1N4D43

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[X] DOE-RL DNFSB 2.3	[ ] Drawings	[X] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	_____

Description and what constitutes completion of this commitment:
Transmit from the laboratories to the TWRS Characterization Program a letter report which will document the completion of the analysis portion only of the DNFSB commitment "Complete Sampling and Analysis of all Watchlist tanks per the Safety Screening related Data Quality Objectives".

Acceptance Criteria:
The analytical results for Watchlist tanks will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plan (HASQAP).

Deliverables:
Analytical Services will submit a letter report to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the completion of the analytical portion of the DNFSB commitment 2.3 "Complete Sampling and Analysis of all Watchlist tanks per the Safety Screening related Data Quality Objectives" for all samples from watchlist tanks that have been received b6 August 15, 1995 to complete analysis per DQO plan and schedule. 09/30/95

The following will be required for completion of DNFSB commitment 2.3 by the Program Managment and Integration:

- Identify all watchlist tanks requiring safety screening analyses
- Identify primary safety screening analyses required on each of the watchlist tanks
- Identify for each specific watchlist tank:
  - Watchlist tanks for which the primary screening analytes were within the action limits
  - Watchlist tanks for which the primary screening analytes exceeded the action limits and which required subsequent secondary analytes performed. Identify primary screening action limits and actual primary analyte values for watchlist tanks which exceed the action limits.

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

D. R. Bratzel for DRB 9/22/94
Activity Manager: Date:

R. E. Gerton
DOE Manager (acceptance) Date:

M. L. Bell 9-22-94
Analytical Services Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

R. E. Gerton
DOE Monitor: Date:

WHC-SP-1101 **SCHEDULE ID:** N4D44C01A

TITLE: TRANSMIT A 216 DAY VALIDATED DATA REPORT FOR ALL SAMPLING EVENTS BASED ON SAFETY RESOLUTION DQOS AS IDENTIFIED IN THE TANK SPECIFIC TANK CHARACTERIZATION PLANS

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.04

COMPLETION DATE: 09/30/95

MILESTONE CONTROL NO: T2D-95-124

FDS CODE: 1N4D44

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:

Transmit from the laboratories to the TWRS Characterization Program a 216 day validated report for Safety Resolution (DQOs) samples received at the Laboratory by February 15, 1995. These reports will be issued within 216 days after the removal of the last segment from the last core from the tank.

Acceptance Criteria:

The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:

The laboratory will submit a data package to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of analyses performed on Safety Resolution Data Quality Objectives in support of the Tank Characterization Reports required by Tri-Party Agreement milestone M-44.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for samples received at the laboratory by February 15, 1995. 09/30/95

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 216-day reporting requirement for safety resolution per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory, PNL Laboratory, and/or INEL).
- Date of sample received at the laboratory.
- Date of when the 216-day data report is due (from receipt of last segment from the last core to delivery at the laboratory)
- Current status of 216-day analysis and data reporting requirement:
  - 216-Day reporting requirment met or exceeded
  - 216-Day reporting requirement not met. If so, provide reasons/justification.
  - 216-Day analyses and reporting requirements in progress for those samples still within the 216-day analysis and reporting requirement.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

M. L. Bell 9-22-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

DRB-ltr
D. R. Bratzel 9/21/94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

	SCHEDULE ID: N4D47C01A
TITLE: TRANSMIT A 216 DAY VALIDATED DATA REPORT FROM EACH SAMPLING EVENT SPECIFIC TO THE DISPOSAL RELATED DQOS	**REVISION:** 0
ASSIGNED TO: Program Management & Integration	**ADS NO:** 1130-0D
PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.07	**COMPLETION DATE:** 09/30/95
MILESTONE CONTROL NO: T2D-95-140	**FDS CODE:** 1N4D47

MILESTONE CLASS:	**DELIVERABLE:**	**ADDRESSED TO:**
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:

Transmit from the laboratories to the TWRS Characterization Program will include a 216 day validated report for Disposal (DQOs) samples received at the Laboratory by February 15, 1995 required by Tri-Party Agreement milestone M-44. These reports will be issued within 216 days after the removal of the last segment from the last core of the tank.

Acceptance Criteria:

The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:

The laboratory will submit a data package to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of analyses performed on Disposal Data Quality Objectives in support of the Tank Characterization Reports required by Tri-Party Agreement milestone M-44.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for samples received at the laboratory by February 15, 1995. 09/30/95

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 216-day reporting requirement for Disposal per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory, PNL Laboratory).
- Date of sample received at the laboratory.
- Date of when the 216-day data report is due (from receipt of last segment from the last core at the laboratory)
- Current status of 216-day analysis and data reporting requirement:
  - 216-Day reporting requirment met or exceeded
  - 216-Day reporting requirement not met. If so, provide reasons/justification.
  - 216-Day analyses and reporting requirements in progress for those samples still within the 216-day analysis and reporting requirement.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

M. L. Bell 9-22-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

D. R. Bratzel 9/21/94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

SCHEDULE ID: N4D49C04A

TITLE: TRANSMIT DATA REPORTS AND COMPLETE EMERGENCY NOTIFICATIONS PER REQUIREMENTS OF TANK CHARACTERIZATION PLAN OR LETTER OF INSTRUCTION

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.09

COMPLETION DATE: 09/30/95

MILESTONE CONTROL NO: T2D-95-141

FDS CODE: 1N4D49

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:

Immediate transmittal to Characterization Program and others per Tank Characterization Plan of out-of-limits data from safety screening. Deliverables are to be provided in accordance with requirements and schedules provided in Tank Characterization Plans (TCP), letters of instruction, the INEL Upgrade Plan or other documentation used to acquire and specify laboratory services.

Acceptance Criteria:

Analyze tank waste samples as required by the Tank Characterization Plans developed using appropriate data quality objectives. Issue a letter/report with the results of the analyses in the format specified by the Tank Characterization Plan (or, if there is no Tank Characterization Plan, other documentation).

Deliverables:

The laboratory will notify immediately and submit a letter report to the Characterization Program and others per TCP requirements documenting the results of analyses of out-of-limits safety screening data in support of the TWRS Characterization Program.

WHC will issue a letter on 9/30/95 summarizing emergency notifications made during the fiscal year to RL to document completion of this milestone.

M. L. Bell 9-21-94
M. L. Bell
Analytical Service Manager: Date:

C. Stroup
Cost Account Manager: Date:

C. Defigh-Price 9-22-94
C. Defigh-Price
Program Element Manager: Date:

D. R. Bratzel for DRB 9/22/94
D. R. Bratzel
Activity Manager: Date:

N/A
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D49A00A

TITLE: DNFSB COMMITMENT 5.12, COMPLETE UPGRADES OF INEL LABORATORY TO READY-TO-SERVE MODE FOR CHARACTERIZATION SUPPORT

REVISION: 0

ASSIGNED TO: Analytical Services

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.09

COMPLETION DATE: 10/31/94

MILESTONE CONTROL NO: T2D-95-142

FDS CODE: 1N4D49

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] DOE-HQ	[X] DOE-RL
[X] DOE-RL DNFSB 5.12	[ ] DOE-RL	[ ] Other (Specify)
[ ] WHC Key	[ ] Other (Specify)	DNFSB

Description and what constitutes completion of this commitment:
Complete INEL upgrades to bring the laboratory to ready-to-serve mode to receive and analyze Hanford Site tank waste samples in support of the Characterization Program. The upgrades will be performed in accordance with the upgrade plan issued in January 1994.

Acceptance Criteria:
The upgrades have completed the requirements set forth in the INEL Upgrade Plan issued in January 1994.

Deliverables:
Submit a draft report to the Characterization Program Manager for review. 10/21/94

Analytical Services will submit a letter report to the Characterization Program manager which is complete for transmittal to DOE-RL documenting the completion of DNFSB commitment 5.12, "Complete upgrades of INEL Laboratory to ready-to-serve mode" and the readiness of the laboratory to support TWRS waste characterization support. 10/31/94

M. L. Bell 9.2-94
M. L. Bell
Analytical Services Manager: Date:

C. R. Stroup
Cost Account Manager: Date:

C. DeFigh-Price 9/22/94
C. DeFigh-Price
Program Element Manager: Date:

COP for DRB 9/22/94
D. R. Bratzel
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptance) Date:

DS-41

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

SCHEDULE ID: N4D4BAD11

TITLE: Complete renovation for ICPMS/AA installation, Sample Preparation and General Specifications, Typical Plans for Room Upgrades in the 222-S Facility

REVISION: 0

ASSIGNED TO: Engineering and Technology

ADS NO: 1130-OD

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.11

COMPLETION DATE: 09/30/95

MILESTONE CONTROL NO: T2D-95-143

FDS CODE: 1N4D4B

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

Transmittal from 222-S Laboratory to the Tank Characterization Program office, of a letter report which documents the completion of the inductively coupled mass spectrometer (ICP/MS) and atomic absorption (AA) installation, sample preparation and sample receiving room renovations located at the 222-S Laboratory.

Acceptance Criteria:

The rooms are ready for occupancy, equipment installed and operational and turned over the 222-S Operation manager for analytical work.

Deliverable:

Complete ICPMS and AA Installation, Rm 1C		09/30/95
Completion of Design	05/01/95	
Completion of Demo	07/01/95	
Completion of Construction	09/30/95	
Complete Sample Preparation room renovation, Rm 1D		09/30/95
Completion of Design	03/31/95	
Completion of Demonstration	06/01/95	
Completion of Construction	09/30/95	
Complete General Specifications, Typical Plans for Room Upgrades		12/15/94

Transmit a letter report to WHC Characterization Program Manager which documents the completion of 222-S Laboratory upgrades. 09/30/95

M. L. Bell 9-21-94
M. L. Bell
Analytical Services Manager: Date:

R. P. Marshall 9/21/94
R. P. Marshall
Cost Account Manager: Date:

C. DeFigh-Price 9/22/94
C. DeFigh-Price
Program Element Manager: Date:

D. R. Bratzel 9/21/94
D. R. Bratzel
Activity Manager: Date:

N/A
N/A
DOE Monitor: (agreement) Date:

N/A
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D4BBF21

TITLE: Complete Laboratory Information Management System (LIMS) Development Activity

REVISION: 0

ASSIGNED TO: Engineering and Technology

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.11

COMPLETION DATE: 09/30/95

MILESTONE CONTROL NO: T2D-95-144

FDS CODE: 1N4D4B

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

A letter report will be prepared documenting the completion of: 1) the 222-S Tank Characterization Database (TCD) SEF Revision 1.2 Deliverable from LABCORE; 2) the 222-S TWRS 180 Day LABCORE Report; 3) interfacing the 222-S Counting Room GEA/AEA Instrument System to LABCORE; 4) the 222-S Hotcell Balance/LABCORE Integration; 5) interface the Gross Alpha/Beta instrument to LABCORE

Acceptance Criteria:

All testing will have met the requirements for implementation.

Deliverable:

A letter report to the manager, WHC Characterization Program which documents completion of these LIMS Development Activities — 09/30/95

- 222-S TCD SEF Revision 1.2 Deliverable from LABCORE — 02/28/95

  Documentation and testing of software that produces a TCD data file that complies with the format of TCD Standard Electronic Format Revision 1.2. Revision 1.2 refers to an initial TCD format which includes sample results. Sample hierarchy must be entered manually. Sample data will be transmitted to the TCD via HLAN.

- 222-S TWRS 180 Day LABCORE Report — 01/31/95

  Documentation and testing of software that produces a hardcopy report containing tank characterization summary data. The general report format will comply with the letter to C.S. Haller from Characterization Support, Letter, 7E720-94-121, "Revised Interim Tank Characterization Plan Guidance:, dated May 12, l994.

- 222-S Counting Room Instrument Systems Interfaced to LABCORE — 05/01/95

  Provide documented and tested software that provides a user interface for the Gamma Energy Analysis/Alpha Energy Analysis (GEA/AEA) instrument that allows the user to review and parse the data for upload to MULTI LIMS.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

- 222-S Hotcell Balance/LABCORE Integration — 05/30/95

  The 222-S Hotcell balances will be configured for minimal hands-on data entry and electronic data upload to LABCORE.

- 222-S Gross Alpha/Beta Instrument Interface to LABCORE — 09/30/95

  Documented and tested software that provides a user interface that allows the user to review and parse gross alpha/beta data for upload to MULTI LIMS.

M. L. Bell 9-21-94
M. L. Bell
Analytical Services Manager: Date:

R. P. Marshall 9/21/94
R. P. Marshall
Cost Account Manager: Date:

C. DeFigh-Price 9/22/94
C. DeFigh-Price
Program Element Manager: Date:

DRB
D. R. Bratzel 9/21/94
Activity Manager: Date:

N/A
N/A
DOE Monitor: Date

N/A
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

SCHEDULE ID: N4D4CA02

TITLE: Completion of the Shielded Inductively Coupled Plasma (ICP) Installation

REVISION: 0

ASSIGNED TO: PNL

ADS NO: 1130-OD

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.12

COMPLETION DATE: 09/30/95

MILESTONE CONTROL NO: T2D-95-146

FDS CODE: 1N4D4C

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

A letter by Analytical Chemistry Laboratory will be prepared documenting the completion of the Shielded Inductively Coupled Plasma (ICP) installation to support TWRS Characterization Program. This is based on the 325 Laboratory restart on November 1, 1994.

Acceptance Criteria:

Installation of shielded ICP and glovebox is complete. Instrument is ready to initiate testing and calibration.

Deliverable:

Demo existing glovebox	03/15/95
Complete procurement and delivery of ICP and glovebox	04/01/95
Complete installation of glovebox and ICP	09/30/95
Transmit a letter from Analytical Chemistry Laboratory to WHC Characterization Program Manager which documents the completion of the Shielded ICP installation	09/30/95

A. G. King 9/21/94
Analytical Chemistry Lab. Date:

W. C. Weimer 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

DRB
D. R. Bratzel 9/21/94
Activity Manager: Date:

N/A
DOE Monitor: Date:

N/A
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D4CA02

TITLE: Completion of the Shielded Analytical Laboratory Operation and Rear Galleries

REVISION: 0

ASSIGNED TO: PNL

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.12

COMPLETION DATE: 09/30/95

MILESTONE CONTROL NO: T2D-95-147

FDS CODE: 1N4D4C

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

A letter by Analytical Chemistry Laboratory will be prepared documenting the completion the and Renovation of Shielded Analytical Laboratory Operating and Rear Galleries to support TWRS Characterization Program. This is based on the 325 Laboratory restart on November 11, 1994.

Acceptance Criteria:

The rooms are ready for occupancy and turned over the Shielded Analytical Laboratory (SAL) for use.

Deliverable:

Engineering design for rear gallery completed	02/15/95
Remove rear gallery walls/equipment	03/15/95
Install operating gallery casework and lighting	05/15/95
Construct manipulator repair shop and cask storage area	09/30/95

Transmit a letter from Analytical Chemistry Laboratory to WHC Characterization Program Manager which documents the completion of the Shielded Analytical Laboratory Operating and Rear Galleries renovation 09/30/95

A. G. King 9/22/94
Analytical Chemistry Lab. Date:

W. C. Weimer 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

D. R. Bratzel 9/21/94
Activity Manager: Date:

N/A
DOE Monitor: Date:

N/A
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D4CA05A

TITLE: COMPLETION OF HIGH LEVEL RADIOCHEMISTRY FACILITY (HLRF) CLEANOUT AND REFURBISHING OF "A-CELL"

REVISION: 0

ASSIGNED TO: PNL

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.12

COMPLETION DATE: 05/01/95

MILESTONE CONTROL NO: T2D-95-148

FDS CODE: 1N4D4C

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	TWRS Characterization Program

Description and what constitutes completion of this commitment:

A letter will be prepared documenting the completion of the Cleanout and Refurbishing of the HLRF "A-Cell" to the TWRS Characterization Program. This is based on the 325 Laboratory restart on November 1, 1994.

Acceptance Criteria:

The cell will be ready to receive additional equipment for characterization of TWRS core samples.

Deliverable:

Schedule Status meetings with the Analytical Integration Activity Manager	12/15/94 02/15/95 04/15/95
Complete decontamination and window repairs	02/01/95
Install new equipment	04/30/95
Analytical Chemistry Laboratory will submit a letter to DOE-RL via the WHC Characterization Program Manager to DOE-RL transmitting report which documents the completion of the HLRF "Cleanout and Refurbishing of "A-Cell"	05/01/95

A. G. King — Analytical Chemistry Lab — Date: 9/22/94

W. C. Weimer — Cost Account Manager: — Date: 9/21/94

C. DeFigh-Price — Program Element Manager: — Date: 9-22-94

D. R. Bratzel — Activity Manager: — Date: 9/21/94

N/A — DOE Monitor: — Date:

N/A — DOE Manager (acceptance) — Date:

WHC-SP-1101

Title: Complete Vapor Headspace Sample Analysis for all Ferrocyanide Watch List Tanks

Schedule ID: N4D4GB12A

Revision: 0

Assigned to: Oak Ridge National Laboratory (ORNL)

WBS Designator: 1.1.1.2.04.04.14

ADS No.: 1130-0D

Milestone Control No.: T2D-95-149

Completion Date: 4/30/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC Tank Vapor Program Manager
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

ORNL will analyze Triple Sorbent Traps (TSTs) and Carbotrap/Carbotrap C™ traps (CCTs) for organic species. ORNL will prepare and deliver all quality control devices and sampling materials to WHC/FAS.

Acceptance Criteria:

Compliance with DQO criteria as outlined in WHC-SD-WM-DQO-002, Data Quality Objectives for Generic In-Tank Health and Safety Issue Resolution (Osborne, 1994). This compliance shall be documented in the analytical reports by specific assessments of the DQO ics (i.e., precision, accuracy, limit of detection and confidence level).

Preliminary letter report on analysis to Vapor Program Manager providing all qualitative and quantitative analytical results five weeks after receipt.

Completion of this milestone satisfies part of the requirement specified in TPA Milestone M-40-03.

Deliverables:

1. Final analysis report from laboratory to the Vapor Program Manager, submitted for clearance for public release, on the chemical characterization in each tank, four weeks after preliminary letter report.
2. Thirteen final analytical reports on FeCN class tanks per year by the completion date. 4/30/95

Approved by ORNL R Jenkins via FAX 9/19/94

J. W. Osborne — Date
Cost Account Manager

C. DeFigh-Price 9/20/94 — Date
Program Element Manager

D. R. Bratzel 9/20/94 — Date
Activity Manager

N/A — Date
DOE Manager (agreement)

N/A — Date
DOE Manager (acceptance)

D5-48

WHC-SP-1101

Title: Complete Vapor Headspace Sample Analysis for all Ferrocyanide Watch List Tanks

Schedule ID: N4D47B01A

Revision: 0

Assigned to: PNL

WBS Designator: 1.1.1.2.04.04.07

ADS No.: 1130-0D

Milestone Control No.: T2D-95-150

Completion Date: 4/30/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC Tank Vapor Program Manager
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

PNL will analyze SUMMA™ canister vapor samples for organic analytes and permanent gases (hydrogen, carbon monoxide, methane, carbon dioxide and nitrous oxide). PNL will also analyze sorbent tubes and OSHA versatile samplers (OVS) for inorganics, HCN, NH_3 , and other acid gases and water. PNL will prepare and deliver all quality control devices and sampling materials to WHC/FAS.

Acceptance Criteria:

Compliance with DQO criteria as outlined in WHC-SD-WM-DQO-002, Rev. 0, Data Quality Objectives for Generic In-Tank Health and Safety Issue Resolution (Osborne, 1994). This compliance shall be documented in the analytical reports by specific assessments of QO metric for confidence level and Fin Plan designated metrics (i.e., precision, accuracy, and limit of detection).

Preliminary letter report on analysis to Vapor Program Manager providing all qualitative and quantitative analytical results five weeks after receipt (not to exceed one report/week per Fin Plan).

Completion of this milestone satisfies part of the requirement specified in TPA M-40-03.

Deliverables:

1. Final analysis report from laboratory to the Vapor Program Manager, submitted for clearance for public release, on the chemical characterization in each tank, four weeks after preliminary letter report.
2. Thirteen final analytical reports on FeCN class tanks per year by the completion date. 4/30/95

approved by PNL S. Cohen via FAX signature JCO 9/20/94

J. W. Osborne Date
Cost Account Manager

9/20/94

D. R. Bratzel Date
Activity Manager

N/A Date
DOE Manager (acceptance)

9/20/94

C. DeFigh-Price Date
Program Element Manager

N/A Date
DOE Manager (agreement)

DS-4/9

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

Schedule ID: N4D42B05B

TITLE: Complete Phase IV, V and VI of the Sample Exchange Evaluation Program **REVISION:** 0

ASSIGNED TO: Program Management & Analytical **ADS NO:** 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.02 **COMPLETION DATE:** 09/15/96

MILESTONE CONTROL NO: T2D-96-110 **FDS CODE:** 1N4D42

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

The Quality Triad will compile a quarterly status report consisting of the status of each phase of the Sample Exchange Evaluation (SEE). The quarterly report will be submitted to TWRS Characterization Program Office, Analytical Chemistry Laboratory (ACL) and Analytical Services and any other participating laboratories. A final report will be prepared on the completion of each phase of the program and distributed to the same list as the quarterly report.

Acceptance Criteria:

Scientific principle and data is reviewed by statistical analysis. Corrective actions is determined on a graded approach.

Deliverable:

The Quality Triad will compile a quarterly status report representing the status of each phase of the SEE Program. The quarterly report will be presented to Analytical Integration Activity Manager, ACL Manager, Analytical Services Manager and managers of any other participating laboratories.

12/30/95
03/30/96
06/30/96
09/15/96

The fourth quarter report will summarize all quarterly reports and status of phase reports completed, in process and identification of corrective measures based on comparative analysis of results. 09/15/96

Transmittal of a letter report to Analytical Services, ACL Laboratory, INEL Laboratory and TWRS Characterization Program office on the issuance of each Phase Test Plan and completion of each Phase Report:

Completion of Phase IV Report (2 Weeks Prior for program review/comment)	10/24/95
Issuance of Phase V Test Plan (Requires program & QA concurrence)	10/01/95
Completion of Phase V Report	02/22/96
Issuance of Phase VI Test Plan (Requires program & QA concurrence)	03/09/96
Completion of Phase VI Report	

A draft of each phase report will be provided for review to the Analytical Integration Activity Manager and management of each participating laboratory, two weeks prior to release.

D5-50

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

A. G. King 9/22/94
ACL Manager: Date:

M. L. Bell 9-21-94
Analytical Services Manager: Date:

P. Segall 9/2/94
Cost Acct Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

DRB
D. R. Bratzel 9/21/94
Activity Manager: Date:

N/A
DOE Monitor: Date:

N/A
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

SCHEDULE ID: N4D43C02B

TITLE: Complete Analysis of all Non Watchlist tanks per the Safety Screening Data Quality Objective

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.03

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: T2D-96-111

FDS CODE: 1N4D43

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[X] DOE-RL	[ ] Drawings	[X] Other (Specify).
[ ] Contractor	[ ] Other (Specify)	DNFSB

Description and what constitutes completion of this commitment:
Transmit from the laboratories to the TWRS Characterization Program a letter report which will document the completion of Analysis of Non Watchlist tanks (or all non watchlist tank samples received by August 15, 1996) per the Safety Screening related Data Quality Objectives.

Acceptance Criteria:
The analytical results for Non Watchlist tanks will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plan (HASQAP).

Deliverables:
Analytical Services will submit a letter report to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the completion of Analysis of Non Watchlist tank samples received by August 15, 1996 per the Safety Screening related Data Quality Objectives. 9/30/96

The following will be required for completion by the Program Management and Integration:

- Identify all nonwatchlist tanks requiring safety screening analyses
- Identify primary safety screening analyses required on each of the nonwatchlist tanks
- Identify for each specific nonwatchlist tank:
  - nonwatchlist tanks for which the primary screening analytes were within the action limits
  - nonwatchlist tanks for which the primary screening analytes exceeded the action limits and which required subsequent secondary analytes performed. Identify primary screening action limits and actual primary analyte values for watchlist tanks which exceed the action limits.

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

D. R. Bratzel CBT for DRB 9-22-94
Activity Manager: Date:

R. E. Gerton
DOE Manager (acceptance) Date:

M L Bell 9-22-94
M. L. Bell
Analytical Services Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

R. E. Gerton
DOE Monitor: Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

SCHEDULE ID: N4D43C02A

TITLE: TRANSMIT A 45 DATA REPORT FOR ALL SAMPLING EVENTS BASED ON SAFETY SCREENING DQOS AS IDENTIFIED IN THE TANK SPECIFIC TANK CHARACTERIZATION PLANS

REVISION: 0

ASSIGNED TO: Program TWRS Analytical

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.03

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: T2D-96-112

FDS CODE: 1N4D43

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:
Transmit from the laboratories via the TWRS Characterization Program to DOE-RL, letter reports which contain the preliminary results and a short descriptive narrative of the high priority safety screening analyses for sample received at the laboratory by August 15, 1996. These reports will be issued within 45 days of receipt at the laboratory of the last segment of the last core of the tank sample.

Acceptance Criteria:
The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:
The laboratory will submit a letter report to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of high priority screening analyses within 45 days of the receipt of the last segment of each core.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for samples received by August 15, 1996. 9/30/96

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 45-day reporting requirement per guidance from the Tank Characterization Plans (TCPs).
- Identify which laboratories are analyzing the samples (222-S Laboratory and PNL laboratory).
- Date of sample received at the laboratory.
- Date of when the 45-day reporting clock was initiated (receipt of last segment from the last core to delivery at the laboratory)
- Current status of 45-day report:
  - 45-day reporting requirement or exceeded
  - 45-day reporting requirement not met. If so, provide reasons/justification.
  - 45-day analyses and reporting requirements in progress for those samples still within the 45-day reporting requirement.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

M. L. Bell 9.21-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

DRB
D. R. Bratzel 9/21/94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101 **SCHEDULE ID:** N4D44C02A

TITLE: TRANSMIT A 216 DATA VALIDATED DATA REPORT FOR ALL SAMPLING EVENTS BASED ON SAFETY RESOLUTION DQOS AS IDENTIFIED IN THE TANK SPECIFIC TANK CHARACTERIZATION PLANS

REVISION: 0

ASSIGNED TO: Program Management & Integration **ADS NO:** 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.04 **COMPLETION DATE:** 09/30/96

MILESTONE CONTROL NO: T2D-96-119 **FDS CODE:** 1N4D44

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:
Transmit from the laboratories to the TWRS Characterization Program a 216 day validated report for Safety Resolution (DQOs) samples received at the Laboratory between February 16, 1995 and February 15, 1996 required by Tri-Party Agreement milestone M-44. These reports will be issued within 216 days after the removal of the last segment from the last core of the tank sample.

Acceptance Criteria:
The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:
The laboratory will submit a data package to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of analyses performed on Safety Resolution Data Quality Objectives in support of the Tank Characterization Reports required by Tri-Party Agreement milestone M-44.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for samples received at the laboratory between February 16, 1995 and February 15, 1996. 09/30/96

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 216-day reporting requirement for safety resolution per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory, PNL Laboratory, and/or INEL).
- Date of sample received at the laboratory.
- Date of when the 216-day data report is due (from receipt of last segment from the last core to delivery at the laboratory)
- Current status of 216-day analysis and data reporting requirement:
  - 216-Day reporting requirment met or exceeded
  - 216-Day reporting requirement not met. If so, provide reasons/justification.
  - 216-Day analyses and reporting requirements in progress for those samples still within the 216-day analysis and reporting requirement.

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

M. L. Bell 9-22-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

D. R. Bratzel for DRB 9-22-94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D42B02A

TITLE: TRANSMIT 136 DAY VALIDATED ANALYTICAL DATA PACKAGES FROM EACH SAMPLING EVENT WITHIN 136 DAYS SPECIFIC TO THE COMPATABILITY DQO

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.05

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: N/A

FDS CODE: 1N4D45

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	
[ ] Other		

Description and what constitutes completion of this commitment:

Transmit from the laboratories to the TWRS Characterization Program will include a 136 day analytical data report for Compatability (DQOs) samples received at the Laboratory between May 16, 1995 and May 15, 1996 per Tank Characterization Plans. These reports will be issued within 136 days (annual average, but not exceeding 172 days) after receipt of the last sample from the last core from the tank.

Acceptance Criteria:

The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:

The Laboratory will submit a data package to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of analyses performed on Compatability Data Quality Objectives in support of the Tank Characterization Reports.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for all samples received between May 16, 1995 and May 15, 1996. 09/30/96

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 136-day reporting requirement for Compatability per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory and/or PNL Laboratory).
- Date of sample received at the laboratory.
- Date of when the 136-day data report is due (from receipt of last sample from the last riser to delivery at the laboratory)
- Current status of 136-day analysis and data reporting requirement:
  - 136-Day reporting requirment met or exceeded
  - 136-Day reporting requirement not met. If so, provide reasons/justification.
  - 136-Day analyses and reporting requirements in progress for those samples still within the 136-day analysis and reporting requirement.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

M. L. Bell 9-22-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

DR Bratzel
D. R. Bratzel 9/21/94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

SCHEDULE ID: N4D43C01A

TITLE: TRANSMIT 172 DAY VALIDATED DATA REPORTS FROM EACH SAMPLING EVENT SPECIFIC TO OPERATIONS RELATED DQOS

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.06

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: T2D-96-122

FDS CODE: 1N4D46

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:
Transmit from the laboratories to the TWRS Characterization Program to DOE-RL will include a 172 day analytical data report for Operations (DQOs) samples received at the Laboratory by April 15, 1996 required by Tri-party Agreement milestone M-44. These reports will be issued within 172 days after removal of the last segment from the last core from the tank sample.

Acceptance Criteria:
The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:
The Laboratory will submit a data package to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of analyses performed on Operations Data Quality Objectives in support of the Tank Characterization Reports required by Tri-Party Agreement milestone M-44.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for samples received at the laboratory between April 16, 1995 and April 15, 1996. 09/30/96

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 172-day reporting requirement for Operations per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory and/or PNL Laboratory).
- Date of sample received at the laboratory.
- Date of when the 172-day data report is due (from receipt of last sample from the last riser to delivery at the laboratory)
- Current status of 172-day analysis and data reporting requirement:
  - 172-Day reporting requirment met or exceeded
  - 172-Day reporting requirement not met. If so, provide reasons/justification.
  - 172-Day analyses and reporting requirements in progress for those samples still within the 172-day analysis and reporting requirement.

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

M. L. Bell 9-22-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

D. R. Bratzel for DRB 9/22/94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D43C01B

TITLE: TRANSMIT A 216 DAY VALIDATED DATA REPORT FROM EACH SAMPLING EVENT SPECIFIC TO THE DISPOSAL RELATED DQOS

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.07

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: T2D-96-123

FDS CODE: 1N4D47

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:
Transmit from the laboratories to the TWRS Characterization Program will include a 216 day validated report for Disposal (DQOs) samples received at the Laboratory between February 16, 1995 and February 15, 1996 required by Tri-Party Agreement milestone M-44. These reports will be issued within 216 days after the removal of the last segment from the last core of the tank.

Acceptance Criteria:
The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:
The laboratory will submit a data package to the TWRS Characterization Program which is complete for transmittal to DOE-RL documenting the results of analyses performed on Disposal Data Quality Objectives in support of the Tank Characterization Reports required by Tri-Party Agreement milestone M-44.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for samples received at the laboratory between February 16, 1995 and February 15, 1996. 09/30/95

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 216-day reporting requirement for Disposal per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory and PNL Laboratory).
- Date of sample received at the laboratory.
- Date of when the 216-day data report is due (from receipt of last segment from the last core at the laboratory)
- Current status of 216-day analysis and data reporting requirement:
  - 216-Day reporting requirment met or exceeded
  - 216-Day reporting requirement not met. If so, provide reasons/justification.
  - 216-Day analyses and reporting requirements in progress for those samples still within the 216-day analysis and reporting requirement.

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

M. L. Bell 9.22-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

D. R. Bratzel CDP for DRB 9-22-94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

INEL MLB 9.21.94

SCHEDULE ID: N4D49C01A

TITLE: TRANSMIT DATA REPORTS AND COMPLETE EMERGENCY NOTIFICATIONS PER REQUIREMENTS OF TANK CHARACTERIZATION PLAN OR LETTER OF INSTRUCTION

REVISION: 0

ASSIGNED TO: Analytical Services

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.09

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: T2D-96-124

FDS CODE: 1N4D49

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	DNFSB

Description and what constitutes completion of this commitment:
Immediate transmittal to Characterization Program and others per Tank Characterization Plan (TCP) of out-of-limits data from safety screening. Deliverables are to be provided in accordance with requirements and scheduled provided in Tank Characterization Plans, letters of instruction, the INEL Upgrade Plan or other documentation used to acquire and specify laboratory services.

INEL MLB 9.21.94

Acceptance Criteria:
Analyze tank waste samples as required by the Tank Characterization Plans developed using appropriate data quality objectives. Issue a letter/report with the results of the analyses in the format specified by the Tank Characterization Plan (or, if there is no Tank Characterization Plan, other documentation).

Deliverables:
The laboratory will notify immediately and submit a letter report to the Characterization Program and others per TCP requirements documenting the results of analyses of out-of-limits safety screening data in support of the TWRS Characterization Program.

WHC will issue a letter on 9/30/95 summurizing emergency notifications made during the fiscal year to RL to document completion of this milestone.

M L Bell 9.21.94
M. L. Bell
Analytical Services Manager: Date:

C. Stroup
Cost Account Manager: Date:

C&P for DRB 9/22/94
D. R. Bratzel
Activity Manager: Date:

C. DeFigh-Price 9-22-94
C. DeFigh-Price
Program Element Manager: Date:

N/A
DOE Monitor: (agreement) Date:

DS-60

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D45C01A

TITLE: CONTINUED IMPLEMENTATION OF LABCORE FEATURES AND FUNCTIONALITY IN SUPPORT OF TWRS CHARACTERIZATION PROGRAM

REVISION: 0

ASSIGNED TO: Engineering and Technology

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.11

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: T2D-96-126

FDS CODE: 1N4D4B

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[X] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

A letter report will be prepared documenting the continued implementation of LABCORE features and functionality in support of the Tank Characterization Program.

Acceptance Criteria:

All testing will have met the requirements for implementation.

Deliverable:

Transmit a letter report to the manager, WHC Characterization Program which documents the continued implementation of LABCORE features and functionality in support of the Tank Characterization Program 09/30/96.

M. L. Bell 9.21.94
M. L. Bell
Analytical Services Manager: Date:

C. DeFigh-Price 9-22-94
R. P. Marshall
Cost Account Manager: Date:

C. DeFigh-Price
Program Element Manager: Date:

D R Bratzel 9/21/94
D. R. Bratzel
Activity Manager: Date:

N/A
DOE Monitor: Date

N/A
DOE Manager (acceptance) Date:

D5-61

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D46C01A

TITLE: Complete renovation of Rooms 4C, 4H, and 4J in the 222-S Facility

REVISION: 0

ASSIGNED TO: Engineering and Technology

ADS NO: 1130-OD

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.11

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: T2D-96-127

FDS CODE: 1N4D4B

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

Transmittal from 222-S Laboratory to the Tank Characterization Program office, of a letter report which documents the completion of the multi-purpose laboratory rooms 4C, 4H, and 4J located at the 222-S Laboratory.

Acceptance Criteria:

The rooms are ready for occupancy, equipment installed and operational and turned over the 222-S Operation manager for analytical work.

Deliverable:

Complete Room 4C renovations	09/30/96
Complete Room 4H renovations	09/30/96
Complete Room 4J renovations	09/30/96

Transmit a letter report to WHC Characterization Program Manager which documents the completion of 222-S Laboratory upgrades for FY 1996. 09/30/96

M. L. Bell M L Bell 9-21-94
Analytical Services Manager: Date:

R. P. Marshall R P Marshall 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price C DeFigh-Price 9-22-94
Program Element Manager: Date:

D. R. Bratzel D R Bratzel 9/21/94
Activity Manager: Date:

N/A
DOE Monitor: (agreement) Date:

DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

SCHEDULE ID: N4D4CA09A

TITLE: COMPLETION OF DNFSB COMMITMENT 5.2, "CLEANOUT AND REFURBISH 'B-CELL'" AND THE HIGH LEVEL RADIOCHEMISTRY FACILITY (HLRF) "A-COMPLEX"

REVISION: 0

ASSIGNED TO: PNL

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.12

COMPLETION DATE: 9/30/96

MILESTONE CONTROL NO: T2D-96-128

FDS CODE: 1N4D4C

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[X] DOE-RL DNFSB 5.2	[ ] Drawings	[X] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	DNFSB

Description and what constitutes completion of this commitment:

A letter will be prepared documenting the completion of the cleanout and refurbishing of the "B-Cell" and the HLRF "A-Complex" via the TWRS Characterization Program for submittal to DOE-RL.

Acceptance Criteria:

The cell will be ready to receive additional equipment for characterization of TWRS core samples.

Deliverable:

Schedule Status meetings with the Analytical Integration Activity Manager	12/15/94 02/15/95 04/15/95 06/15/95 08/15/95 11/15/95 01/15/96 02/15/96 04/15/96 06/15/95 09/15/95
Relocate extrusion/analysis equipment	09/30/95
Remove in-cell equipment	12/30/95
B-Cell decontamination	04/01/96
Install new equipment	09/30/96
Issue a draft for review and comments to WHC Characterization Program Manager, ACL Manager and DOE-RL.	09/01/96
Incorporate comments from TWRS Characterization Program, ACL Manager, and DOE-RL and transmit to DNFSB.	09/15/96
Analytical Chemistry Laboratory will submit a letter via the WHC Characterization Program Manager to DOE-RL transmitting report which documents the completion of the DNFSB Commitment 5.2, "Cleanout and Refurbishing of 'B-Cell'" and HLRF "A-Complex."	09/30/96

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

A. G. King 9/22/94
Analytical Chemistry Lab. Date:

W. C. Weimer 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

DRB for
D. R. Bratzel 9/21/94
Activity Manager: Date:

R. E. Gerton
DOE Monitor: Date:

R. E. Gerton
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

SCHEDULE ID: N4D4CB07A

TITLE: Completion of the 325 Laboratory Upgrades

REVISION: 0

ASSIGNED TO: Waste Characterization Program

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.12

COMPLETION DATE: 09/30/96

MILESTONE CONTROL NO: T2D-96-129

FDS CODE: 1N4D4C

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

A letter by Analytical Chemistry Laboratory will be prepared documenting the completion the 325 Laboratory Upgrades consisting of completion of the Radiochemical Analysis Laboratory Upgrades; completion of the Inorganic Analysis Laboratory upgrades; and complete Standards Laboratory Expansion to support TWRS Characterization Program.

Acceptance Criteria:

All testing of equipment will have met the requirements for implementation, and rooms are ready for occupancy and turned over the Analytical Chemistry Laboratory (ACL) for use.

Deliverable:

Completion of the Radiochemical Analysis Laboratory Upgrades - completion of construction	09/30/96
Completion of the Inorganic Analysis Laboratory Upgrades - Renovations of Rooms 404, 406, and 416	09/30/96
Complete Standards Laboratory Expansion - expansion of 370 square foot to the Standards Laboratory	09/30/96

Transmit a letter from Analytical Chemistry Laboratory to WHC Characterization Program Manager which documents the completion of the 325 Laboratory Upgrades for FY 1996. 09/30/96

A. G. King 9/22/94
Analytical Chemistry Lab: Date:

W. C. Weimer 9/21/94
Cost Account Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

D. R. Bratzel 9/20/94
Activity Manager: Date:

N/A
DOE Monitor: Date:

N/A
DOE Manager (acceptance) Date:

Title: Complete Vapor Headspace Sample Analysis for all Organic Watch List Tanks

Schedule ID: N4D48A113

Revision: 0

Assigned to: Oak Ridge National Laboratory (ORNL)

WBS Designator: 1.1.1.2.04.04.08

ADS No.: 1130-0D

Milestone Control No.: T2D-96-130

Completion Date: 10/31/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC Tank Vapor Program Manager
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

ORNL will analyze Triple Sorbent Traps (TSTs) and Carbotrap/Carbotrap C™ traps (CCTs) for organic species. ORNL will prepare and deliver all quality control devices and sampling materials to WHC/FAS.

Acceptance Criteria:

Compliance with DQO criteria as outlined in WHC-SD-WM-DQO-002, Data Quality Objectives for Generic In-Tank Health and Safety Issue Resolution (Osborne, 1994). This compliance shall be documented in the analytical reports by specific assessments of the DQO [illegible]s (i.e., precision, accuracy, limit of detection and confidence level).

Preliminary letter report on analysis to Vapor Program Manager providing all qualitative and quantitative analytical results five weeks after receipt.

Completion of this milestone satisfies part of the requirement specified in TPA Milestone M-40-08.

Deliverables:

1. Final analysis report from laboratory to the Vapor Program Manager, submitted for clearance for public release, on the chemical characterization in each tank, four weeks after preliminary letter report.
2. Eighteen final analytical reports on organic class tanks per year by the completion date. 10/31/95

approved by ORNL R. Jenkins via FAX 9/19/94

J. W. Osborne — Date
Cost Account Manager

C. DeFigh-Price 9/20/94 — Date
Program Element Manager

DRB 9/20/94

D. R. Bratzel — Date
Activity Manager

N/A — Date
DOE Manager (agreement)

N/A — Date
DOE Manager (acceptance)

D5-66

Title: Complete Vapor Headspace Sample Analysis for all Organic Watch List Tanks

Schedule ID: N4D48A113

Revision: 0

Assigned to: PNL

WBS Designator: 1.1.1.2.04.04.08

ADS No.: 1130-0D

Milestone Control No.: T2D-96-131

Completion Date: 10/31/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC Tank Vapor Program Manager
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

PNL will analyze SUMMA™ canister vapor samples for organic analytes and permanent gases (hydrogen, carbon monoxide, methane, carbon dioxide and nitrous oxide). PNL will also analyze sorbent tubes and OSHA versatile samplers (OVS) for inorganics, NH_3, and other acid gases and water. PNL will prepare and deliver all quality control devices and sampling materials to WHC/FAS.

Acceptance Criteria:

Compliance with Data Quality Objective (DQO) criteria as outlined in WHC-SD-WM-DQO-002, Rev. 0, Data Quality Objectives for Generic In-Tank Health and Safety Issue Resolution (Osborne, 1994). This compliance shall be documented in the analytical reports [illegible]cific assessments of the DQO metric for confidence level and Fin Plan designated metrics (i.e., precision, [illegible]cy, and limit of detection).

Preliminary letter report on analysis to Vapor Program Manager providing all qualitative and quantitative analytical results five weeks after receipt (not to exceed one report/week per Fin Plan).

Completion of this milestone satisfies part of the requirement specified in TPA Milestone M-40-08.

Deliverables:

1. Final analysis report from laboratory to the Vapor Program Manager, submitted for clearance for public release, on the chemical characterization in each tank, four weeks after preliminary letter report.
2. Eighteen final analytical reports on organic class tanks per year by the completion date. 10/31/95

approved per PNL S. Cahan/P. Mellinger via FAX signature 9/20/94

J. W. Osborne — Date
Cost Account Manager

C. DeFigh-Price 9/20/94
C. DeFigh-Price — Date
Program Element Manager

D R Bratzel 9/20/94
D. R. Bratzel — Date
Activity Manager

N/A — Date
DOE Manager (agreement)

N/A — Date
DOE Manager (acceptance)

D5-67

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

Schedule ID: N4D42B07B

TITLE: Complete Phase VII and VIII of the Sample Exchange Evaluation Program **REVISION:** 0

ASSIGNED TO: Program Management & Integration **ADS NO:** 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.02.04.04.02 **COMPLETION DATE:** 09/15/97

MILESTONE CONTROL NO: T2D-97-105 **FDS CODE:** 1N4D42

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor	[ ] Other (Specify)	Characterization Program Manager

Description and what constitutes completion of this commitment:

The Quality Triad will compile a quarterly status report consisting of the status of each phase of the Sample Exchange Evaluation (SEE). The quarterly report will be submitted to TWRS Characterization Program Office, Analytical Chemistry Laboratory (ACL) and Analytical Services and any other participating laboratories. A final report will be prepared on the completion of each phase of the program and distributed to the same list as the quarterly report.

Acceptance Criteria:

Scientific principle and data is reviewed by statistical analysis. Corrective actions is determined on a graded approach.

Deliverable:

The Quality Triad will compile a quarterly status report representing the status of each phase of the SEE Program. The quarterly report will be presented to Analytical Integration Activity Manager, ACL Manager, Analytical Services Manager and managers of any other participating laboratories.

12/30/96
03/30/97
06/30/97
09/15/97

The fourth quarter report will summarize all quarterly reports and status of phase reports completed, in process and identification of corrective measures based on comparative analysis of results. 09/15/97

Transmittal of a letter report to Analytical Services, ACL Laboratory, INEL Laboratory and TWRS Characterization Program office on the issuance of each Phase Test Plan and completion of each Phase Report:

Issuance of Phase VII Test Plan (2 weeks prior for concurrence, Requires program & QA concurrence)	10/01/96
Completion of Phase VII Report	2/22/97
Issuance of Phase VIII Test Plan (2 weeks prior for concurrence, Requires program & QA concurrence)	03/09/97
Completion of Phase VIII Report	08/25/97

A draft of each phase report will be provided for review to the Analytical Integration Activity Manager and management of each participating laboratory, two weeks prior to release.

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

A. G. King 9/22/94
ACL Manager: Date:

M. L. Bell 9-21-94
Analytical Services Manager: Date:

P. Segall 9/21/94
Cost Acct Manager: Date:

C. DeFigh-Price 9-22-94
Program Element Manager: Date:

DRB
D. R. Bratzel 9/21/94
Activity Manager: Date:

N/A
DOE Monitor: Date:

N/A
DOE Manager (acceptance) Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

WHC-SP-1101

SCHEDULE ID: N4D44D09A

TITLE: TRANSMIT A 216 DAY VALIDATED DATA REPORT FOR ALL SAMPLING EVENTS BASED ON SAFETY RESOLUTION DQOS AS IDENTIFIED IN THE TANK SPECIFIC TANK CHARACTERIZATION PLANS

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.04

COMPLETION DATE: 9/30/97

MILESTONE CONTROL NO: T2D-97-107

FDS CODE: 1N4D44

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:
Transmit from the laboratories to the TWRS Characterization Program a 216 day validated report for Safety Resolution (DQOs) samples received at the Laboratory between February 16, 1996 and February 15, 1997 required by Tri-Party Agreement milestone M-44. These reports will be issued within 216 days after the removal of the last segment from the last core of the tank sample.

Acceptance Criteria:
The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:
The laboratory will submit a data package to the Characterization Program which is complete for transmittal to DOE-RL documenting the results of analyses performed on Safety Resolution DQOs in support of the Tank Characterization Reports required by Tri-Party Agreement milestone M-44.

TWRS Characterization will issue a letter to RL documenting completion of this milestone for samples received at the Laboratory between February 16, 1996 and February 15, 1997. 09/30/97

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 216-day reporting requirement for safety resolution per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory, PNL Laboratory, and/or INEL).
- Date of sample received at the laboratory.
- Date of when the 216-day data report is due (from receipt of last segment from the last core to delivery at the laboratory)
- Current status of 216-day analysis and data reporting requirement:
  - 216-Day reporting requirment met or exceeded
  - 216-Day reporting requirement not met. If so, provide reasons/justification.
  - 216-Day analyses and reporting requirements in progress for those samples still within the 216-day analysis and reporting requirement.

A. G. King 9/22/94
Analy. Chem. Lab Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

D. R. Bratzel COF for DRB 9-22-94
Activity Manager: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

M L Bell 9.22.94
M. L. Bell
Analytical Services Manager: Date:

C DeFigh-Price 9-22-94
C. DeFigh-Price
Program Element Manager: Date:

R. E. Gerton
DOE Monitor: Date:

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

SCHEDULE ID: N4D47D09A

TITLE: TRANSMIT A 216 DAY VALIDATED DATA REPORT FROM EACH SAMPLING EVENT SPECIFIC TO THE DISPOSAL RELATED DQOS

REVISION: 0

ASSIGNED TO: Program Management & Integration

ADS NO: 1130-0D

PROGRAM WBS DESIGNATOR: 1.1.1.2.04.04.07

COMPLETION DATE: 09/30/97

MILESTONE CONTROL NO: T2D-97-112

FDS CODE: 1N4D47

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor	[ ] Other (Specify)	

Description and what constitutes completion of this commitment:
Transmit from the laboratories to the TWRS Characterization Program will include a 216 day validated report for Disposal (DQOs) samples received at the Laboratory between February 15, 1996 and February 15, 1997 required by Tri-Party Agreement milestone M-44. These reports will be issued within 216 days after the removal of the last segment from the last core of the tank.

Acceptance Criteria:
The analytical results will comply with the criteria as identified in Tank Characterization Plans (TCPs) and Hanford Analytical Services Quality Assurance Plans.

Deliverables:
The laboratory will submit a data package via the TWRS Characterization Program to DOE-RL documenting the results of analyses performed on Disposal Data Quality Objectives in support of the Tank Characterization Reports required by Tri-Party Agreement milestone M-44.

TWRS Characterization Program will issue a letter to RL documenting completion of this milestone for samples received at the laboratory between February 15, 1996 and February 15, 1997. 09/30/97

The Program Management and Integration will provide a weekly status report to the Activity Manager for Analytical Integration/Characterization Program to identify the following information:

- All samples submitted by the Characterization Program for characterization as required to meet the 216-day reporting requirement for Disposal per guidance from the Tank Characterization Plans (TCPs).
- Identify to which laboratory the samples were delivered for analysis (222-S Laboratory and PNL Laboratory).
- Date of sample received at the laboratory.
- Date of when the 216-day data report is due (from receipt of last segment from the last core at the laboratory)
- Current status of 216-day analysis and data reporting requirement:
  - 216-Day reporting requirment met or exceeded
  - 216-Day reporting requirement not met. If so, provide reasons/justification.
  - 216-Day analyses and reporting requirements in progress for those samples still within the 216-day analysis and reporting requirement.

A. G. King 9/22/94
Analy. Chem. Lab. Manager: Date:

P. Segall 9/21/94
Cost Account Manager: Date:

D. R. Bratzel CDP for DRB 9/22/94
Activity Manager: Date:

R. E. Gerton
DOE Manager (acceptable) Date:

M L Bell 9.22.94
M. L. Bell
Analytical Services Manager: Date:

C. DeFigh-Price 9-22-94
C. DeFigh-Price
Program Element Manager: Date:

R. E. Gerton
DOE Monitor: Date:

D5-71

MDSs for Data Evaluation & Reporting (1.1.1.2.04.05)

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: SUBMIT DRAFT TANK WASTE ANALYSIS PLAN ANNUAL UPDATE TO ECOLOGY AND EPA FOR REVIEW (M-44-01B)

SCHEDULE ID: N4E57B01A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.07

ADS NO: 1130-0-0E
COMPLETION DATE: 5/31/95

MILESTONE CONTROL NO: T2D-95-100

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[X] TPA M-44-01B	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:
Prepare and deliver to DOE-RL a draft copy of the annual update to the Tank Waste Analysis Plan (TWAP).

Acceptance Criteria
The TWAP will cover safety, retrieval, pretreatment and other processing needs; identify sampling and analysis activities projected for the following year; and describe the Tank Characterization Plans (TCPs) that will be issued during the following year. The TWAP will also identify the following year's Tank Characterizations Reports (TCRs) to be submitted and on what type of data they will be based. The TWAP will specify the contents of these TCRs. The TWAP and TCPs will be developed via a DQO process. An outline of the format and content of the TWAP shall be supplied to DOE-RL by 12/15/94, based on the previous year's format and content and any negotiated revisions. DOE-RL shall advise WHC of any changes to the format and content in writing by 1/31/95 to ensure inclusion of the changes in the draft document.

Deliverables: (Describe the specific products or condition)
Five copies of a preliminary draft TWAP will be submitted to RL by 3/24/95 for review. Comments received from RL by 4/21/95 will be incorporated into the draft document. Five copies of the draft TWAP update shall be transmitted to RL on or before 5/15/95 for transmittal to Ecology and EPA by 5/31/95.

FOR C. S. Haller Todd Brown 9/14/94
Cost Account Manager Date

C. DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-73

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: SUBMIT TANK WASTE ANALYSIS PLAN ANNUAL UPDATE TO ECOLOGY AND EPA FOR APPROVAL (M-44-02B)

SCHEDULE ID: N4E57B02A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.07

ADS NO: 1130-0-0E
COMPLETION DATE: 8/31/95

MILESTONE CONTROL NO: T2D-95-101

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[X] TPA M-44-02B	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:

Prepare and deliver to DOE-RL the final copy of the annual update to the Tank Waste Analysis Plan (TWAP).

Acceptance Criteria

The TWAP will cover safety, retrieval, pretreatment and other processing needs; identify sampling and analysis activities projected for the following year; and describe the Tank Characterization Plans (TCPs) that will be issued during the following year. The TWAP will also identify the following year's Tank Characterizations Reports (TCRs) to be submitted and on what type of data they will be based. The TWAP will specify the contents of these TCRs. The TWAP and TCPs will be developed via a DQO process.

Deliverables: (Describe the specific products or condition)

The final TWAP update shall be based on the draft (M-44-01B), submitted 5/31/95, and shall address comments provided on the draft during the four-week review period between 6/1/95 and 7/1/95. Five copies shall be transmitted to RL by 8/15/95 for transmittal to Ecology and EPA by 8/31/95.

FOR C. S. Haller Jodel Brown 9/19/94
Cost Account Manager Date

C. DeFigh-Price 9-20-94
C. DeFigh-Price
Program Element Manager Date

S. J. Eberlein 9-19-94
S. J. Eberlein
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-74

WHC-SP-1101

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: ISSUE 30 TANK CHARACTERIZATION REPORTS IN ACCORDANCE WITH THE APPROVED TANK CHARACTERIZATION PLANS. COMPLETE INPUT OF CHARACTERIZATION INFORMATION FOR 30 HLW TANKS TO ELECTRONIC DATABASE(S) (M-44-08)

SCHEDULE ID: N4E54A01A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.04

ADS NO: 1130-0-0E
COMPLETION DATE: 9/30/95

MILESTONE CONTROL NO: T2D-95-102

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[X] TPA M-44-08	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:

Generate and issue 30 Tank Characterization Reports (TCRs) (in accordance with the approved Tank Characterization Plans) in support of TPA milestone M-44-08. These TCRs will integrate tank waste historical data with tank waste analytical data. Update previously issued TCRs as necessary to incorporate new information. TCRs will be cleared for public release.

Acceptance Criteria:

1) The Tank Characterization Reports must include both the relevant historical data and the information obtained by the characterization effort in accordance with the approved Tank Characterization Plans. The TCRs will be similar in content and format to that prepared for tank 241-AP-101 and issued as supporting documents. One copy of each TCR will be transmitted to RL for formal submittal to Ecology. All other internal and external distribution of the TCRs will be performed by the Characterization Program.

2) Characterization data for all 30 tanks must be accessible by onsite and offsite stakeholders through the Tank Characterization Database.

Deliverables: (Describe the specific products or condition)

1) Provide a draft to DOE-RL during review process so RL can perform concurrent review.

2) Transmit each new or revised TCR to DOE-RL as it is issued. Provide with each TCR a draft transmittal letter which DOE-RL may use to forward the document to EPA and Ecology.

3) Provide a final letter after transmission of all TCRs to DOE-RL, indicating completion of the milestone and the date that each TCR was transmitted.

FOR C. S. Haller Todd Brown 9/19/94
Cost Account Manager Date

C. DeFigh-Price C DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein S J Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-75

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Draft Tank Characterization Technical Basis Strategy Document

SCHEDULE ID: N4E52A01A
REVISION: 0

ASSIGNED TO: Data Evaluation and Reporting
WBS DESIGNATOR: 1.1.1.2.04.05.02

ADS NO: 1130-0-0E
COMPLETION DATE: 2/28/95

MILESTONE CONTROL NO: T2D-95-103

MILESTONE CLASS:
[ ] TPA _____
[ ] DOE-HQ
[X] DOE-RL
[ ] CONTRACTOR

DELIVERABLE:
[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)
_____

ADDRESSED TO:
[ ] DOE-HQ
[X] DOE-RL
[ ] OTHER (SPECIFY)
_____

Description and what constitutes completion of this commitment:

The Draft Technical Basis Strategy will contain two elements: an outline of the technical basis for performing waste characterization and a detailed strategy for optimizing characterization within the constraints of the technical basis. The technical basis for performing characterization will be described with reference to characterization information derived from sampling and analysis, historical information, waste modeling and experimentation, monitoring, surveillance and other sources.
The basis description will include current methods of obtaining and evaluating information from the varioius sources. The strategy will include an outline of the means by which confidence in each element of the technical basis is being increased or better defined. The strategy will take into account the needs driving characterization for all major elements of TWRS. The strategy will define tactics for maximizing the effectiveness of the Characterization program in meeting characterization needs for all TWRS issues. The strategy will consider the priorities of needs (e.g. safety is most important) and how changing priorities in the future will be handled. The draft will be presented to and discussed with the DNFSB, Ecology, RL, affected TWRS programs, and contractors involved in tank waste characterization activities.

Acceptance Criteria:

The draft strategy will require review by TWRS Characterization Program, TWRS Process Engineering, TWRS Safety, TWRS Pretreatment Program, TWRS Disposal, Ecology, RL, DNFSB, and selected contractors.

Deliverables: (Describe the specific products or condition)

An outline of the draft will be provided to DOE-RL for review by 11/30/94. Comments received by 1/11/95 will be incorporated into the draft document. The Draft Tank Characterization Technical Basis Strategy Document will be transmitted to DOE-RL 2/28/95.

S. J. Eberlein — 9-19-94
Cost Account Manager — Date

C. DeFigh-Price — 9/20/94
Program Element Manager — Date

S. J. Eberlein — 9-19-94
Activity Manager — Date

R. E. Gerton
DOE Monitor — Date

R. E. Gerton
DOE Manager (acceptance) — Date

D5-96

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Final Tank Characterization Technical Basis Strategy Document

SCHEDULE ID: N4E52A02A
REVISION: 0

ASSIGNED TO: Data Evaluation and Reporting
WBS DESIGNATOR: 1.1.1.2.04.05.02.0A

ADS NO: 1130-0-0E
COMPLETION DATE: 5/1/95

MILESTONE CONTROL NO: T2D-95-104

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[X] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY) _____	_____

Description and what constitutes completion of this commitment:
Tank Characterization Technical Basis Strategy Document will be issued following incorporation of comments on the previously issued draft. The Technical Basis Strategy will contain two elements: an outline of the technical basis for performing waste characterization and a detailed strategy for optimizing characterization within the constraints of the technical basis. The technical basis for performing characterization will be described with reference to characterization information derived from sampling and analysis, historical information, waste modeling and experimentation, monitoring, surveillance and other sources. The basis description will include current methods of obtaining and evaluating information from the varioius sources. The strategy will include an outline of the means by which confidence in each element of the technical basis is being increased or better defined. The strategy will take into account the needs driving characterization for all major elements of TWRS. The strategy will define tactics for maximizing the effectiveness of the Characterization program in meeting characterization needs for all TWRS issues. The strategy will consider the priorities of needs (e.g. safety is most important) and how changing priorities in the future will be handled. The strategy will incorporate comments derived from discussions of the draft document with the DNFSB, Ecology, RL, affected TWRS programs, and contractors involved in tank waste characterization activities. Following document release, the strategy will be implemented and the technical basis established and annually updated.

Acceptance Criteria

Report must be released as a WHC Supporting Document, meeting all WHC publication standards. Report will address all comments received by 3/31/95.

Deliverables: (Describe the specific products or condition)

Final Tank Characterization Technical Basis Strategy Document.

S. J. Eberlein — 9-19-94
Cost Account Manager — Date

C. DeFigh-Price — 9/20/94
Program Element Manager — Date

S. J. Eberlein — 9-19-94
Activity Manager — Date

R. E. Gerton
DOE Monitor — Date

R. E. Gerton
DOE Manager (acceptance) — Date

D5-17

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Establish Tank Characterization Technical Basis

SCHEDULE ID: N4E52A03A
REVISION: 0

ASSIGNED TO: Data Evaluation and Reporting
WBS DESIGNATOR: 1.1.1.2.04.05.02

ADS NO: 1130-0-0E
COMPLETION DATE: 7/1/95

MILESTONE CONTROL NO: T2D-95-105

MILESTONE CLASS:
[ ] TPA _____
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

DELIVERABLE:
[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)
_____

ADDRESSED TO:
[ ] DOE-HQ
[ ] DOE-RL
[X] OTHER (SPECIFY)
Program Manager

Description and what constitutes completion of this commitment:

The current technical basis for performing characterization will be defined in detail, with all supporting information (e.g. statistical analysis of existing data) documented in the technical basis document. The technical basis for characterization of TWRS waste tanks will be established, and described in this document. The technical basis for performing characterization will be described with reference to:

- characterization information derived from sampling and analysis
- characterization information derived from historical information
- characterization information derived from waste modeling and experimentation
- characterization information derived from monitoring, surveillance and other sources.

An outline of the starting point of the technical basis will be provided by 10/15/94, listing assumptions, constraints, issues and outlines of plans for improving the basis. Comments on this outline received by 12/1/94 will be used to refine the plans for improving the technical basis. The plans to improve the basis will be implemented and the resulting information integrated into the basis. This will result in the development of the complete technical basis document. The technical basis document includes details of the plans for ongoing improvement of the technical basis. Methods for increasing confidence in each element of the basis (as outlined in the strategy) will be covered in the technical basis document. The document will summarize the effort to date in establishing the basis and areas where significant uncertainty still exists. The technical basis will be established initially with reference to safety drivers. Subsequent updates will include support of other disposal drivers. The technical basis will be reissued annually as the TWRS system engineering basis evolves. This document will become the backbone for the annual Tank Waste Analysis Plan.

Acceptance Criteria:

The Tank Characterization Technical Basis document requires the TWRS Characterization Program Manager's approval.

Deliverables: (Describe the specific products or condition)

An outline of the content of the technical basis document will be developed and transmitted to DOE-RL by 10/15/94. DOE-RL will transmit the outline to DNFSB for comment. A draft document will be provided to DOE by 4/14/95. Comment received by 5/26/95 will be incorporated. The Tank Characterization Technical Basis document (first release) will be provided to DOE-RL by 7/1/95.

S. J. Eberlein — 9-19-94
Cost Account Manager — Date

C. DeFigh-Price — 9/20/94
Program Element Manager — Date

S. J. Eberlein — 9-19-94
Activity Manager — Date

N/A
DOE Monitor — Date

N/A
DOE Manager (acceptance) — Date

D5-78

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: DNFSB COMMITMENT 1.23, IDENTIFY "BOUNDING TANKS" FOR DISPOSAL

SCHEDULE ID: N4E52B01A
REVISION: 0

ASSIGNED TO: Data Evaluation and Reporting
WBS DESIGNATOR: 1.1.1.2.04.05.02

ADS NO: 1130-0-0E
COMPLETION DATE: 11/30/94

MILESTONE CONTROL NO: T2D-95-106

MILESTONE CLASS:

[ ] TPA _____
[ ] DOE-HQ
[X] DOE-RL DNFSB 1.23
[ ] CONTRACTOR

DELIVERABLE:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)
_____

ADDRESSED TO:

[ ] DOE-HQ
[X] DOE-RL
[ ] OTHER (SPECIFY)
_____

Description and what constitutes completion of this commitment:

Identify bounding tanks for disposal. Using historical data and recent characterization results, determine how tanks may be grouped due to similarities in physical or chemical properties. Consider waste properties that drive retrieval, pretreatment and processing decisions. Document the primary properties that drive grouping/identification of bounding tanks for each type of need (e.g. retrieval, pretreatment). Provide reference to other documents showing the need to understand the particular parameter in question, or briefly describe logic used to select that parameter as important. Use historical information to identify waste streams likely to exhibit limiting properties for each type of need, and waste streams likely to dominate waste processing due to volume or other considerations. Use similarities in waste stream properties (overall) or in specific bounding parameters to group waste streams and limit the overall number of waste types as far as possible. Identify tanks which may be considered representative of a group or a particular waste stream. Identify tanks which may provide upper bounds of important properties.

Acceptance Criteria:

1) The bounding tank report must identify assumptions or incomplete information which may cause the conclusions to change.
2) The bounding tank report must list specific tanks, prioritized in terms of overall contribution of information, that may be used to direct characterization efforts.

Deliverables: (Describe the specific products or condition)

A report from the Characterization Program to DOE-RL will document the identification of bounding tanks, and the limiting criteria for each application area (e.g. pretreatment, retrieval). A draft report will be issued for comment by 9/30/94. Comments received by 11/1/95 will be incorporated into the final report. The final report will be transmitted to DOE-RL by 11/16/94 to be forwarded to DNFSB. The final reports will be provided as a WHC document for sponsor limited release.

S. J. Eberlein 9-19-94
Cost Account Manager Date

C. DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-79

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Develop Waste Status & Transaction Record Summary (WSTRS), Tank Layer Model and Inventory Estimates for Northwest Quadrant

SCHEDULE ID: N4E53A01A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-0E

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 12/1/94

MILESTONE CONTROL NO: T2D-95-107

MILESTONE CLASS:

[ ] TPA _____
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

DELIVERABLE:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)
_____

ADDRESSED TO:

[ ] DOE-HQ
[ ] DOE-RL
[X] OTHER (SPECIFY)
Characterization Support

Description and what constitutes completion of this commitment:
Creation and verification of transaction record summaries for single shell tanks in the Northwest quadrant (T, TX and TY Farms). Preparation of Tank Layer Model estimates based on this information, which is a description of tank sediments in terms of type and chronology. Finally, an estimate of the inventory of each tank will be provided upon integration of the TLM information with that from the Defined Wastes report, LA-UR-94-2657. This is a carry over task from FY 94 and will be completed 12/1/94. Included within this task is some checking of the predictions for this quadrant against analytical information.

Acceptance Criteria
Tank Layer Model and Inventory Estimates shall be provided in a form easily incorporated into the HTCE supporting documents.

Deliverables: (Describe the specific products or condition)
WSTRS Report and associated Tank Layer Model and Inventory Estimates for Northwest Quadrant .

Signed per telefax
S. F. Agnew for 9-20-94
Cost Account Manager — Date

C. DeFigh-Price 9-22-94
Program Element Manager — Date

S. J. Eberlein 9-19-94
Activity Manager — Date

N/A
DOE Monitor — Date

N/A
DOE Manager (acceptance) — Date

DS-80

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Develop Waste Status & Transaction Record Summary (WSTRS), Tank Layer Model and Inventory Estimates for Southeast Quadrant

SCHEDULE ID: N4E53A02A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-0E

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 4/1/95

MILESTONE CONTROL NO: T2D-95-108

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	Characterization Support

Description and what constitutes completion of this commitment:

Creation and verification of transaction record summaries for double shell tanks in the Southeast quadrant (AN, AP, AW, AY, AZ and SY Farms). Preparation of Tank Layer Model (TLM) estimates based on this information, which is a description of tank sediments in terms of type and chronology. A supernatant mixing model will also be created and used to derive predictions for all tank supernatants, not just the SE DST quadrant. This supernatant mixing model (SMM) will be derived for each tank for the entire tank farm history. Finally, an estimate of the inventory of each tank will be provided upon integration of the TLM and SMM information with that from the Defined Wastes report, LA-UR-94-2657. This task will be completed 4/1/95. Included within this task is some checking of the predictions for this quadrant against analytical information.

Acceptance Criteria

Tank Layer Model and Inventory Estimates shall be provided in a form easily incorporated into the HTCE supporting documents.

Deliverables: (Describe the specific products or condition)

WSTRS Report and associated Tank Layer model and Inventory Estimates for Southeast Quadrant .

Signed per telefax S. F. Agnew 9-20-94
S. F. Agnew
Cost Account Manager — Date

C. DeFigh-Price 9-22-94
C. DeFigh-Price
Program Element Manager — Date

S. J. Eberlein 9-19-94
S. J. Eberlein
Activity Manager — Date

N/A
DOE Monitor — Date

DOE Manager (acceptance) — Date

D5-81

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Perform Statistical Quality Assurance Review of Waste Status & Transaction Record Summary (WSTRS)

SCHEDULE ID: N4E53A03A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-0E

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 9/30/95

MILESTONE CONTROL NO: T2D-95-109

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	Characterization Support

Description and what constitutes completion of this commitment:
A statistical analysis of the transaction record summary data will be developed and performed. In particular, the volume of traffic for each tank for each quarter will be evaluated and compared with any unknown transactions that may have occurred for that quarter. Using this per cent unknown traffic, the uncertainty will be used as a basis for a confidence level of what is in a tank. Thus, each tank's supernatant description will comprise a certain percentage of "unknown" liquid.

Acceptance Criteria
Report shall clearly indicate the source and reliability of data describing each tank farm.

Deliverables: (Describe the specific products or condition)
Report the results of the evaluation in a letter report to WHC by 9/23/95 for transmittal to DOE-RL by 9/30/95.

signed per telefax S J Eberlein 9-20-94
S. F. Agnew
Cost Account Manager — Date

C. DeFigh-Price 9-22-94
C. DeFigh-Price
Program Element Manager — Date

S J Eberlein 9-19-94
S. J. Eberlein
Activity Manager — Date

N/A
DOE Monitor — Date

N/A
DOE Manager (acceptance) — Date

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Revise and Update the Defined Wastes Report, LA-UR-94-2657

SCHEDULE ID: N4E53A07A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-OE

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 9/30/95

MILESTONE CONTROL NO: T2D-95-112

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY) Characterization Support
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	

Description and what constitutes completion of this commitment:

Inclusion of additional species and update of Defined Wastes report will be performed. Other corrections and improvements will also be incorporated into the Define Wastes Report and a updated revision of the report will be issued, as well as updated estimates for all the tanks based on these revisions. Checking of these results against analytical data will begin in order to further define the confidence level of these estimates. This checking task will not be completed until FY 96.

Acceptance Criteria

Report shall incorporate all available information concerning additional analytes provided in the list.

Deliverables: (Describe the specific products or condition)

Formal LANL report will be delivered to WHC by 9/23/95 for transmittal to DOE-RL by 9/30/95.

signed per telefax S J Eberlein 9-20-94
S. F. Agnew
Cost Account Manager Date

C DeFigh-Price 9-22-94
C. DeFigh-Price
Program Element Manager Date

S J Eberlein 9-19-94
S. J. Eberlein
Activity Manager Date

N/A
DOE Monitor Date

N/A
Manager (acceptance) Date

DOE

D5-83

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Establish Data Control Measures for Tank Characterization Data

SCHEDULE ID: N4E55C01A
REVISION: 0

ASSIGNED TO: TWRS Database Improvements
WBS DESIGNATOR: 1.1.1.2.04.05.05

ADS NO: 1130-0-0E
COMPLETION DATE: 2/28/95

MILESTONE CONTROL NO: T2D-95-113

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY)	Program Manager

Description and what constitutes completion of this commitment:

Data control measures are required to ensure that characterization data is handled consistently and that methods for reconciling inconsistencies between information in multiple databases are available. This milestone is complete when

1) a single point of contact has been established for all characterization data issues;
2) an advisory board is established;
3) a letter documenting these activities and outlining the role of the point of contact and advisory board is transmitted to the Characterization Program.

Acceptance Criteria:

The role of the single point of contact and advisory board must be consistent with the roles defined in the Characterization Data Management Improvement Plan (WHC-SD-WM-WP-276). The letter shall include a description of the plan for implementation of the point of contact and advisory board responsibilities.

Deliverables:

Provide a letter to the WHC Characterization Program by 2/21/95, for transmittal to DOE-RL by 2/28/95, identifying the single point of contact and advisory board and their roles and responsibilities.

M. R. Schmidt 9-20-94
Cost Account Manager Date

C. DeFigh-Price 9-22-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

N/A
DOE Monitor Date

N/A
DOE Manager (acceptance) Date

D5-84

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Develop Data Accessibility Improvement Plan

SCHEDULE ID: N4E55C02A
REVISION: 0

ASSIGNED TO: TWRS Database Improvements
WBS DESIGNATOR: 1.1.1.2.04.05.05

ADS NO: 1130-0-0E
COMPLETION DATE: 9/30/95

MILESTONE CONTROL NO: T2D-95-114

MILESTONE CLASS:
[ ] TPA _____
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

DELIVERABLE:
[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[X] OTHER (SPECIFY)
Data Access Mechanisms

ADDRESSED TO:
[ ] DOE-HQ
[ ] DOE-RL
[X] OTHER (SPECIFY)
Program Manager

Description and what constitutes completion of this commitment:

Characterization data must be available in a common resource center. This information must be readily accessible to the Hanford community. The availability of the data must be communicated to potential users. The milestone is complete when
1) a plan for a data resource center is in place;
2) data availability communications are improved;
3) a report is provided detailing the resource center implementation plan and the plan for continued improved communication to data users.

Acceptance Criteria:

The resource center plan must make use of existing Hanford data centers and integrate the characterization data with other tank information. The communications plans must ensure that data end users within TWRS and other Hanford support organizations are provided with information regarding available data and how to access it.

Deliverables:

A report shall be provided to the Characterization Program detailing the resource center implementation plan and the plan for continued improved communication to data users by 9/23/95, for transmission to DOE-RL by 9/30/95.

M. R. Schmidt — 9-20-94
Cost Account Manager — Date

C. DeFigh-Price
Program Element Manager — Date

S. O. Eberlein — 9-19-94
Activity Manager — Date

N/A
DOE Monitor — Date

N/A
DOE Manager (acceptance) — Date

D5-85

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

TITLE: DNFSB COMMITMENT 1.19, DEVELOP STATISTICAL TOOLS NECESSARY TO SUPPORT DECISIONS RELATIVE TO THE AMOUNT OF SAMPLES NEEDED

SCHEDULE ID: N4E51A02A
REVISION: 0

ASSIGNED TO: Data Evaluation and Reporting
WBS DESIGNATOR: 1.1.1.2.04.05.01

ADS NO: 1130-0-0E
COMPLETION DATE: 12/30/94

MILESTONE CONTROL NO: T2D-95-117

MILESTONE CLASS:
[ ] TPA _____
[ ] DOE-HQ
[X] DOE-RL DNFSB 1.19
[ ] CONTRACTOR

DELIVERABLE:
[ ] REPORT
[X] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)

ADDRESSED TO:
[ ] DOE-HQ
[x] DOE-RL
[ ] OTHER (SPECIFY)
_____

Description and what constitutes completion of this commitment:

Develop statistical tools necessary to support decisions relative to the number of samples needed. This activity will start with the model developed for tank 241-B-110. It will provide needed supplementary information to update the Data Quality Objectives performed in FY 1994, to better focus on how many samples are required for a specific issue. The key deliverable will be a PC-based computer program that will allow a user to explore the effects of altering sampling strategy on confidence level. The program will be oriented toward the technical user who is not a statistician. The program will be designed to assist the user in understanding the multiple sources of variability that contribute to uncertainty in sampling and analysis. The program is very specifically NOT intended to duplicate complex statistical analysis tools already available for use by the trained statistician. The computer program will provide access to sampling and analysis data for one or more tanks.

Acceptance Criteria

The program must be useable by a non-statistician with no more than four hours of training. The program must run on a PC class computer. Documentation must be provided for the end user.

Deliverables: (Describe the specific products or condition)

A demonstration of the statisticals tools package will be provided prior to December 1, 1994. A letter will be sent from the Characterization Program to DOE-RL by December 16, 1994 documenting that the tool has been developed, outlining its salient features, and summarizing the results of demonstration of the tool for at least one tank. This letter will also indicate any steps required to make the tool generally available for use at the Hanford site (e.g Information Resource Management requirements).

S. J. Eberlein — 9-19-94
Cost Account Manager — Date

C. DeFigh-Price — 9-20-94
Program Element Manager — Date

S. J. Eberlein — 9-19-94
Activity Manager — Date

R. E. Gerton
DOE Monitor — Date

R. E. Gerton
DOE Manager (acceptance) — Date

D5-86

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Perform Tank Grouping Analysis

SCHEDULE ID: N4E58A04A
REVISION: 0

ASSIGNED TO: Analytic Services Department, PNL
WBS DESIGNATOR: 1.1.1.2.04.05.08

ADS NO: 1130-0-0E
COMPLETION DATE: 8/31/95

MILESTONE CONTROL NO: T2D-95-118

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	_____

Description and what constitutes completion of this commitment:

This task will integrate related activities at WHC and LANL in the development of waste tank grouping strategies. Grouping must consider both physical and chemical properties which provide information on the behavior of the waste matrices. Synthesis of the qualitative and quantitative, and physical and chemical information is expected to provide a method with which characterization data can be assessed. Comparisons of tanks with similar predicted contents will determine the validity of tank grouping. A report will be delivered that summarizes and interprets tank grouping models and identifies techniques for applying grouping strategies to optimize sampling and analysis activities. Groups of suspected similar tanks will be evaluated in the report to determine whether this approach more generally applicable estimates of spatial variability or inventory.

Acceptance Criteria:

The report should describe the analysis methods used, key assumptions and an engineering assessment with regards to implementation. Specific recommendations for how the results of this evaluation should be used in the development and optimization of sampling strategies should be provided.

Deliverables: (Describe the specific products or condition)

A letter report will be provided to the Characterization Program for transmittal to DOE-RL summarizing the qualitative and statistical evaluation and findings of the analysis. The report must be provided to the Characterization Program by PNL by 8/24/95. WHC will provide the report to DOE-RL by 8/31/95.

P. J. Mellinger 9/21/94
Cost Account Manager Date

C. DeFigh-Price 9/20/94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

N/A
DOE Monitor Date

N/A
DOE Manager (acceptance) Date

D5-87

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Prepare White Paper on Methods for Using Historical Data

SCHEDULE ID: N4E58A05A
REVISION: 0

ASSIGNED TO: Analytic Services Department, PNL
WBS DESIGNATOR: 1.1.1.2.04.05.08

ADS NO: 1130-0-0E
COMPLETION DATE: 9/28/95

MILESTONE CONTROL NO: T2D-95-119

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[X] OTHER (SPECIFY) White Paper	_____

Description and what constitutes completion of this commitment:

Develop methods to quantitatively combine historical data, evidence from models, surveillance information, process knowledge, and general physical and chemical principles, with tank sample data to improve the statistical "confidence" in the data and narrowing the domain of decision making. This activity supports development of the technical basis. This process requires some further statistical research and methods development as well as an understanding of the chemical processes in the past. A paper will be developed that documents an evaluation of possible applicable statistical methods including Bayesian methods with the choice of application based on the chemistry. Appropriate methods will be evaluated and developed in FY95 for implementation in FY96. Following preliminary evaluation, the key candidate methods will be selected for further development with real tank waste data. WHC will supply PNL with historical information, model information and analytical data from tank waste. PNL shall provide a preliminary demonstration of key methods applied to one tank by 5/15/95. WHC and DOE-RL shall be invited to this demonstration and shall have the opportunity to review the methods and comment. The results of the demonstration and comments shall be considered in the white paper deliverable.

Acceptance Criteria:

Methods must be applicable to small sample size applications. Potential application of methods must be demonstrated using TWRS specific example. Document must also have an engineering assessment of implementation methods.

Deliverables: (Describe the specific products or condition)

PNL will deliver the white paper to the Characterization program (by 9/21/95) for transmittal to DOE-RL (by 9/28/95) documenting the methods development activities.

P. J. McVinger 9/21/94
Cost Account Manager Date

C. DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

N/A
DOE Monitor Date

N/A
DOE Manager (acceptance) Date

D5-88

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: DNFSB Commitment 1.18, Historical Tank Content Estimate Reports for the Northwest and Southeast Quadrants

SCHEDULE ID: N4E59A01A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.09

ADS NO: 1130-0-0E
COMPLETION DATE: 3/31/95

MILESTONE CONTROL NO: T2D-95-120

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[X] DOE-RL DNFSB 1.18	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY) _____	_____

Description and what constitutes completion of this commitment:
Draft Historical Content Estimate Reports for the NW and SE quadrants will be provided in Fiscal Year 1994. The completion of this milestone is a final document for each quadrant and will cover all tanks in the quadrants.

Acceptance Criteria:
Complete Historical Tank Content Estimate reports for the Northwest and Southeast quadrants of tanks. These content estimates will be based on quantitative transactions analysis, layering models, nominal waste type compositions, and historical sample data. The Fiscal Year 1995 Historical Tank Content Estimates will be similar in format and content to the Historical Tank Content Estimates prepared and released in Fiscal Year 1994. Final documents will meet all WHC publication standards and will be cleared for public release.

Deliverables: (Describe the specific products or condition)
The final reports for the NW quadrant and the SE quadrant will be provided to DOE-RL by the Characterization Program for forwarding to the DNFSB.

FOR C. S. Haller Todd Brown 9/19/94
Cost Account Manager Date

C. DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-89

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: SUBMIT DRAFT TANK WASTE ANALYSIS PLAN ANNUAL UPDATE TO ECOLOGY AND EPA FOR REVIEW (M-44-01C)

SCHEDULE ID: N4E57B03A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.07

ADS NO: 1130-0-0E
COMPLETION DATE: 5/31/96

MILESTONE CONTROL NO: T2D-96-100

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[X] TPA M-44-01C	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:
Prepare and deliver to DOE-RL a draft copy of the annual update to the Tank Waste Analysis Plan (TWAP).

Acceptance Criteria:
The TWAP will cover safety, retrieval, pretreatment and other processing needs; identify sampling and analysis activities projected for the following year; and describe the Tank Characterization Plans (TCPs) that will be issued during the following year. The TWAP will also identify the following year's Tank Characterizations Reports (TCRs) to be submitted and on what type of data they will be based. The TWAP will specify the contents of these TCRs. The TWAP and TCPs will be developed via a DQO process. An outline of the format and content of the TWAP shall be supplied to DOE-RL by 12/15/95, based on the previous year's format and content and any negotiated revisions. DOE-RL shall advise WHC of any changes to the format and content in writing by 1/31/96 to ensure inclusion of the changes in the draft document.

Deliverables: (Describe the specific products or condition)
Five copies of a preliminary draft TWAP will be submitted to RL by 3/25/96 for review. Comments received from RL by 4/22/96 will be incorporated into the draft document. Five copies of the draft TWAP update shall be transmitted to RL on or before 5/15/96 for transmittal to Ecology and EPA by 5/31/96.

FOR C. S. Haller Todd Brown 9/14/94
Cost Account Manager Date

C. DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-90

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: SUBMIT TANK WASTE ANALYSIS PLAN ANNUAL UPDATE TO ECOLOGY AND EPA FOR APPROVAL (M-44-02C)

SCHEDULE ID: N4E57B04A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.07

ADS NO: 1130-0-0E
COMPLETION DATE: 8/31/96

MILESTONE CONTROL NO: T2D-96-101

MILESTONE CLASS:
[X] TPA M-44-02C
[ ] DOE-HQ
[ ] DOE-RL
[ ] CONTRACTOR

DELIVERABLE:
[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)

ADDRESSED TO:
[ ] DOE-HQ
[X] DOE-RL
[ ] OTHER (SPECIFY)

Description and what constitutes completion of this commitment:

Prepare and deliver to DOE-RL the final copy of the annual update to the Tank Waste Analysis Plan (TWAP).

Acceptance Criteria:

The TWAP will cover safety, retrieval, pretreatment and other processing needs; identify sampling and analysis activities projected for the following year; and describe the Tank Characterization Plans (TCPs) that will be issued during the following year. The TWAP will also identify the following year's Tank Characterizations Reports (TCRs) to be submitted and on what type of data they will be based. The TWAP will specify the contents of these TCRs. The TWAP and TCPs will be developed via a DQO process.

Deliverables: (Describe the specific products or condition)

The final TWAP update shall be based on the draft (M-44-01C), submitted 5/31/96, and shall address comments provided on the draft during the four-week review period between 6/1/96 and 7/1/96. Five copies shall be transmitted to RL by 8/15/96 for transmittal to Ecology and EPA by 8/31/96.

FOR C. S. Haller Isabel Brown 9/19/94
Cost Account Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

C. DeFigh-Price 9-20-94
C. DeFigh-Price Date
Program Element Manager

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-91

WHC-SP-1101
WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: ISSUE 40 TANK CHARACTERIZATION REPORTS IN ACCORDANCE WITH THE APPROVED TANK CHARACTERIZATION PLANS. COMPLETE INPUT OF CHARACTERIZATION INFORMATION FOR 40 HLW TANKS TO ELECTRONIC DATABASE(S) (M-44-09)

SCHEDULE ID: N4E54A02A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.04

ADS NO: 1130-0-0E
COMPLETION DATE: 9/30/96

MILESTONE CONTROL NO: T2D-96-102

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[X] TPA M-44-09	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:

Generate and issue 40 Tank Characterization Reports (TCRs) (in accordance with the approved Tank Characterization Plans) in support of TPA milestone M-44-09. These TCRs will integrate tank waste historical data with tank waste analytical data. Update previously issued TCRs as necessary to incorporate new information. TCRs will be cleared for public release.

Acceptance Criteria

1) The Tank Characterization Reports must include both the relevant historical data and the information obtained by the characterization effort in accordance with the approved Tank Characterization Plans. The TCRs will be similar in content and format to that prepared for tank 241-AP-101 and issued as supporting documents. One copy of each TCR will be transmitted to RL for formal submittal to Ecology. All other internal and external distribution of the TCRs will be performed by the Characterization Program.

2) Characterization data for all 40 tanks must be accessible by onsite and offsite stakeholders through the Tank Characterization Database.

Deliverables: (Describe the specific products or condition)

1) Provide a draft to DOE-RL during review process so RL can perform concurrent review.

2) Transmit each new or revised TCR to DOE-RL as it is issued. Provide with each TCR a draft transmittal letter which DOE-RL may use to forward the document to EPA and Ecology.

3) Provide a final letter after transmission of all TCRs to DOE-RL, indicating completion of the milestone and the date that each TCR was transmitted.

FOR C. S. Haller Todd Brown 9/19/94
Cost Account Manager Date

C. DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

DS -92

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Update Tank Characterization Technical Basis

SCHEDULE ID: N4E52A04A
REVISION: 0

ASSIGNED TO: Data Evaluation and Reporting
WBS DESIGNATOR: 1.1.1.2.04.05.02

ADS NO: 1130-0-0E
COMPLETION DATE: 7/1/96

MILESTONE CONTROL NO: T2D-96-103

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY) Program Manager
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	

Description and what constitutes completion of this commitment:

The Tank Characterization Technical Basis document annual update will incorporate the most recent TWRS programmatic strategy evolutions in support of safe storage, treatment and disposal of TWRS waste. The technical basis to date for performing characterization will be defined in detail, with all supporting information documented in the technical basis document. The technical basis for performing characterization will be described with reference to all sources of information (historical, sample analysis, monitoring, modeling, etc.). Improvements to the technical basis since the last release of the document will be described in detail. The technical basis document includes details of the plans for ongoing improvement of the technical basis. Methods for increasing confidence in each element of the basis (as outlined in the strategy) will be covered in the technical basis document. The document will summarize the effort to date in establishing the basis and areas where significant uncertainty still exists. The technical basis will be established with reference to safety and disposal drivers. The technical basis will be reissued annually as the TWRS system engineering basis evolves. This document will become the backbone for the annual Tank Waste Analysis Plan.

Acceptance Criteria:

The Tank Characterization Technical Basis document requires the TWRS Characterization Program Manager's approval.

Deliverables: (Describe the specific products or condition)

A draft document will be provided to DOE by 4/15/96. Comments received by 5/27/96. The Tank Characterization Technical Basis Update will be delivered to DOE-RL by 7/1/96.

S. J. Eberlein 9-19-94
Cost Account Manager Date

C. DeFigh-Price 9/20/94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

N/A
DOE Monitor Date

N/A
DOE Manager (acceptance) Date

D5-93

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Revise and Update the Defined Wastes Report, LA-UR-94-2657

SCHEDULE ID: N4E53A07A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-0E

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 9/30/96

MILESTONE CONTROL NO: T2D-96-104

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY) Characterization Support
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	

Description and what constitutes completion of this commitment:

As part of an ongoing update of the Defined Wastes report, models for Tc-99, I-129, Np-237 and Am-241 will be completed and models for Co-60 and the noble metals will be evaluated. Uncertainties will be estimated for each of the uncertainties and added to the updated version of the report. These uncertainties will be based on comparisons of predictions with analytical data, uncertainties in solubilities of components, and variability of solids accumulations in tanks, and uncertainty in supernatant compositions because of unknown transactions.

Acceptance Criteria

Report shall incorporate all available information concerning additional analytes provided in the list.

Deliverables: (Describe the specific products or condition)

Formal LANL report will be delivered to WHC by 9/23/96 for transmittal to DOE-RL by 9/30/96.

pa telefax SJ Eberlein 9-26-94
S. F. Agnew
Cost Account Manager Date

C DeFigh-Price 9-23-94
C. DeFigh-Price
Program Element Manager Date

SJ Eberlein 9-23-94
S. J. Eberlein
Activity Manager Date

N/A
DOE Monitor Date

N/A
DOE Manager (acceptance) Date

D5-94

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Perform Complete Iteration of Waste Inventories

SCHEDULE ID: N4E53A08A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-OE

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 3/31/96

MILESTONE CONTROL NO: T2D-96-105

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[X] OTHER (SPECIFY)	Characterization Support
	_____	

Description and what constitutes completion of this commitment:

A validation and update of chemicals added wil be performed based on statistical treatment of the comparison of historical waste sample analyses with Inventory Predictions derived from this project. All adjustments in added chemicals will be documented and justified and the result will be updated Inventory Predictions for the Historical Tank Content Estimates (HTCEs).

Acceptance Criteria:

Inventory Estimates shall be in a form easily incorporated into the Historical Tank Content Estimates.

Deliverables: (Describe the specific products or condition)

Inventory estimates for all tanks will be delivered by Los Alamos National Laboratory to WHC by 3/31/96.

per telefax S. F. Agnew — 9-26-94
S. F. Agnew
Cost Account Manager — Date

C. DeFigh-Price — 9-23-94
C. DeFigh-Price
Program Element Manager — Date

S. J. Eberlein — 9-22-94
S. J. Eberlein
Activity Manager — Date

N/A
DOE Monitor — Date

N/A
DOE Manager (acceptance) — Date

D5-95

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Develop Tank Grouping and Sorting Models

SCHEDULE ID: N4E53A11A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-0E

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 7/31/96

MILESTONE CONTROL NO: T2D-96-107

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY) Charaterization Program
[X] CONTRACTOR	[X] OTHER (SPECIFY) Computer Program	

Description and what constitutes completion of this commitment:

Development of schemes for combining tanks into groups because of similar characteristics. Such groupings would be applied to tanks for characterization purposes, as well as for retrieval, pretreatment, and immobilization of the low-level and high-level streams. Therefore, the primary task will be to develop a program that will run as a spreadsheet, allowing user input as to criteria for selection and to produce as output those tanks that meet the criteria. The deliverable will be this program and examples of its application to a variety of schemes.

Acceptance Criteria

Models shall be implemented in a PC-compatible program which is designed to be used by experienced Hanford engineers and scientists.

Deliverables: (Describe the specific products or condition)

Program incorporating tank grouping and sorting models and the supporting documentation shall be provided to WHC by 7/31/96.

per telefax S.J. Eberlein 9-26-94
S. F. Agnew
Cost Account Manager Date

C. DeFigh-Price 9-23-94
C. DeFigh-Price
Program Element Manager Date

S.J. Eberlein 9-23-94
S. J. Eberlein
Activity Manager Date

N/A
DOE Monitor Date

N/A
DOE Manager (acceptance) Date

D5-96

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Develop Quantitative Tank Laydown Model

SCHEDULE ID: N4E53A05A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory
(Chemical Science & Technology Division)

ADS NO: 1130-0-0E

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 7/31/96

MILESTONE CONTROL NO: T2D-96-108

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY) Characterization Support
[X] CONTRACTOR	[X] OTHER (SPECIFY) Program	

Description and what constitutes completion of this commitment:

A quantitative model for predicting the waste configuration or laydown within waste tanks will be developed. This model will be in depth and apply a set of rules based on the physical and chemical characteristics of the waste. These characteristics will include particle size, fluid viscosity, fill rate, solids volume per cent, fill position, and so on. This model will be applied to three single-shell tanks.

Acceptance Criteria:

The computer program shall: 1) be user-friendly; 2) run on PC-compatibles under Microsoft Windows; 3) be documented for general use. The report shall document application of the program to 3 tanks.

Deliverables: (Describe the specific products or condition)

Report on Quantitative Tank Laydown Model, along with implementing program, will be delivered to WHC by 7/24/96 for transmittal to DOE-RL by 7/31/96.

per telefax S. F. Agnew 9-26-94
Cost Account Manager Date

C. DeFigh-Price 9-23-94
Program Element Manager Date

S. J. Eberlein 9-23-94
Activity Manager Date

N/A
DOE Monitor Date

N/A
Manager (acceptance) Date

DOE

D5-97

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Develop Qualitative Tank Laydown Model

SCHEDULE ID: N4E53A04A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-OE

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 1/15/96

MILESTONE CONTROL NO: T2D-96-133

MILESTONE CLASS:

[ ] TPA _____
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

DELIVERABLE:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)
_____

ADDRESSED TO:

[ ] DOE-HQ
[ ] DOE-RL
[X] OTHER (SPECIFY)
Characterization Support

Description and what constitutes completion of this commitment:

A qualitative waste configuration or laydown model will be developed and applied to tanks in U Farm. This model will be a series of "rules" that will allow a qualitative prediction of exactly where in a tank the solids have accumulated following various transactions. This model will be produced and documented in such a way as to allow further application of these rules for all of the waste tanks.

Acceptance Criteria:

Report shall describe the methodology and give the results for U Farm in a manner that will allow transfer of the methodology to other farms.

Deliverables: (Describe the specific products or condition)

Report describing the Qualitative Tank Laydown Model will be delivered to WHC by 1/8/96 for transmittal to DOE-RL by 1/15/96.

per telefax 9-26-94
S. F. Agnew
Cost Account Manager — Date

C. DeFigh-Price 9-23-94
C. DeFigh-Price
Program Element Manager — Date

9-23-94
S. J. Eberlein
Activity Manager — Date

N/A
DOE Monitor — Date

N/A
DOE Manager (acceptance) — Date

D5-98

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: SUBMIT DRAFT TANK WASTE ANALYSIS PLAN ANNUAL UPDATE TO ECOLOGY AND EPA FOR REVIEW (M-44-01D)

SCHEDULE ID: N4E57B05A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.07

ADS NO: 1130-0-0E
COMPLETION DATE: 5/31/97

MILESTONE CONTROL NO: T2D-97-100

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[X] TPA M-44-01D	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:
Prepare and deliver to DOE-RL a draft copy of the annual update to the Tank Waste Analysis Plan (TWAP).

Acceptance Criteria:
The TWAP will cover safety, retrieval, pretreatment and other processing needs; identify sampling and analysis activities projected for the following year; and describe the Tank Characterization Plans (TCPs) that will be issued during the following year. The TWAP will also identify the following year's Tank Characterizations Reports (TCRs) to be submitted and on what type of data they will be based. The TWAP will specify the contents of these TCRs. The TWAP and TCPs will be developed via a DQO process. An outline of the format and content of the TWAP shall be supplied to DOE-RL by 12/15/96, based on the previous year's format and content and any negotiated revisions. DOE-RL shall advise WHC of any changes to the format and content in writing by 1/31/97 to ensure inclusion of the changes in the draft document.

Deliverables: (Describe the specific products or condition)
Five copies of a preliminary draft TWAP will be submitted to RL by 3/24/97 for review. Comments received from RL by 4/21/97 will be incorporated into the draft document. Five copies of the draft TWAP update shall be transmitted to RL on or before 5/15/97 for transmittal to Ecology and EPA by 5/31/97.

FOR C. S. Haller Jodel Brown 9/14/94
Cost Account Manager Date

C. DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-99

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: SUBMIT TANK WASTE ANALYSIS PLAN ANNUAL UPDATE TO ECOLOGY AND EPA FOR APPROVAL (M-44-02D)

SCHEDULE ID: N4E57B06A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.07

ADS NO: 1130-0-0E
COMPLETION DATE: 8/31/97

MILESTONE CONTROL NO: T2D-97-101

MILESTONE CLASS:
[X] TPA M-44-02D
[ ] DOE-HQ
[ ] DOE-RL
[ ] CONTRACTOR

DELIVERABLE:
[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] OTHER (SPECIFY)

ADDRESSED TO:
[ ] DOE-HQ
[X] DOE-RL
[ ] OTHER (SPECIFY)

Description and what constitutes completion of this commitment:

Prepare and deliver to DOE-RL the final copy of the annual update to the Tank Waste Analysis Plan (TWAP).

Acceptance Criteria:

The TWAP will cover safety, retrieval, pretreatment and other processing needs; identify sampling and analysis activities projected for the following year; and describe the Tank Characterization Plans (TCPs) that will be issued during the following year. The TWAP will also identify the following year's Tank Characterizations Reports (TCRs) to be submitted and on what type of data they will be based. The TWAP will specify the contents of these TCRs. The TWAP and TCPs will be developed via a DQO process.

Deliverables: (Describe the specific products or condition)

The final TWAP update shall be based on the draft (M-44-01D), submitted 5/31/97, and shall address comments provided on the draft during the four-week review period between 6/1/97 and 7/1/97. Five copies shall be transmitted to RL by 8/15/97 for transmittal to Ecology and EPA by 8/31/97.

FOR C. S. Haller Jodel Brown 9/19/94
Cost Account Manager Date

C. DeFigh-Price C. DeFigh-Price 9-20-94
Program Element Manager Date

S. J. Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5 - 100

WHC-SP-1101
WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: ISSUE 40 TANK CHARACTERIZATION REPORTS IN ACCORDANCE WITH THE APPROVED TANK CHARACTERIZATION PLANS. COMPLETE INPUT OF CHARACTERIZATION INFORMATION FOR 40 HLW TANKS TO ELECTRONIC DATABASE(S) (M-44-10)

SCHEDULE ID: N4E54A03A
REVISION: 0

ASSIGNED TO: Characterization Support
WBS DESIGNATOR: 1.1.1.2.04.05.04
MILESTONE CONTROL NO: T2D-97-102

ADS NO: 1130-0-OE
COMPLETION DATE: 9/30/97

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[x] TPA M-44-10	[x] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[x] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:

Generate and issue 40 Tank Characterization Reports (TCRs) (in accordance with the approved Tank Characterization Plans) in support of TPA milestone M-44-10. These TCRs will integrate tank waste historical data with tank waste analytical data. Update previously issued TCRs as necessary to incorporate new information. TCRs will be cleared for public release.

Acceptance Criteria

1) The Tank Characterization Reports must include both the relevant historical data and the information obtained by the characterization effort in accordance with the approved Tank Characterization Plans. The TCRs will be similar in content and format to that prepared for tank 241-AP-101 and issued as supporting documents. One copy of each TCR will be transmitted to RL for formal submittal to Ecology. All other internal and external distribution of the TCRs will be performed by the Characterization Program.

2) Characterization data for all 40 tanks must be accessible by onsite and offsite stakeholders through the Tank Characterization Database.

Deliverables: (Describe the specific products or condition)

1) Provide a draft to DOE-RL during review process so RL can perform concurrent review.

2) Transmit each new or revised TCR to DOE-RL as it is issued. Provide with each TCR a draft transmittal letter which DOE-RL may use to forward the document to EPA and Ecology.

3) Provide a final letter after transmission of all TCRs to DOE-RL, indicating completion of the milestone and the date that each TCR was transmitted.

FOR C. S. Haller Todd Brown 9/19/94
Cost Account Manager Date

C. DeFigh-Price C. DeFigh-Price 9-20-94
Program Element Manager Date

S. G. Eberlein 9-19-94
Activity Manager Date

R. E. Gerton
DOE Monitor Date

R. E. Gerton
DOE Manager (acceptance) Date

D5-101

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Update Tank Characterization Technical Basis

SCHEDULE ID: N4E52A05A
REVISION: 0

ASSIGNED TO: Data Evaluation and Reporting
WBS DESIGNATOR: 1.1.1.2.04.05.02.0A

ADS NO: 1130-0-0E
COMPLETION DATE: 7/1/97

MILESTONE CONTROL NO: T2D-97-103

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY)
[X] CONTRACTOR	[ ] OTHER (SPECIFY) _____	Program Manager

Description and what constitutes completion of this commitment:

The Tank Characterization Technical Basis document annual update will incorporate the most recent TWRS programmatic strategy evolutions in support of safe storage, treatment and disposal of TWRS waste. The technical basis to date for performing characterization will be defined in detail, with all supporting information documented in the technical basis document. The technical basis for performing characterization will be described with reference to all sources of information (historical, sample analysis, monitoring, modeling, etc.). Improvements to the technical basis since the last release of the document will be described in detail. The technical basis document includes details of the plans for ongoing improvement of the technical basis. Methods for increasing confidence in each element of the basis (as outlined in the strategy) will be covered in the technical basis document. The document will summarize the effort to date in establishing the basis and areas where significant uncertainty still exists. The technical basis will be established with reference to safety and disposal drivers. The technical basis will be reissued annually as the TWRS system engineering basis evolves. This document will become the backbone for the annual Tank Waste Analysis Plan.

Acceptance Criteria:

The Tank Characterization Technical Basis document requires the TWRS Characterization Program Manager's approval.

Deliverables: (Describe the specific products or condition)

A draft document will be provided to DOE by 4/15/97. Comments received by 6/27/97 will be incorporated. The Tank Characterization Technical Basis Update will be delivered to DOE-RL by 7/1/97.

S. J. Eberlein — 9-19-94
Cost Account Manager — Date

C. DeFigh-Price — 9/20/94
Program Element Manager — Date

S. J. Eberlein — 9-19-94
Activity Manager — Date

N/A
DOE Monitor — Date

N/A
DOE Manager (acceptance) — Date

D5-102

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Archive Los Alamos National Laboratory Generated Historical Data Analyses

SCHEDULE ID: N4E53A12A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-OE

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 9/30/97

MILESTONE CONTROL NO: T2D-97-104

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[x] OTHER (SPECIFY) Characterization Program
[X] CONTRACTOR	[X] OTHER (SPECIFY) Archive Package	

Description and what constitutes completion of this commitment:

Archive all LANL-generated analyses and documents associated with work done for the Hanford Waste Tanks Characterization Program.

Acceptance Criteria

The archive shall be in an easily retrievable form which can be accessed via PC-compatible computers, such as standard format optical disks, i.e., CD-ROMs

Deliverables: (Describe the specific products or condition)

Archive package shall be provided to WHC by 9/30/97.

per telefax S. J. Eberlein 9-26-94
S. F. Agnew
Cost Account Manager Date

C. DeFigh-Price 9-23-94
C. DeFigh-Price
Program Element Manager Date

S. J. Eberlein 9-23-94
S. J. Eberlein
Activity Manager Date

N/A
DOE Monitor Date

N/A
DOE Manager (acceptance) Date

D5-103

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: Apply Quantitative Laydown Model to all Tanks and Prepare Tank Narratives for Historical Tank Content Estimates (HTCEs)

SCHEDULE ID: N4E53A10A
REVISION: 0

ASSIGNED TO: Los Alamos National Laboratory (Chemical Science & Technology Division)

ADS NO: 1130-0-0E

WBS DESIGNATOR: 1.1.1.2.04.05.03

COMPLETION DATE: 3/31/97

MILESTONE CONTROL NO: T2D-97-114

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA	[X] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY) Characterization Support
[X] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:

Application of quantitative waste configuration or laydown model to all waste tanks and composition of a tank narrative for each waste tank. These narratives will be comprise information from the Tank Layering Model, Tank Laydown Model, Supernatant Mixing Model, and the resulting Inventory Estimates for each tank. This will be the final section for the tank specific chapters in the Historical Tank Content Estimate Reports for all four quadrants.

Acceptance Criteria

Tank narratives shall be in a form easily incorporatable into the FY97 HTCE updates.

Deliverables: (Describe the specific products or condition)

Written tank narratives shall be provided to WHC for each tank by 3/31/97.

per telefax S. F. Agnew 9-26-94
S. F. Agnew
Cost Account Manager Date

C. DeFigh-Price 9-23-94
C. DeFigh-Price
Program Element Manager Date

S. J. Eberlein 9-27-94
S. J. Eberlein
Activity Manager Date

N/A
DOE Monitor Date

N/A
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Develop Single-Shell Tank (SST) Retrieval Technology

Schedule ID: R00201A

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: TDB-94-216

Completion Date: 30SEP94

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA M-45-01	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Complete proof of principle and concept feasibility tests on waste dislodging tooling and conveyance systems for the arm based retrieval system to be used in tank 241-C-106 in a scale and/or full size model of a tank, using simulated waste.

Acceptance Criteria:

) test results should indicate that equipment and systems are suitable and capable of carrying out the retrieval quirements established for the project.

Deliverables:

Prepare documentation package consisting of reports to submit to the state of washington as evidence of completion of these tests and evaluations.

E. J. Shen — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
Manager (acceptance)

D6-1

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Evaluation Sub-Surface Barrier Feasibility

Schedule ID: R00300A

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: ~~T2E~~-94-231 TDB

Completion Date: 30SEP94

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA M-45-07A	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Complete a feasibility study of barriers to accomplish the following:

1) Estimate the potential environmental impact of waste storage and retrieval activities without the application of barriers.

2) Establish functional requirements of barriers to minimize the impact associated with the waste storage and retrieval activities.

3) Evaluate the application of existing sub-surface barrier technologies to meet functional requirements or barriers and the potential reduction on environmental impacts from the application of barriers to SST waste storage and retrieval activities.

Acceptance Criteria:

TBD - Acceptance criteria will be established through of negotiations between EPA, Ecology, and DOE.

Deliverables:

Issue a sub-surface barrier feasibility study

G. D. Bazinet Cost Account Manager	Date	G. A. Meyer Program Element Manager	Date
A. Fort ivity Manager	Date	W. R. Wrzesinski DOE Manager (agreement)	Date
W. R. Wrzesinski DOE Manager (acceptance)	Date		

D6-2

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Project W-211 Title I Design for 10-SY

Schedule ID: R0E402-4

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: TDB-94-238

Completion Date: 31MAY95

Milestone Class:

[ ]	TPA	
[ ]	DOE-HQ	
[X]	DOE-RL	
[ ]	CONTRACTOR	

Deliverable:

[X]	REPORT	
[ ]	LETTER	
[ ]	DRAWINGS	
[ ]	Other (Specify):	

Addressed to:

[ ]	DOE-HQ	
[X]	DOE-RL	
[ ]	Other (Specify):	

Description and what constitutes completion of this commitment:

ICF KH issued for approval (IFA) Title I Design Report consisting of tradeoff studies, design drawings, specifications, preliminary construction estimate and schedule for the Waste Retrieval System.

Acceptance Criteria:

As specified in DOE Order 4700.1 Chapter V Part C Section 2e.

Deliverables:

IFA the Title I Design Report

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-3

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Clean Air Act Permitting Requirements for W-211

Schedule ID: R0E101-2

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: TDB-94-265

Completion Date: 31DEC95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Modified CAA Permit		

Description and what constitutes completion of this commitment:

Completion of the required Clean Air Act permit modifications to allow construction and operations of the waste retrieval associated with W-211.

Acceptance Criteria:

Clean Air Act Permit modification in accordance with the W-211 POC checklist, WHC Memo 88110-93-089, to allow waste retrieval under W-211.

Deliverables:

Required Clean Air Act permit modifications to include waste retrieval operations utilizing the W-211 retrieval systems.

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

R. Wrzesinski — Date
Manager (acceptance)

DG-4

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Performance Criteria and Test Specifications for Sub-Surface Barrier Demonstration

Schedule ID: R00311A

Revision: 0

gned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.02.05

ADS No.: 1210-0

Milestone Control No.: T2E-95-100

Completion Date: 31MAR95

Milestone Class:

- [X] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): TWRS Program Management

Description and what constitutes completion of this commitment:

Establish performance criteria and test specifications for demonstration of sub-surface barriers. Ecology, EPA, and DOE will establish and reach agreement or performance criteria, and test specifications to be used for the small scale demonstration of sub-surface barrier technologies.

Acceptance Criteria:

Ecology, EPA, and DOE approval on the performance criteria and test specifications in accordance the TPA Milestone M-45-07-T01.

Deliverables:

Letter documenting the approval.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-5

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Reach Decision to Proceed with Demonstration

Schedule ID: R00310A

Revision: 1

signed to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-~~94-231~~ 95-101

Completion Date: ~~30SEP94~~ 1/31/95

Milestone Class:

[X]	TPA	M-45-07B	
[ ]	DOE-HQ		
[ ]	DOE-RL		
[ ]	CONTRACTOR		

Deliverable:

[ ]	REPORT
[X]	LETTER
[ ]	DRAWINGS
[ ]	Other (Specify):

Addressed to:

[ ]	DOE-HQ
[X]	DOE-RL
[ ]	Other (Specify):

Description and what constitutes completion of this commitment:

Based on the results of the sub-surface barrier feasibility study, Ecology, EPA, and DOE will make a decision on whether to proceed with a sub-scale demonstration. If the decision is negative, then interim milestone M-45-07 will be considered complete.

Acceptance Criteria:

'D - Acceptance criteria will be established through of negotiations between EPA, Ecology, and DOE.

Deliverables:

Issue a letter documenting decision on whether to proceed with a sub-scale demonstration.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

'/. R. Wrzesinski — Date
E Manager (acceptance)

D6-6

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: W-151 FP CONSTRUCTION COMPLETE

Schedule ID: R0D140-1

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-2

Milestone Control No.: T2E-95-102

Completion Date: 29SEP95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC Retrieval Program
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Activity includes all construction efforts needed to complete the mixer pump installation and all ancillary equipment. This activity includes an electrical/instrumentation building, along with a transformer and substation for mixer pump electrical.

Acceptance Criteria:

Approval of the official Acceptance of Construction, Part I.

Deliverables:

Issue a letter to the Waste Retrieval Program Office documenting completion of construction and approval of the Official Acceptance of Construction, Part I.

E. M. Nordquist — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

A. Fort — Date
ivity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-7

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: VENDOR SPECIFICATION/RFP COMPLETE

Schedule ID: R0D230-1

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210

Milestone Control No.: T2E-95-105

Completion Date: 30JUN95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): RFP

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Develop draft systems specification for Waste Retrieval Manipulator System (WRM). Prepare and issue RFPs.

Acceptance Criteria:

Reviewed and approval specification, and issued RFPs.

Deliverables:

Issue a letter to the Waste Retrieval Program documenting release of the WRMS - RFP.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

R. Wrzesinski — Date
DOE Manager (acceptance)

D6-8

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Initiate Long Lead Procurement for Tank 241-SY-101 Waste Retrieval System

Schedule ID: R0E408-2

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: T2E-95-108

Completion Date: 31JUL96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Start Bid Cycle		

Description and what constitutes completion of this commitment:

Initiate the Procurement Package required to obtain fixed price bids for Long Lead Procurement items. Associated with the 241-SY-101 Retrieval System.

Acceptance Criteria:

Initiate Procurement Package associated with early procurement for W-211.

Deliverables:

Initiate Procurement Package.

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-9

WHC TWRS Milestone Description Sheet
WHC-SP-1101

Title: DOCUMENT 1/12 SCALE UNIFORMITY TESTING

Schedule ID: R0ATDS0291

Revision: 0

Assigned to: Pacific Northwest Laboratory

WBS Designator: 1.1.2.05.02.01

ADS No.: 1210-0

Milestone Control No.: T2E-95-120

Completion Date: 03/30/95

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify):

Description and what constitutes completion of this commitment:

Prepare a letter report documenting the mixing behavior of DSTs using mixer pumps from 1/12 scale testing. The report will relate the hydraulic performance of pumps to the uniformity of waste for a range of expected waste properties.

tance Criteria:

Retrieval of the PNL Letter Report incorporating WHC Retrieval Program review comments.

Deliverables:

Report: "One Twelfth Scale Uniformity Testing."

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

n/a — Date
DOE Manager (agreement)

R. Wrzesinski — Date
anager (acceptance)

D6-10

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Submit SST Closure Work Plan to Ecology for Review

Schedule ID: R0B313005A

Revision: 1

gned to: Waste Retrieval

WBS Designator: 1.1.1.2.5.13

ADS No.: 1210-0

Milestone Control No.: T2E-95-121

Completion Date: 1MAY95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Submit draft of SST Closure Work Plan (DOE/RL 89-16, Rev. 1) to Ecology for review. This document will address waste
retrieval, operable units characterization, technology development to support closure, regulatory pathway, and strategy for achieving closure. Issues will be identified and explanation provided as to how the issues are being addressed.

Acceptance Criteria:

DOE-RL approval of document, and transmittal to Ecology.

Deliverables:

DOE/RL 89-16, Rev. 1. (draft)

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wezesinski — Date
DOE Manager (acceptance)

D6-11

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue FY 95 Waste Retrieval Strategy Plan

Schedule ID: R0A100-0AM

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-95-122

Completion Date: 31JAN95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Define the strategy and provide the basis to employ such a strategy to retrieve waste from Hanford Underground storage tanks (USTs) in a safe, environmentally sound, and most effective manner.

Acceptance Criteria:

The strategic plan that describes the fundamental approached applied in achieving the waste retrieval program and project plans; and formulate strategies linking the critical path of goals and objectives established for the waste retrieval program element within the TWRS Program to the level of detail possible for each specific activity.

Deliverables:

A public released document.

L. A. Fort Cost Account Manager	Date	G. A. Meyer Program Element Manager	Date
K. E. McKinney Activity Manager	Date	W. R. Wrzesinski DOE Manager (agreement)	Date
W. R. Wrzesinski DOE Manager (acceptance)	Date		

D6-12

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: FY 96 Waste Retrieval MYWP Submittal

Schedule ID: R0A100-2BM

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-95-123

Completion Date: 31AUG95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): TWRS Program Management
[X]	CONTRACTOR	[X]	Other (Specify): MYWP		

Description and what constitutes completion of this commitment:

Develop and submit Waste Retrieval FY 96 MYWP for inclusion in the TWRS MYWP

Acceptance Criteria:

Accepted MYWP, reviewed by RL.

Deliverables:

TWRS submitted FY 96 MYWP.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-13

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: FY 97 Waste Retrieval ADS Submittal

Schedule ID: R0A100-2AM

Revision: 1

...ned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-95-124

Completion Date: 14APR95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC EPIDs
[X]	CONTRACTOR	[X]	Other (Specify): ADS		

Description and what constitutes completion of this commitment:

Develop and submit FY 97 ADS to RL for inclusion with DOE budget process.

Acceptance Criteria:

Accepted ADSs; reviewed by RL.

Deliverables:

...pted ADS within EPIDs.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-14

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Leak Detection and Monitoring (LDM) Approach Document

Schedule ID: R00213-1A

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.2.05.02.04

ADS No.: 1210-0

Milestone Control No.: T2E-95-125

Completion Date: 18OCT94

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Complete and release the LDM approach document. This document will serve as a the template for working with LDM users/need cases to develop an action plan to address LDM technology needs.
(R00213-1A/MS-1)

ance Criteria:

Reviewed and accepted document by the Retrieval Program.

Deliverables:

The LDM Approach document will be issued to the Retrieval Program.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-15

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Definitive Design (Title II) for Project W-320 106-C Sluicing Demo

Schedule ID: 02E31

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.09

ADS No.: 1210-0

Milestone Control No.: T2E-95-126

Completion Date: 31JUL95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify):		

Description and what constitutes completion of this commitment:

Completion of definitive design consists of the release for construction of all the design media for the Tank 106-C sluicing system. Exceptions to this are media relating to equipment being fabricated under development contract, and the incorporation of vendor engineering, which will be done under Title III.

Acceptance Criteria:

Acceptance criteria as specified in DOE Order 4700.1 Chapter V Part C Section 2F.

Deliverables:

Release of Title 2 Design Package consisting of (Approximately 330 design drawings, 20 procurement and 7 construction specifications) through and engineering data transmittal (EDT) approved for construction submitted to RL.

J. M. Henderson — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-16

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Evaluation of WERC Alternate Technology Reports

Schedule ID: R0B010010A

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.2.05.02.02

ADS No.: 1210-0

Milestone Control No.: T2E-95-127

Completion Date: 30JUN95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The Waste Management Environmental Research Council (WERC) sponsors an annual University Design Challenge to provide solutions to waste management issues. The 1995 Design Challenge is to develop alternate technology solutions for retrieval of waste from single shell tanks. Poster boards, models and reports will be submitted and presented to WERC for evaluation. WERC will issue selected reports to WHC. WHC will evaluate the reports for further development.

Acceptance Criteria:

WERC established evaluation criteria will be applied to university proposals. WHC will apply decision analysis criteria developed through TWRS-SE-4 to complete an evaluation of proposals for further development of alternative technologies.

Deliverables:

Decision Analysis Report evaluating alternate technologies for continued development.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

T. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-17

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue FY 95 Trade Studies & Required Analysis Workscope

Schedule ID: R0A100-6AM

Revision: 0

gned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01.02

ADS No.: 1210-0

Milestone Control No.: T2E-95-128

Completion Date: 31OCT94

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Establish the Retrieval Program detail workscope and schedule for FY 95 Trade Studies/Decision Analysis and Required Analysis based on a priority/need basis.

Acceptance Criteria:

The proposed schedule and performance base for specified Trade Studies/Decision Analysis and Required Analysis is to be reviewed and accepted by the Retrieval Program.

Deliverables:

A letter with an attached proposed change request documenting the basis and schedule for FY 95 workscope, addressed to the Retrieval Program.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

DG-18

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Tank Waste Retrieval Strategy Determination

Schedule ID: R0A100-5AM

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01.02

ADS No.: 1210-0

Milestone Control No.: T2E-95-129

Completion Date: 31JAN95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Determine a strategic technology development and demonstration approach for mobilizing wastes contained in single-shell, double-shell, and miscellaneous underground waste tanks. This is part of the TWRS resolution of top-level program decisions.

Acceptance Criteria:

Reviewed and accepted by the Retrieval Program decision analysis is accordance with TWRS System Engineering Desk Instructions Manual.

Deliverables:

Tank Waste Retrieval Strategy Determination Report to the Retrieval program

L. A. Fort Cost Account Manager — Date	G. A. Meyer Program Element Manager — Date
K. E. McKinney Activity Manager — Date	W. R. Wrzesinski DOE Manager (agreement) — Date
W. R. Wrzesinski DOE Manager (acceptance) — Date	

D6-19

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue TWRS Excess Facilities Interface Requirements Determination

Schedule ID: R0A100-5CM

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01.02

ADS No.: 1210-0

Milestone Control No.: T2E-95-130

Completion Date: 30AUG95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Develop an acceptance criteria for transfer of excess facilities to the Hanford Site-Level Deactivate Facilities function (4.1) ERC for decommissioning and the interface requirements for each TWRS program. This is part of the TWRS resolution of top-level program decision.

Acceptance Criteria:

Reviewed and accepted by the TWRS Program Review Panel decision analysis is accordance with TWRS System Engineering Desk Instructions Manual.

Deliverables:

TWRS Excess Facilities Interface Requirements Determination Report to the Retrieval Program.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-20

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue TWRS Recycle/Reuse Concept Determination

Schedule ID: R0A100-5DM

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01.02

ADS No.: 1210-0

Milestone Control No.: T2E-95-131

Completion Date: 30AUG95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Develop a TWRS strategy to effectively recycle reusable materials to minimize cost and waste generation as part of the TWRS resolution of top-level program decisions.

Acceptance Criteria:

Reviewed and accepted by the TWRS Program Review Panel decision analysis is accordance with TWRS System Engineering Desk Instructions Manual.

Deliverables:

TWRS Recycle/Reuse Concept Determination Report to the Retrieval Program.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-21

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Preliminary Retrieval Program Risk Assessment

Schedule ID: R0A100-6FM

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01.02

ADS No.: 1210-0

Milestone Control No.: T2E-95-132

Completion Date: 29SEP95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Determine and document the Waste Retrieval Programmatic Risk. Develop an approach to deal with those risks, identify and quantify the risks. Provide a Waste Retrieval Risk Management Plan and Risk Watch lists, and the necessary risk assessments reports and risk analysis report.

Acceptance Criteria:

Reviewed and Retrieval Program accepted risk documentation in accordance with TWRS System Engineering Desk Instructions Manual and Risk Assessment.

Deliverables:

The Risk Management Plan and Risk Watch list, and the necessary risk assessment reports and risk analysis report to the Retrieval Program.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Initiate Title I Design for 101-SY W-211 Waste Retrieval System

Schedule ID: R0E402-2

Revision: 1

ned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: T2E-95-240

Completion Date: 28FEB95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): DST Retrieval Projects
[X]	CONTRACTOR	[X]	Other (Specify): Start Design		

Description and what constitutes completion of this commitment:

Initiation of Title I Design.

Acceptance Criteria:

Start Design

L . erables:

n/a

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-23

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Initiate Demonstration Testing of Selected Sub-Surface Barrier Technologies.

Schedule ID: R00311B

Revision: 1

ned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.02.05

ADS No.: 1210-0

Milestone Control No.: T2E-96-100

Completion Date: 31OCT95

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Start testing one or more small scale sub-surface barrier technologies at a Hanford test site. Documentation is to be completed prior to testing, and is to incorporate the performance criteria and test specifications.

Acceptance Criteria:

Completion of construction and initiation of test procedures.

Deliverables:

Letter to RL documenting the completion of TPA Milestone M-45-07-T02.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-24

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Submit Initial Single Shell Tank Retrieval Sequence Document for Ecology Approval

Schedule ID: R00100A

Revision: 1

gned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-96-101

Completion Date: 30SEP96

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA M-45-02A	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Based on the TWRS flow sheet and system models, provide a single-shell tank retrieval sequence document that defines the tank selection criteria, tank selection rationale, reference retrieval methods for each tank, and the estimated retrieval schedules.

ceptance Criteria:

.e retrieval sequence document will reflect the latest revision of the TWRS flow sheet and provide a basis for retrieval project and operations schedules.

Deliverables:

Submit the single-shell tank retrieval document to DOE-RL for approval by Ecology.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

. R. Wrzesinski — Date
DOE Manager (acceptance)

D4-25

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: W-151 ORR/STARTUP COMPLETE

Schedule ID: R0D160-1

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-2

Milestone Control No.: T2E-96-102

Completion Date: 30SEP95

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[X] DOE-RL
[ ] CONTRACTOR

Deliverable:

[ ] REPORT
[X] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

This activity includes all work necessary to prepare for startup of the mixer pumps in tank 101-AZ, including readiness reviews, procedures, etc..

eptance Criteria:

Completion of the Operation Readiness Review and approval to begin operations.

Deliverables:

Issue a letter to the Waste Retrieval Program Office documenting completion of the ORR/Starting activities.

E. M. Nordquist — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-26

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: W-340 PSEL COMPLETE

Schedule ID: R0D470-1

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-96-104

Completion Date: 29DEC95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Develop preliminary safety equipment list for the manipulator retrieval system.

Acceptance Criteria:

A reviewed and accepted PSEL.

Deliverables:

Issue a letter documenting the issuance of the PSEL to the 106-C manipulator retrieval system.

L. A. Fort Cost Account Manager — Date	G. A. Meyer Program Element Manager — Date
K. E. McKinney Activity Manager — Date	W. R. Wrzesinski DOE Manager (agreement) — Date
W. R. Wrzesinski DOE Manager (acceptance) — Date	

D6-27

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete the Safety Assessment for W-211

Schedule ID: R0E104-4

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: TDB-96-105

Completion Date: 31JAN96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Issue draft Safety Assessment for W-211's waste retrieval system. The Safety Assessment will be developed in two parts. Raytheon will develop section for transfer system and all above tank work and LANL will develop section on mixer pump interface issues with the Hydrogen Mitigation Program.

Acceptance Criteria:

Complete draft Safety Assessment document

Deliverables:

Draft Safety Assessment document

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
Manager (acceptance)

D6-28

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Submit Title I Design Report to DOE for Key Decision 2 approval for W-211

Schedule ID: R0E404-2

Revision: 1

.ed to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: T2E-96-106

Completion Date: 30SEP96

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[X] DOE-RL
[ ] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[X] DOE-HQ
[ ] DOE-RL
[ ] Other (Specify):

Description and what constitutes completion of this commitment:

Submit W-211 Title I Design report to DOE-HQ for Key Decision 2 approval. The Title I Design Report approval by DOE-HQ is required by 5/01/95 to support start of Title II design.

Acceptance Criteria:

'1 Title I Design Report in accordance with DOE Order 4700.1 Chapter V, Part C 2e.

Deliverables:

Title I Design Report

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-29

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete RCRA Permitting for W-211

Schedule ID: R0E490-2

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: T2E-96-108

Completion Date: 28JUN96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Modified RCRA Part B Permit		

Description and what constitutes completion of this commitment:

Modification of the tank farms RCRA Part B permit to allow waste retrieval activities associated with W-211.

Acceptance Criteria:

Required RCRA Part B modifications to support W-211 waste retrieval activities.

Deliverables:

Modified RCRA Part B permit for waste retrieval operations associated with W-211

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: DOCUMENT INSTRUMENTATION AND CONTROL STRATEGY FOR DST RETRIEVAL OPERATIONS

Schedule ID: R0ATDS0292

Revision: 0

Assigned to: Pacific Northwest Laboratory

WBS Designator: 1.1.2.05.02.01

ADS No.: 1210-0

Milestone Control No.: T2E-96-120

Completion Date: 05/30/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify):

Description and what constitutes completion of this commitment:

Prepare a report that will identify the functions of the DSTs and define the control strategies based on postulated scenarios, and will describe the operating response to various conditions. The report will relate the demands of the system to commercially available equipment, and will recommend approaches.

Acceptance Criteria:

Receipt of the PNL letter report incorporating WHC Retrieval Program review comments.

Deliverables:

Report: "Instrumentation and Control Strategy for DST Retrieval Operations."

L. A. Fort Cost Account Manager	Date	G. A. Meyer Program Element Manager	Date
K. E. McKinney Activity Manager	Date	n/a DOE Manager (agreement)	Date
W. R. Wrzesinski DOE Manager (acceptance)	Date		

DG-31

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Release SST-Closure Work Plan (DOE/RL 89-16, Rev. 1)

Schedule ID: R0B313005B

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.5.13

ADS No.: 1210-0

Milestone Control No.: T2E-96-122

Completion Date: 31JAN96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Release SST Closure Work Plan (DOE/RL 89-16, Rev. 1). This document will address waste retrieval, operable units characterization, technology development to support closure, regulatory pathway, and strategy for achieving closure. Issues will be identified and explanation provided as to how the issues are being addressed.

Acceptance Criteria:

Incorporation of Ecology comments on draft document, and DOE-RL approval to release document.

Deliverables:

/RL 89-16, Rev. 1.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrezesinski — Date
DOE Manager (acceptance)

D6-32

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue FY 96 Waste Retrieval Strategy Plan

Schedule ID: R0A100-0BM

Revision: 0

...ed to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-96-123

Completion Date: 31JAN96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Define the strategy and provide the basis to employ such a strategy to retrieve waste from Hanford Underground storage tanks (USTs) in a safe, environmentally sound, and most effective manner.

Acceptance Criteria:

The strategic plan that describes the fundamental approached applied in achieving the waste retrieval program and project plans; and formulate strategies linking the critical path of goals and objectives established for the waste retrieval program element within the TWRS Program to the level of detail possible for each specific activity.

...ables:

A public released document.

L. A. Fort Cost Account Manager	Date	G. A. Meyer Program Element Manager	Date
K. E. McKinney Activity Manager	Date	W. R. Wrzesinski DOE Manager (agreement)	Date
W. R. Wrzesinski DOE Manager (acceptance)	Date		

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: FY 98 Waste Retrieval ADS Submittal

Schedule ID: R0A100-2CM

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-96-124

Completion Date: 15APR96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): ADS

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC EPIDs

Description and what constitutes completion of this commitment:

Develop and submit FY 96 ADS for inclusion in the DOE Budget Process.

Acceptance Criteria:

Accepted ADSs, reviewed by RL.

Deliverables:

Accepted ADS written EPIDs.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-34

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: FY 97 Waste Retrieval MYWP Submittal

Schedule ID: R0A100-2DM

Revision: 1

...ied to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-96-125

Completion Date: 30AUG96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): TWRS Program Management
[X]	CONTRACTOR	[X]	Other (Specify): MYWP		

Description and what constitutes completion of this commitment:

Develop and submit Waste Retrieval FY 97 MYWP for inclusion in the TWRS MYWP

Acceptance Criteria:

Accepted MYWP, reviewed by RL.

...rables:

...RS submitted FY 97 MYWP.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-25

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Update of LDM Evaluation Tool

Schedule ID: R00213-3D

Revision: 0

ɹned to: Waste Retrieval

WBS Designator: 1.1.2.05.02.04

ADS No.: 1210-0

Milestone Control No.: T2E-96-126

Completion Date: 26SEP96

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

Deliverable:

[ ] REPORT
[X] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

The interactive LDM Case Evaluation Tool will be updated for use in field testing and evaluation.

Acceptance Criteria:

A reviewed and approved document bt the Retrieval Program.

Deliverables:

A cover letter will transmit/release the update of the LDM Interactive Evaluation Tool to the Retrieval Program.

ɔrt — Date
Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Tank Waste Transfer Mechanism Determination

Schedule ID: R0A100-5BM

Revision: 0

ıned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01.02

ADS No.: 1210-0

Milestone Control No.: T2E-96-127

Completion Date: 31JAN96

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC Retrieval Program
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

Determine mechanism for transfer of tank waste for storage, treatment, and disposal. This is part of the TWRS resolution of top-level program decisions.

Acceptance Criteria:

Reviewed and accepted by the Retrieval Program decision analysis is accordance with TWRS System Engineering Desk Instructions Manual.

Deliverables:

TWRS Waste Transfer Mechanism Determination report to the Retrieval Program.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue the SST Retrieval Technical Requirement

Schedule ID: R0A100-4DM

Revision: 0

.gned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01.02

ADS No.: 1210-0

Milestone Control No.: T2E-96-128

Completion Date: 30SEP96

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Prepare the requirements analysis for the SST Retrieval function and allocate those requirements to the sub-functions and to the identified system elements. The system element interface requirements will be identified and documented in the respective interface control documents (ICD).

Acceptance Criteria:

Reviewed and accepted by the Retrieval Program and TWRS System Engineering. The required documents that conform with the appropriate TWRS System Engineering Desk Instructions Manual for format and content to establish hnical requirements.

Deliverables:

Compilation of the required documents (and index of the supplementary document used to derive the numerical values of performance requirements as well as the basis to develop to minimize technical risk) is a summary report format to the Retrieval Program.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Project W-211 Title II Design for Tank 241-SY-101

Schedule ID: R0E403-2

Revision: 1

ned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: T2E-96-129

Completion Date: 31MAY96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[X]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[X]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

WHC/RL approved and released Title II Design for Tank 241-SY-101 Waste Retrieval System.

Acceptance Criteria:

Tank 241-SY-101 Waste Retrieval Title II Design in accordance with DOE Order 4700.1 Chapter V, Part C 2f.

Deliverables:

Approved Title II Design for Tank 241-SY-101 Waste Retrieval System.

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Evaluation and Demonstration Testing of Small Scale Sub-Surface Barriers

Schedule ID: R00312B

Revision: 1

.gned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-97-100

Completion Date: 30SEP97

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA M-45-07	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

DOE will assess the risk to the environment due to tank waste remediation and evaluate the feasibility of barriers. DOE, with concurrence from Ecology and EPA, will evaluate barrier technology as a means to minimize those risks and demonstrate vendor capabilities to deploy and test barriers in hanford soils. Retrieval of waste from tank 241-C-106 will proceed without a barrier.

ıptance Criteria:

TBD - Acceptance criteria will be established through of negotiations between EPA, Ecology, and DOE.

Deliverables:

A report will be issued summarizing the results of the evaluations and decisions reached by DOE, Ecology, and EPA regarding the use of full-scale sub-surface barriers.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

.R. Wrzesinski — Date
DOE Manager (acceptance)

D6-40

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Results of Sub-surface Barrier Demonstration Evaluation

Schedule ID: R00312A

Revision: 0

)ned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.02.05

ADS No.: 1210-0

Milestone Control No.: T2E-97-101

Completion Date: 31MAR97

Milestone Class:

[X] TPA
[ ] DOE-HQ
[ ] DOE-RL
[ ] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[X] DOE-RL
[ ] Other (Specify):

Description and what constitutes completion of this commitment:

Prepare and evaluate the test data and related information on Sub-surface Barrier Demonstration against the established performance criteria and test specifications.

Acceptance Criteria:

A review and WHC Retrieval Program approved in accordance with TPA milestone M-45-07-T03

)rables:

Issue the results of sub-surface Barrier Demonstration Evaluation report to RL.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-41

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Decision on whether to Proceed with Sub-surface Barrier Program

Schedule ID: R00312C

Revision: 0

gned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.02.05

ADS No.: 1210-0

Milestone Control No.: T2E-97-102

Completion Date: 30JUN97

Milestone Class:

- [X] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Facilitate and reach a decision (Ecology, EPA, and DOE) on whether to proceed with installation of a full-scale sub-surface barrier to support SST Retrieval based on the evaluation of sub-surface barrier demonstration test results.

Acceptance Criteria:

A documented decision on whether to proceed with installation of a full-scale sub-surface barrier effort.

Deliverables:

Issue a letter documenting the decision described as a TPA Milestone M-45-07-T04 to RL.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Establish New Milestones for Sub-Surface Barrier Implementation

Schedule ID: R00311C

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-97-103

Completion Date: 30SEP97

Milestone Class:

- [X] TPA M-45-07C
- [ ] DOE-HQ
- [ ] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): TPA Change Request

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Ecology, EPA, and DOE will negotiate and reach agreement on new milestones to support milestone M-45-07 and a program to install sub-surface barriers in sst farms or individual tanks to support SST retrieval schedules under M-45-00. New milestones will include completion of construction of a full-scale sub-surface barrier in a tank farm, in conjunction with the installation of the retrieval systems pursuant to M-45-04-t03 (complete construction for the initial SST retrieval systems).

Acceptance Criteria:

TBD - Acceptance criteria will be established through of negotiations between EPA, Ecology, and DOE.

Deliverables:

Initiate a change request to the Tri-Party agreement establishing milestones to implement sub-surface barriers.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Submit Annual Update of Single Shell Tank Retrieval Sequence Document for Ecology Approval

Schedule ID: R00100C

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-97-104

Completion Date: 30SEP97

Milestone Class:

[X] TPA M-45-02B
[ ] DOE-HQ
[ ] DOE-RL
[ ] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[X] DOE-RL
[ ] Other (Specify):

Description and what constitutes completion of this commitment:

Based on the TWRS flow sheet and system models, provide a single-shell tank retrieval sequence document that defines the tank selection criteria, tank selection rationale, reference retrieval methods for each tank, and the estimated retrieval schedules.

Acceptance Criteria:

The retrieval sequence document will reflect the latest revision of the TWRS flow sheet and provide a basis for retrieval project and operations schedules.

Deliverables:

Submit the single-shell tank retrieval document to DOE-RL for approval by Ecology.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
TE Manager (acceptance)

D6 - 44

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Conceptual Design for Initial Single-Shell Tank Retrieval Systems

Schedule ID: R00227A

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-97-105

Completion Date: 30APR97

Milestone Class:

[X]	TPA	M-45-04A
[ ]	DOE-HQ	
[ ]	DOE-RL	
[ ]	CONTRACTOR	

Deliverable:

[X]	REPORT
[ ]	LETTER
[ ]	DRAWINGS
[ ]	Other (Specify):

Addressed to:

[ ]	DOE-HQ
[X]	DOE-RL
[ ]	Other (Specify):

Description and what constitutes completion of this commitment:

Develop technical, cost, and schedule baseline to prepare for initial single-shell tank retrieval.

Acceptance Criteria:

Compliance with DOE order 4700.1

Deliverables:

Issue the conceptual design report for the initial single-shell tank retrieval system.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Initiate Sluicing Retrieval of C-106

Schedule ID: 05P3A

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-97-106

Completion Date: 31OCT97

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA M-45-03A	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Design, procure, construct, test, complete all required documentation, obtain all necessary permits and authorizations to initiate sluicing retrieval of tank 241-C-106 to resolve the high-heat safety issue and demonstrate waste retrieval.

Acceptance Criteria:

Compliance with DOE order 4700.1

Deliverables:

Issue a letter documenting the start of tank 241-C-106 retrieval.

J. M. Henderson — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-46

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Salt Cake Sampler Final F & R for the Pilot Scale Retrieval System

Schedule ID: R0F001801

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.2.05.08.02

ADS No.: 1210-0

Milestone Control No.: T2E-97-107

Completion Date: 31DEC96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Waste Retrieval Program

Description and what constitutes completion of this commitment:

Define the functional requirements of the Salt Cake Sampler and identify design and interface requirements.

Acceptance Criteria:

WHC approval of the Pilot Scale Salt Cake Sampler F & R Document for release.

Deliverables:

Issue the F & R for the Pilot Scale Retrieeval System document.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-47

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: W-340 ADVANCED CONCEPTUAL DESIGN COMPLETE

Schedule ID: R0D173-1

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05

ADS No.: 1210-0

Milestone Control No.: T2E-97-108

Completion Date: 31DEC96

Milestone Class:

[ ] TPA
[X] DOE-HQ
[ ] DOE-RL
[ ] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[X] DOE-RL
[ ] Other (Specify):

Description and what constitutes completion of this commitment:

Perform Trade studies/feasibility studies on conceptual design issues to finalize design alternatives.

Acceptance Criteria:

Complete workscope indentified in the ACD Tank Plan.

Deliverables:

Issue Advance Conceptual Design Report.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
ivity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-48

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Submit Title II Design Package to DOE for Key Decision 3 approval for W-211

Schedule ID: R0E405-2

Revision: 1

...ed to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: T2E-97-109

Completion Date: 31DEC96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [X] DOE-HQ
- [ ] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Submit W-211 Title II Design Package to DOE-HQ for Key Decision 3 approval. The Title II Design Package approval by DOE-HQ is required by 12/31/96 to support start of construction.

Acceptance Criteria:

W-211 Title II Design Package in accordance with DOE Order 4700.1 Chapter V, Part C 2f.

Deliverables:

Title II Design Package

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-49

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Initiate Construction on 101-SY W-211 Waste Retrieval System

Schedule ID: R0E406-2

Revision: 1

...ned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.06

ADS No.: 1210-3

Milestone Control No.: T2E-97-110

Completion Date: 02JAN97

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): Initiate Construction

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): DST Retrieval Projects

Description and what constitutes completion of this commitment:

Initiation of construction of the Waste Retrieval System of Tank 101-SY.

Acceptance Criteria:

Start construction

Deliverables:

n/a

F. J. Muller — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

L. A. Fort — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-50

WHC TWRS Milestone Description Sheet

WHC-SP-1101

WHC-SP-1101

Title: ISSUE RECOMMENDATION FOR MIXER PUMP DEPLOYMENT IN DSTs WITH SHALLOW SLUDGES

Schedule ID: R0ATDS0293

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.2.05.02.01

ADS No.: 1210-0

Milestone Control No.: T2E-97-120

Completion Date: 09/30/97

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Provide a report that recommends mixer pump deployment in DSTs that certain shallow sludges (<3ft. of sludge) based on scale testing result.

Acceptance Criteria:

Receipt of PNL letter report incorporating WHC TWRS Retrieval Program review comments.

Deliverables:

Report: "Final Recommendation for Mixer Pump Deployment and Operations in DSTs Containing Shallow Sludges."

L. A. Fort Cost Account Manager	Date	G. A. Meyer Program Element Manager	Date
K. E. Mckinney Activity Manager	Date	DOE Manager (agreement)	Date
W. R. Wrzesinski DOE Manager (acceptance)	Date		

D6-51

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue FY 97 Waste Retrieval Strategy Plan

Schedule ID: R0A100-0CM

Revision: 0

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-97-122

Completion Date: 31JAN97

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Define the strategy and provide the basis to employ such a strategy to retrieve waste from Hanford Underground storage tanks (USTs) in a safe, environmentally sound, and most effective manner.

Acceptance Criteria:

The strategic plan that describes the fundamental approached applied in achieving the waste retrieval program and project plans; and formulate strategies linking the critical path of goals and objectives established for the waste retrieval program element within the TWRS Program to the level of detail possible for each specific activity.

Deliverables:

A public released document.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: FY 99 Waste Retrieval ADS Submittal

Schedule ID: R0A100-2EM

Revision: 1

Assigned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-97-123

Completion Date: 15APR97

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): ADS

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC EPIDs

Description and what constitutes completion of this commitment:

Develop and submit FY 99 ADS to RL for inclusion in the DOE Budget Process.

Acceptance Criteria:

Accepted ADSs; reviewed by RL.

Deliverables:

Accepted ADS written EPIDs.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-53

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: FY 98 Waste Retrieval MYWP Submittal

Schedule ID: R0A100-2FM

Revision: 1

)ned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01

ADS No.: 1210-0

Milestone Control No.: T2E-97-124

Completion Date: 29AUG97

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

Deliverable:

[ ] REPORT
[ ] LETTER
[ ] DRAWINGS
[X] Other (Specify): MYWP

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): TWRS Program Management

Description and what constitutes completion of this commitment:

Develop and submit Waste Retrieval FY 98 MYWP for inclusion in the TWRS MYWP

Acceptance Criteria:

Accepted MYWP, reviewed by RL.

Deliverables:

.S submitted FY 98 MYWP.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

D6-54

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue the DST Retrieval Technical Requirement

Schedule ID: R0A100-4EM

Revision: 1

gned to: Waste Retrieval

WBS Designator: 1.1.1.2.05.01.02

ADS No.: 1210-0

Milestone Control No.: T2E-~~96-128~~ 97-125

Completion Date: 30SEP97

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): WHC Retrieval Program

Description and what constitutes completion of this commitment:

Prepare the requirements analysis for the DST Retrieval function and allocate those requirements to the sub-functions and to the identified system elements. The system element interface requirements will be identified and documented in the respective interface control documents (ICD).

Acceptance Criteria:

Reviewed and accepted by the Retrieval Program and TWRS System Engineering. The required documents that conform with the appropriate TWRS System Engineering Desk Instructions Manual for format and content to establish ·chnical requirements.

Deliverables:

Compilation of the required documents (and index of the supplementary document used to derive the numerical values of performance requirements as well as the basis to develop to minimize technical risk) is a summary report format to the Retrieval Program.

L. A. Fort — Date
Cost Account Manager

G. A. Meyer — Date
Program Element Manager

K. E. McKinney — Date
Activity Manager

W. R. Wrzesinski — Date
DOE Manager (agreement)

W. R. Wrzesinski — Date
DOE Manager (acceptance)

MDSs for Technology Integration & Planning (1.1.1.3.01.01)

WHC TWRS Milestone Description Sheet

Title: Issue Waste Pretreatment Facility Operations Costs Study

Schedule ID: PMW46270A/PXW46

Revision: 0

Assigned to: Pretreatment Program Office

WBS Designator: 1.1.1.3.01.01.01.05

ADS No.: 1220-00-AA

Milestone Control No.: T3A-95-119

Completion Date: 04/28/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will be considered complete when the Pretreatment Facility Operations Costs Study, issued as a WHC Supporting Document, is transmitted to DOE-RL.

Acceptance Criteria:

Perform a review of the waste pretreatment facility operations cost estimates utilizing cost estimate data from Westinghouse Savannah River for operations of the In-Tank Processing, Extended Sludge Washing, and Defense Waste Processing Plant facilities as a comparison to the current cost estimates in the MYPP facility operations planning and cost information. Include in this review staffing, materials and other resources needed for operational readiness and start-up, operations, and clean-out. Current estimates are based on historical operations costs of like facilities, i.e., B-Plant, PUREX, and the 242A Evaporator. This study will evaluate potential savings from the use of state of the art process controls and facility concepts and use of equipment and instrumentation that requires minimal operational surveillance and preventive maintenance procedures to keep operational.

D7-1

WHC TWRS Milestone Description Sheet

Deliverables:

A draft version of the facility operations cost study will be provided for review by the pretreatment program office by March 31, 1995. The final report will be issued as a WHC supporting document and transmitted to DOE-RL by April 30, 1994.

K.A. Gasper	9/23/94	K.A. Gasper	9/23/94
Cost Account Manager	Date	Program Element Manager	Date
K.A. Gasper	9/23/94	L. Erickson	
Activity Manager	Date	DOE Manager (agreement)	Date
L. Erickson			
DOE Manager (acceptance)	Date		

WHC TWRS Milestone Description Sheet

Title: Complete Pretreatment Input to the FY 1997 ADS Budget Submittal

Schedule ID: PMW46010A/PXW46

Revision: 0

Assigned to: Pretreatment Program Office

WBS Designator: 1.1.1.3.01.01.01.01

ADS No.: 1220-00-AA

Milestone Control No.: T3A-95-124

Completion Date: 06/30/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): ADS Budget Submittal

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

This milestone will be considered complete when the DOE-RL approved Tank Waste Pretreatment ADSs have been submitted to WHC Baseline Integration.

Acceptance Criteria:

Work scope to be included in the ADS is developed from the activities in the Program Master Schedule (MYPP) with detailed narrative describing the workscope in the planning year. Budget and funding levels reconcile to ADS targets.

Deliverables:

The FY 1997 ADS for the Tank Waste Pretreatment Program, ADSs 1220 and 1280.

K.A. Gasper K A Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (acceptance) Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

L. Erickson
DOE Manager (agreement) Date

D7-3

WHC-SP-1101

WHC TWRS Milestone Description Sheet

Title: Complete Pretreatment Input to the FY 1996 Multi-Year Work Plan

Schedule ID: PMW46020A/PXW46

Revision: 0

Assigned to: Pretreatment Program Office

WBS Designator: 1.1.1.3.01.01.01.01

ADS No.: 1220-00-AA

Milestone Control No.: T3A-95-128

Completion Date: 08/30/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Multi-Year Work Plan		

Description and what constitutes completion of this commitment:

This milestone will be considered complete when the TWRS Multi-Year Work Plan is transmitted to DOE-RL.

Acceptance Criteria:

Work scope to be included in the Multi-Year Work Plan is developed from the activities in the Program Master Schedule (MYPP) by breaking down the activities in the MYPP into more detailed units of work for the three year window beginning in FY 1996. Products to be included are WBS Dictionaries written at the activity (Level 5) and cost account (Level 6) levels, program logic and schedules, milestone description sheets, cost baselines in the form of cost account schedules, activity planning forms and basis of estimates. Planning products will comply with DOE-RL standards.

Deliverables:

The FY 1996 Multi-Year Work Plan for the Waste Pretreatment Program, ADSs 1220 and 1280.

K.A. Gasper K.A. Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (acceptance) Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

L. Erickson
DOE Manager (agreement) Date

D7-4

WHC-SP-1101

WHC TWRS Milestone Description Sheet

Title: Complete Pretreatment Input to the FY 1998 ADS Budget Submittal

Schedule ID: PMW46040A/PXW46

Revision: 0

Assigned to: Pretreatment Program Office

WBS Designator: 1.1.1.3.01.01.01.01

ADS No.: 1220-00-AA

Milestone Control No.: T3A-96-119

Completion Date: 06/28/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): ADS Budget Submittal

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

This milestone will be considered complete when the DOE-RI approved Tank Waste Pretreatment ADSs have been submitted to WHC Baseline Integration.

Acceptance Criteria:

Work scope to be included in the ADS is developed from the activities in the Program Master Schedule (MYPP) with detailed narrative describing the workscope in the planing year. Budget and funding levels reconcile to ADS targets.

Deliverables:

The FY 1998 ADS for the Tank Waste Pretreatment Program, ADSs 1220 and 1280.

K.A. Gasper K.A. Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (acceptance) Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

L. Erickson
DOE Manager (agreement) Date

D7-5

WHC TWRS Milestone Description Sheet

Title: Complete Pretreatment Input to the FY 1997 Multi-Year Work Plan

Schedule ID: PMW46050A/PXW46

Revision: 0

Assigned to: Pretreatment Program Office

WBS Designator: 1.1.1.3.01.01.01.01

ADS No.: 1220-00-AA

Milestone Control No.: T3A-96-120

Completion Date: 08/30/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): Multi-Year Work Plan

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

This milestone will be considered complete when the TWRS Multi-Year Work Plan is transmitted to DOE-RL.

Acceptance Criteria:

Work scope to be included in the Multi-Year Work Plan is developed from the activities in the Program Master Schedule (MYPP) by breaking down the activities in the MYPP into more detailed units of work for the three year window beginning in FY 1997. Products to be included are WBS Dictionaries written at the activity (Level 5) and cost account (Level 6) levels, program logic and schedules, milestone description sheets, cost baselines in the form of cost account schedules, activity planning forms and basis of estimates. Planning products will comply with DOE-RL standards.

Deliverables:

The FY 1997 Multi-Year Work Plan for the Waste Pretreatment Program, ADSs 1220 and 1280.

K.A. Gasper K.A. Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

D7-6

WHC-SP-1101

WHC TWRS Milestone Description Sheet

Title: Complete Pretreatment Input to the FY 1999 ADS Budget Submittal

Schedule ID: PMW46070A/PXW46

Revision: 0

Assigned to: Pretreatment Program Office

WBS Designator: 1.1.1.3.01.01.01.01

ADS No.: 1220-00-AA

Milestone Control No.: T3A-97-106

Completion Date: 06/30/97

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): ADS Budget Submittal

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

This milestone will be considered complete when the DOE-RL approved Tank Waste Pretreatment ADSs have been submitted to WHC Baseline Integration.

Acceptance Criteria:

Work scope to be included in the ADS is developed from the activities in the Program Master Schedule (MYPP) with detailed narrative describing the workscope to be performed in the planning year. Budget and funding levels reconcile to ADS targets.

Deliverables:

The FY 1999 ADS for the Tank Waste Pretreatment Program, ADSs 1220 and 1280.

K.A. Gasper K.A. Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (acceptance) Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

L. Erickson
DOE Manager (agreement) Date

D7-7

WHC TWRS Milestone Description Sheet

Title: Complete Pretreatment Input to the FY 1998 Multi-Year Work Plan

Schedule ID: PMW46080A/PXW46

Revision: 0

Assigned to: Pretreatment Program Office

WBS Designator: 1.1.1.3.01.01.01

ADS No.: 1220-00-AA

Milestone Control No.: T3A-97-108

Completion Date: 08/29/97

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Multi-Year Work Plan		

Description and what constitutes completion of this commitment:

This milestone will be considered complete when the TWRS Multi-Year Work Plan is transmitted to DOE-RL.

Acceptance Criteria:

Work scope to be included in the Multi-Year Work Plan is developed from the activities in the Program Master Schedule (MYPP) by breaking down the activities in the MYPP into more detailed units of work for the three year window beginning in FY 1998. Products to be included are WBS Dictionaries written at the activity (Level 5) and cost account (Level 6) levels, program logic and schedules, milestone description sheets, cost baselines in the form of cost account schedules, activity planning forms and basis of estimates. Planning products will comply with DOE-RL standards.

Deliverables:

The FY 1998 Multi-Year Work Plan for the Waste Pretreatment Program, ADSs 1220 and 1280.

K.A. Gasper K A Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

K.A. Gasper K A Gasper 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

D7-8

MDSs for Technology Development & Applied Engineering (1.1.1.3.01.02)

WHC TWRS Milestone Description Sheet

Title: Delivery of the Engineered Form of Crystalline Silicotitanate to PNL

Schedule ID: PTS0635A

Revision: 0

Assigned to: Waste Pretreatment - TDPO

WBS Designator: 1.1.1.3.01.02.01.01

ADS No.: 1220-00-AB

Milestone Control No.: T3A-95-126

Completion Date: 06/30/95

Milestone Class:		Deliverable:			Addressed to:	
[ ]	TPA	[ ]	REPORT		[ ] DOE-HQ	
[ ]	DOE-HQ	[X]	LETTER		[ ] DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS		[X] Other (Specify):	WHC
[X]	CONTRACTOR	[X]	Other (Specify):	Ion Exchange Material		

Description and what constitutes completion of this commitment:

This milestone consists of producing an engineered form of crystalline silicotitanate (CST) which is acceptable for removing cesium in column operations for highly alkaline solutions. A commercial vendor, UOP, will manufacture the engineered form from a previous manufactured batch of powder. Sandia National Laboratory (SNL) will perform preliminary tests on the engineered form to verify its acceptability.

Acceptance Criteria:

A letter to PNL with copy to WHC should accompany the delivery of the material certifying that the powdered form and the engineered form were produced by UOP and have undergone successful preliminary testing by SNL.

Deliverables:

The deliverable is 1 kg of the engineered form of CST to PNL, and a letter certifying its manufacture and testing.

J.T. Slankas John T Slankas 9/23/94
Cost Account Manager — Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager — Date

J.N. Appel John N. Appel 9/23/94
Activity Manager — Date

Performing Manager (Other) — Date

L. Erickson
DOE Manager (acceptance) — Date

L. Erickson
DOE Manager (agreement) — Date

D7-10

WHC TWRS Milestone Description Sheet

Title: FY 1995 Sludge Washing/Alkaline Leach Tests Conducted at PNL

Schedule ID: PTD5000A

Revision: 0

Assigned to: Waste Pretreatment - TDPO

WBS Designator: 1.1.1.3.01.02.03.01

ADS No.: 1220-00-AB

Milestone Control No.: T3A-95-132

Completion Date: 09/29/95

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): WHC

Description and what constitutes completion of this commitment:

This milestone will report progress in sludge washing and alkaline leach tests completed during FY 1995. These tests will consist of small scale batch washing and leaching of approximately 5 gram samples of actual sludges. Eight cores of actual waste will be tested. Chemical analysis of washing and leaching solutions and sludges prior to and after each step will be performed so that component material balances can be included in the report. These component balances will facilitiate the estimation of the high level waste (HLW) glass volume.

Acceptance Criteria:

The draft report will include laboratory data of small scale sludge wash/alkaline leach test on eight cores of actual waste. The data will consist of elemental material balances so that HLW glass volumes may be projected based on composition.

Deliverables:

The deliverable is a draft report issued for WHC review on sludge washing/alkaline leaching tests conducted in FY 1995 by Pacific Northwest Laboratory (PNL).

J.T. Slankas John T Slankas 9/23/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager — Date

J.N. Appel John N. Appel 9/23/94
Activity Manager — Date

Performing Manager (Other) — Date

L. Erickson
DOE Manager (acceptance) — Date

L. Erickson
DOE Manager (agreement) — Date

D7-11

WHC TWRS Milestone Description Sheet

Title: FY 1995 Sludge Washing/Alkaline Leach Tests Conducted at LANL

Schedule ID: PTL5010A

Revision: 0

Assigned to: Waste Pretreatment - TDPO

WBS Designator: 1.1.1.3.01.02.03.02

ADS No.: 1220-00-AB

Milestone Control No.: T3A-95-133

Completion Date: 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC

Description and what constitutes completion of this commitment:

This milestone will report progress in sludge washing and alkaline leach tests completed during FY 1995. These tests will consist of small scale batch washing and leaching of approximately 5 gram samples of actual sludges. Eight cores of actual waste will be tested. Chemical analysis of washing and leaching solutions and sludges prior to and after each step will be performed so that component material balances can be included in the report. These component balances will facilitiate the estimation of the high level waste (HLW) glass volume.

Acceptance Criteria:

The draft report will include laboratory data of small scale sludge wash/alkaline leach test on eight cores of actual waste. The data will consist of elemental material balances so that HLW glass volumes may be projected based on composition.

Deliverables:

The deliverable is a draft report issued for WHC review on sludge washing/alkaline leaching tests conducted in FY 1995 by Los Alamos National Laboratory (LANL).

J.T. Slankas John T Slankas 9/23/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager — Date

J.N. Appel John N. Appel 9/23/94
Activity Manager — Date

Performing Manager (Other) — Date

L. Erickson
DOE Manager (acceptance) — Date

L. Erickson
DOE Manager — Date

D7-12

WHC TWRS Milestone Description Sheet

Title: Issue Report on Laboratory Settling Tests of Tank C-107 Sludge

Schedule ID: PTD5060A

Revision: 0

Assigned to: Waste Pretreatment - TDPO

WBS Designator: 1.1.1.3.01.02.03.08

ADS No.: 1220-00-AB

Milestone Control No.: T3A-95-131

Completion Date: 09/29/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will report on settling tests conducted on tank C-107 actual sludge, or another available tank sludge, by PNl. The report will include data on settling rate, compaction and quality of the supernate for sludge washed with inhibited water, with alkaline solutions and again with inhibited water. Tests will be initiated with approximately one liter of sludge.

Acceptance Criteria:

This draft report will include laboratory data completed on at least one cycle of enhanced sludge washing similar to the latest integrated flowsheet for an actual core of tank C-107.

Deliverables:

The deliverable is a draft report issued for WHC review on settling tests of tank C-107.

J.T. Slankas John T Slankas 9/23/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager — Date

J.N. Appel Jol N. Appel 9/23/94
Activity Manager — Date

Performing Manager (Other) — Date

L. Erickson
DOE Manager (acceptance) — Date

L. Erickson
DOE Manager (agreement) — Date

WHC TWRS Milestone Description Sheet

Title: Start Hot Operations of LLW Pretreatment Facility to Remove Cesium and Strontium

Schedule ID: PLW0101A

Revision: 0

Assigned to: TWRS Operations

WBS Designator: 1.1.1.3.01.03

ADS No.: 1220-00-AD

Milestone Control No.: T3A-05-100

Completion Date: 12/31/04

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA M-50-02	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Activities leading to start of hot operations of the LLW pretreatment facility include completion of: construction activities; inspections and acceptance test procedures; Final Safety Analysis Report; licensing under RCRA and Clean Air Act; operational readiness review for operational testing with waste simulants; and, operational readiness review for hot operations with actual radioactive waste. The operational testing with waste simulants will be conducted to demonstrate a capability to meet technical performance goals approved in the project and TWRS baselines prior to turnover of the plant to operations for start of hot operations.

Acceptance Criteria:

The chief criteria are completion of the requirements of: Key Decision 4 - Approval to Commence Operations/Production per DOE Order 4700.1, Project Management System; completion of an operational readiness review pre DOW Standard 3006-93, Planning and Conduct of Operational Readiness Review; and meeting the facility startup requirements set forth in DOE Order 5480.31, Startup and Restart of Nuclear Facilities and receipt of operating licenses from the regulatory agencies. Meeting these requirements by the operating contractor will serve as the basis for DOE approval of the operating contractor to start hot operations of the LLW pretreatment facility. Following approval by DOE, mixed waste feed from Tank Farms will be introduced into the LLW pretreatment facility.

Deliverables:

Prior to start of hot operations, a letter will be transmitted to DOE-RL signifying completion of the operational readiness review in accordance with DOE Standard 3006-93 and identifying that all conditions and recommendation of the DOE operational readiness evaluation have been met. The letter will also request approval to transfer mixed waste feed to the LLW pretreatment facility. Upon DOE approval, the operating contractor will introduce mixed waste to the LLW pretreatment facility to startup hot operations. The deliverable will be a transmittal letter to DOE-RL documenting startup of hot operations.

K.A. Gasper K A Gasper 9/23/94
Date

Cost Account Manager

K.A. Gasper K A Gasper 9/23/94
Date

Activity Manager

L. Erickson
Date

DOE Manager (acceptance)

K.A. Gasper K A Gasper 9/23/94
Date

Program Element Manager

L Erickson
Date

DOE Manager (agreement)

D7-14

WHC TWRS Milestone Description Sheet

Title: Start Hot Operations of HLW Pretreatment Facility

Schedule ID: PHW0100

Revision: 0

Assigned to: TWRS Operations

WBS Designator: 1.1.1.3.01.03

ADS No.: 1220-00-AD

Milestone Control No.: T3A-08-100

Completion Date: 6/30/08

Milestone Class:

[X] TPA M-50-04
[ ] DOE-HQ
[ ] DOE-RL
[ ] CONTRACTOR

Deliverable:

[ ] REPORT
[X] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[X] DOE-RL
[ ] Other (Specify):

Description and what constitutes completion of this commitment:

Activities leading to start of hot operations of the HLW pretreatment facility include completion of: construction activities; inspections and acceptance test procedures; Final Safety Analysis Report; licensing under RCRA and Clean Air Act; operational readiness review for hot operations with actual radioactive waste. The operational testing with waste simulants will be conducted to demonstrate a capability to meet technical performance goals approved in the project and TWRS baselines prior to turnover of the plant to operations for start of hot operations.

Acceptance Criteria:

The chief criteria are completion of the requirements of: Key Decision 4 - Approval to Commence Operation/Production per DOW Order 4700.1, Project Management System; completion of an operational readiness review per DOE Standard 3006-93, Planning and Conduct of Operational Readiness Reviews; and meeting the facility startup requirements set forth in DOE Order 5480.31, Startup and Restart of Nuclear Facilities and receipt of operating licenses from the regulatory agencies. Meeting these requirements by the operating contractor will serve as the basis for DOE approval of the operating contractor to start hot operations of the HLW pretreatment facility. Following approval by DOE, mixed waste feed from Tank Farms will be introduced into the HLW pretreatment facility.

Deliverables:

Prior to start of hot operations, a letter will be transmitted to DOE-RL signifying completion of the operational readiness review in accordance with DOE Standard 3006-93 and identifying that all conditions and recommendation of the DOE operational readiness evaluation have been met. The letter will also request approval to transfer mixed waste feed to the HLW pretreatment facility. Upon DOE approval, the operating contractor will introduce mixed operations will be provided in a transmittal letter to DOE-RL which will constitute the final deliverable for this milestone.

WHC TWRS Milestone Description Sheet

K.A. Gasper K.A. Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Preliminary Recommendation on Evaluation of Enhanced Sludge Washing to Determine Whether Advanced Sludge Separation Process are Required

Schedule ID: PSW04418A

Revision: 0

Assigned to: TWRS Strategic Analysis

WBS Designator: 1.1.1.3.01.04

ADS No.: 1220-00-AF

Milestone Control No.: T3A-96-110

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone supports completion of TPA M-50-03 "Complete evaluation of enhanced sludge washing to determine whether advanced sludge separation processes are required" by 03/31/98. The performance of sludge washing and related tank waste sludge pretreatment methods will be evaluated to determine if these processes will be capable of satisfying criteria which will be established during FY 1995. A decision methodology will be developed with stakeholder participation and implemented. A preliminary recommendation will be developed based on data available during FY 1996 which will:

- Provide a basis for a decision on the need for advanced sludge separations if a decision is required earlier than the planned date of 03/31/98.
- Provide programmatic guidance to prioritize testing, engineering, and development efforts required to reduce the uncertainty of factors affecting the decision.

Acceptance Criteria:

The acceptance criteria, including the plan for accomplishing this milestone, will be documented i the deliverable submitted to DOE-RL to fulfill TPA Milestone M-50-03A by 09/30/94. A draft of the deliverable will be submitted three months prior to the completion date for review by DOE and stakeholders. A final report approved for external publication will be transmitted to DOE-RL one month prior to the completion date for transmittal to WDOE by the completion date.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverable are:

- A contractor approved draft report transmitted to DOE-RL for review b 06/30/96.
- A final report approved for external publication transmitted to DOE-RL by 08/31/96.

W.B. Barton W B Barton 9/23/94
Cost Account Manager Date

K. A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

MDSs for System Definition (1.1.1.3.01.04)

WHC TWRS Milestone Description Sheet

Title: Heat and Digest Process Evaluation of CC Waste

Schedule ID: PSW04490A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.03.38

ADS No.: 1220-00-AF

Milestone Control No.: TDC-94-316

Completion Date: 06/30/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC Internal
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

A process engineering evaluation will be performed to determine the effectiveness of a heat and digest approach to organic destruction on Tank 101-SY and 107-AN simulant and actual waste. This milestone will be considered complete when the report is approved by WHC.

Acceptance Criteria:

The report will evaluate the results of laboratory scale testing of a heat and digest approach to organic destruction for its feasibility for large scale applications such as Tank 101-SY and 107-AN simulant and actual waste.

Deliverables:

The deliverable is an approved report on the process engineering evaluation of the heat and digest technology for large scale applications.

W.B. Barton Wm. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

D7-20

WHC TWRS Milestone Description Sheet

Title: Define Additional Milestones for Waste Pretreatment Leading to the Decision whether Advanced Sludge Separation Processes are required

Schedule ID: PSW04390A/ PXW04-0A

Revision: 0

Assigned to: TWRS Strategic Analysis

WBS Designator: 1.1.1.3.01.04.03.33

ADS No.: 1220-00-AF

Milestone Control No.: TDC-94-390

Completion Date: 9/30/94

Milestone Class:

- [X] TPA M-50-03A
- [ ] DOE-HQ
- [ ] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

The decision of whether advanced sludge separation processes are required will need the development of information from several TWRS Program Elements, (e.g. Waste Pretreatment, HLW Vitrification, LLW Vitrification, and Waste Retrieval), to determine if enhanced sludge separation processes are required. Some interim information to be included on this schedule may include the development of the decision-making methods. It will also include the schedule to evaluate the performance of enhance sludge washing, acceptance of criteria for making the decision encompassed in TPA Milestone M-50-03 and the decision method to be used.

Acceptance Criteria:

The acceptance criteria for accomplishing this milestone (M-50-03A) will be transmitted to DOE-RL approval three months in advance of the completion date. The Criteria will include the logic and strategy for Milestone M-50-03A. The milestone deliverable will be a contractor report approved for external publication and ready for transmittal to the WDOE by DOE-RL. The report will include a strategy plan and schedule defining additional milestones leading to the decision whether advanced sludge separation processes are required. This decision is encompassed in TPA Milestone M-50-03 scheduled for completion by 3/31/98. The schedule will be based on inputs received from stakeholder including DOE-RL, DOE-HQ, WDOE, and Waste Pretreatment Sub-Panel of Technical Advisory Panel.

Deliverables:

Acceptance criteria for this milestone (M-50-03A) will be transmitted to DOE-RL for approval by 6/30/94. A contractor approved draft report will be transmitted to DOE-RL by 8/15/94 for review by DOE-RL. The report will include a strategy plan and schedule for completing TPA Milestone M-50-03. A final contractor report incorporating DOE comments on the draft report and approved for external publication will be transmitted to DOE-RL by 9/15/94 for transmittal to the WDOE by 9/30/94.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I. E. Reep 9/29/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Issue Reports on Cesium Removal Performance of Resorcinol and CS-100 Resins on Multiple Feeds

Schedule ID: PSW04090A/PLW24-0A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.03.05

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-100

Completion Date: 12/30/94

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA M-50-01-T01	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will report on Hanford Progress on flowsheet development based upon of laboratory testing with Resorcinol-Formaldehyde and CS-100 resins for cesium removal. Based on the laboratory results, WHC will prepare preliminary cesium ion exchange flowsheets on multiple waste streams, which will include double-shell slurry feed (DSSF) and neutralized current acid waste (NCAW) supernatants. These flowsheets will reflect the preliminary requirements of the LLW Pretreatment Facility. A report for each of the flowsheets will be prepared, reviewed and issued for external publication.

Acceptance Criteria:

The acceptance criteria for this milestone includes issuance of contractor approved reports three months prior to the completion date for review by DOE. Comments received by reviewers will be incorporated into the final reports which will be transmitted to DOE-RL one month prior to the completion date. The transmittal letter will provide a comparison of results.

Excellent

Complete flowsheet document covering 14 sections identified in TWRS Process Flowsheet WHC-SD-WM-TI-613, Rev. 0 for each ion exchange resin based upon completion of all FY 1994 planned experimental activities.
Fully address programmatic issues within the report to DOE summarizing the flowsheet. The flowsheet presents a sound basis for facility conceptual design.

Satisfactory

Complete a flowsheet document covering sections 1.0 - 4.0, and 12.0 - 13.0 in TWRS Process Flowsheet WHC-SD-WM-TI-613, Rev. 0 for each ion exchange resin based upon current status of laboratory work. The report to DOE summarizing the flowsheet identifies programmatic issues. The flowsheet presents a reasonable basis for facility conceptual design.

Unsatisfactory

Failure to complete a flowsheet document covering key sections (approximately 6) identified in TWRS Process Flowsheet for each ion exchange resin based upon current status of laboratory work. Failure of the report to identify programmatic issues and lack of a reasonable basis for facility conceptual design.

Basis of Measurement: Fulfillment of the requirements identified in the MYWP MDSs.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverables are:

- Contractor approved reports for DOE review summarizing the flowsheets for removal of cesium from Hanford supernatants using two ion exchange resins; Resorcinol-Formaldehyde (Milestone TDC-94-318) and CS-100 (Milestone TDC-94-317) by 9/30/94.
- A final contractor approved report approved for external publication will be transmitted to DOE-RL by 12/02/94 for transmittal to WDOE by 12/31/94 (Milestone M-50-01-T01).

W.B. Barton W. Blaine Barton 9/23/94		K.A. Gasper K A Gasper 9/23/94	
Cost Account Manager	Date	Program Element Manager	Date
I.E. Reep I E Reep 9/23/94		L. Erickson	
Activity Manager	Date	DOE Manager (agreement)	Date
L. Erickson			
DOE Manager (acceptance)	Date		

D7-23

WHC TWRS Milestone Description Sheet

Title: Issue Report on Current Status of Tank Waste Enhanced Sludge Washing

Schedule ID: PSW04390B/PXW04-1A

Revision: 0

Assigned to: Waste Pretreatment

WBS Designator: 1.1.1.3.01.04.03.33

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-101

Completion Date: 10/31/94

Milestone Class:			Deliverable:			Addressed to:	
[X]	TPA	M-50-03-T01	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ		[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL		[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR		[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will report on Hanford progress in enhanced sludge washing. Included in the scope of this milestone will be the issuance of a plan that will define the tests to be performed on Hanford tank sludges. In addition, the enhanced sludge washing laboratory test results on Hanford sludges completed through the third quarter of the fiscal year will be presented with expected impacts on HLW vitrification. These impacts will be illustrated in a summary of HLW glass volume projections for all Hanford waste types. Finally, the status and results of computer modeling of sludge washing of tank wastes will be presented.

Acceptance Criteria:

The report will include data from all actual tests completed through the third quarter of FY 1994 on sludge washing and enhanced sludge washing and the expected impacts on HLW glass volume. (Because of delay of testing at 325 Lab only two the originally scheduled five tank sample tests have been completed, Tanks 241-B-101 and 241-U-110).

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverables are:

- Letter of transmittal by 09/30/94 with the following documents attached:
  - "Laboratory Development of Sludge Washing and Alkaline leaching Processes: Test Plan for Fy 1994, PNL-9984 of Hanford Tank Sludges: A Status Report," PNL-10078 previously submitted to fulfill Milestone TDC-94-332.
  - Modeling Report (WHC approved document transmittal to DOE for review and approval)
  - "Computer Simulation of Laboratory Leaching and Washing of Tank Waste Sludges" (WHC-SD-XXX), Milestone TDC-94-326
- Final transmittal to RL by 10/24/94.

The letter of transmittal will also contain a summary of HLW glass volume projections for all Hanford Waste types.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Submit Report Summarizing the Testing of Enhanced Sludge Washing and Related Tank Waste Sludge Pretreatment Methods for Samples of Tank Waste Sludge

Schedule ID: PSW04730A/PXW04-1B

Revision: 0

Assigned to: Process Technology

WBS Designator: 1.1.1.3.01.04.03.33

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-102

Completion Date: 09/29/95

Milestone Class:

[X]	TPA	M-50-03-T2A
[ ]	DOE-HQ	
[ ]	DOE-RL	
[ ]	CONTRACTOR	

Deliverable:

[X]	REPORT
[ ]	LETTER
[ ]	DRAWINGS
[ ]	Other (Specify):

Addressed to:

[ ]	DOE-HQ
[X]	DOE-RL
[ ]	Other (Specify):

Description and what constitutes completion of this commitment:

Perform testing of enhanced sludge washing and related tank waste sludge pretreatment methods using actual tank waste samples. Document and issue results of testing completed to that time. This annual report will also document preliminary candidate tank waste pretreatment sequence and tank blending strategies. Goals for both early progress on waste immobilization and minimization of the production of high level glass will be addressed in these strategies.

These preliminary strategies will be utilized to predict the production of high level waste glass associated with candidate enhanced sludge washings and related tank waste sludge pretreatment methods. The prediction of the HLW glass volume production will be updated.

Acceptance Criteria:

The report will include the latest laboratory data available on sludge washing and enhanced sludge washing, and the expected impacts on HLW glass volume will be provided.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverables are:

- Contractor approved report to DOE-RL for review and comment by 08/15/95.
- Final WHC-approved report for external release and transmittal by 9/15/95.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Develop Decision Basis for Evaluation of Enhanced Sludge Washing to Determine Whether Advanced Sludge Separation Processes are Required

Schedule ID: PSW04413A

Revision: 0

Assigned to: TWRS Strategic Analysis

WBS Designator: 1.1.1.3.01.04.03

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-112

Completion Date: 09/30/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

A decision basis will be developed which implements decision methodology and decision criteria developed with stakeholder participation for TPA M-50-03 "Complete evaluation of enhanced sludge washing to determine whether advanced sludge separation processes are required" by 03/31/98. The performance of sludge washing and related tank waste sludge pretreatment methods will be evaluated as part of the decision basis verification process using data available in FY 1995. The initial evaluation results will be used to :

- Provide a basis for a decision on the need for advanced sludge separations if a decision is required earlier than the planned date of 3/31/98.
- Provide programmatic guidance to prioritize testing, engineering, and development efforts required to reduce the uncertainty of factors affecting the decision.

Acceptance Criteria:

The acceptance criteria, including the plan for accomplishing this milestone, will be documented in the deliverable submitted to DOE-RL to fulfill TPA Milestone M-50-03A by 09/30/94. A draft of the deliverable will be submitted three months prior to the completion date for review by DOE and stakeholders. A final report approved for external publication will be transmitted to DOE-RL one month prior to the completion date for transmittal to WDOE by the completion date.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverables are:

- A contractor approved draft report transmitted to DOE-RL for review by 06/30/95.
- A final report approved for external publication transmitted to DOE-RL by 08/31/95.

W.B. Barton Wm. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

I.E. Reep I.E. Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Determine Waste Processing Strategy and Waste Separations Process (4.2.2/4.2.2.1)

Schedule ID: PSW00111A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-136

Completion Date: 09/01/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Internal
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity will provide technical justification (via a trade study) for the "case Beta" separations strategy (i.e. sludge washing and enhanced sludge washing) and establish the basis for additional development work for advance separations. The study will assess four categories of separations alternatives consistent with environmental impact statement (EIS) preparation including no pretreatment, treatment of waste to an intermediate form, enhanced sludge washing and extensive pretreatment separations (e.g., CLEAN). A trade study report will be prepared which includes information gathering, draft document preparation, WHC review, and WHC approval. The commitment will be complete with WHC appoval of the study document according to the appropriate Impact Level (assumed to be N/A or level 4).

Acceptance Criteria:

Acceptance will be provided by WHC approval of the study document.

Deliverables:

One study document will be prepared which addresses the alternatives given above.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager — Date

I.E. Reep I. E. Reep 9/23/94
Activity Manager — Date

L. Erickson
DOE Manager (acceptance) — Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager — Date

L. Erickson
DOE Manager (agreement) — Date

D7-30

WHC TWRS Milestone Description Sheet

Title: White Paper Documenting Trade Study for TWRS Top Level Decision 4.2.3, "Manage System Generated Waste and Excess Facilities"

Schedule ID: PSW04850A

Revision: 0

Assigned to: TWRS System Engineering

WBS Designator: 1.1.1.3.01.04.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-137

Completion Date: 03/03/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Internal
[ ]	CONTRACTOR	[X]	Other (Specify): White Paper		

Description and what constitutes completion of this commitment:

Provide the rationale to validate the architectural selection for the functional decomposition of 4.2.3, "Manage System Generated Waste and Excess Facilities". This decision assumes that some level of treatment, storage, and disposal of TWRS system generated waste would be performed by TWRS programs prior to transfer of these wastes to other site functions. This assumption needs to be validated by examining the total quantity of TWRS system generated waste and comparing that quantity with the receiving and handling capacity of the non-TWRS programs.

Acceptance Criteria:

A short white paper (10 to 20 pages) shall capture the required analysis which answers the question of whether TWRS needs to perform any treatment of the system generated waste prior to transfer of this waste to other site functions. Data from numerous studies and reports, some of which are listed below, will be analyzed and summarized to identify existing and planned sitewide capacity shortfalls.

Related Program Studies/Documents:

1) Hanford Mission Plan
2) Concerning Liquid Effluent:
   - LERF Filtration Study (Tim Moberg)
   - Neutralized Current Acid Waste (NCAW) Pretreatment, WHC-SD-WM-ES-235, April 1993
   - Mission Analysis: TWRS Water Recycle, EDT 601780, (Pretreatment Engr)
   - Study Analysis Session (SAS) Report: TWRS Programs WaterReuse/Recycle
3) Concerning Solid Waste:
   - TWRS & Solid Disposal Interface Control Document, WHC-SD-PICD-003,R 0
   - Long-Length ICDs
   - Solid Waste Acceptance Criteria (see Hanford Info)
   - Solid Waste Program Technical Baseline Description [WHC-SD-WM-RPT-60]
   - Solid Waste Management [WHC-CM-7-5]
   - Annual Solid Waste Volume Forecast
4) Concerning Excess Facilities (Tanks, Building and Structures):
   - TBD

WHC TWRS Milestone Description Sheet

Deliverables:

A WHC-internally issued white paper.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (acceptance) Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

L. Erickson
DOE Manager (agreement) Date

WHC TWRS Milestone Description Sheet

Title: Preliminary Retrieval Sequence Report

Schedule ID: PSW04002A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.02.25

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-139

Completion Date: 09/29/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Internal
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

A preliminary retrieval sequence shall be chosen circa May 1995. This sequence shall be selected from alternatives based upon the metrics estimated by a computer simulation of the TWRS. In the event that the computer simulation is not ready on time, the preliminary sequence can be based upon manual estimation of a subset of the metrics. The selected sequence shall be documented in a report.

Acceptance Criteria:

The retrieval sequence report shall:
- Be approved by appropriate organizations within WHC,
- Be cleared for public release,
- Provide the order and estimated timing of the retrieval of all 177 SSTs and DSTs,
- Be consistent with the preliminary retrieval sequence selected circa May 1995, or manual estimates thereof,
- Document or reference the basis for the selected sequence, and
- Document the reference retrieval method(s) for each tank.

Deliverables:

The deliverable is a supporting document meeting the above acceptance criteria.

W.B Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Issue Prototype Decision Model for Waste Pretreatment Alternatives

Schedule ID: PSW04510A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.03.40

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-140

Completion Date: 06/01/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC Internal

Description and what constitutes completion of this commitment:

Background: In FY-94, a decision model for pretreatment was developed. The work scope can be broken into several phases for purposes of discussion:

- Prototype model supporting sludge wash decision - limited to pretreatment
- Integrate LLW vitrification decision model with pretreatment model
- Integrate HLW vitrification decision model with previous models.
- Use model to support evaluation of alternatives for the sludge wash decision.

Scope: The scope of this milestone description sheet is limited to the first phase (Prototype model). Prepare the sludge-wash-decision criteria to be used by the model, build a prototype decision model that incorporates these criteria, and use the model to evaluate at least two alternatives, one of which will be consistent with the emerging TWRS baseline.

Acceptance Criteria:

The prototype decision model report shall:

- Be approved by appropriate organizations within WHC,
- Be cleared for public release,
- Document the decision analysis process/methodology/criteria used, and
- Evaluate at least two alternatives as described in the scope section, above.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverable is one or more supporting documents, that taken together as a set meet the requirements in the acceptance criteria section. An example of such a set is:

- A report documenting the prototype decision model, including the decision criteria
- A report documenting the results of using the model to evaluate two or more pretreatment alternatives.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep A E Reep 9/22/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Determine Waste Concentration Mechanism (4.2.1.5)

Schedule ID: PSW00050A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-141

Completion Date: 06/01/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Internal
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity provides for an engineering trade study which evaluates processes for reducing the volume of radioactive liquid wastes requiring storage in the Hanford site underground radioactive liquid waste tank system. The capacity and useful operating life of the 242-A evaporator will be compared against performance requirements for the "Concentrate Waste" function to determine whether or not the 242-A evaporator can satisfy long- and short-term system requirements. Alternatives to be considered include managing the tank system without concentration of the tank waste, evaporation, selective precipitation, reverse osmosis, ion exchange, and crystallization. An analysis of each alternative will be performed to determine which best satisfies technical requirements and stakeholder values. A trade study report will be prepared which includes information gathering, draft document preparation, WHC review, and WHC approval. The commitment will be complete with WHC appoval of the study document according to the appropriate Impact Level (assumed to be N/A or level 4).

Acceptance Criteria:

Acceptance will be provided by WHC approval of the study document.

Deliverables:

One study document will be prepared which evaluates the alternatives described above.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep A E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Select Supernate Pretreatment Facility Concept (4.2.2.1.1)

Schedule ID: PSW00170A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-142

Completion Date: 03/01/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC-Internal
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

This milestone will result in a summary level report which will consolidate the results of previous studies and decisions regarding selection of a supernate pretreatment facility concept. A report will be prepared which includes information gathering, draft document preparation, WHC review, and WHC approval. The commitment will be complete with WHC appoval of the study document according to the appropriate Impact Level (assumed to be N/A or level 4).

Acceptance Criteria:

Acceptance will be provided by WHC approval of the study document.

Deliverables:

One study document will be prepared as described above.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Determine Liquid Effluent Treatment Concept (4.2.3.3)

Schedule ID: PSW00415A

Revision: 0

Assigned to: Facility and Equipment Engineering

WBS Designator: 1.1.1.3.01.04.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-143

Completion Date: 01/31/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC-Internal
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

The activity leading to this milestone is the performance of a trade study to select a strategy for liquid effluent treatment needsto establish necessary functions and interface requirements. Alternatives to be considered include local treatment by generator, centralized treatment of effluents, and a combination of local and centralized effluent treatment.

Acceptance Criteria:

Deliverables:

A WHC-approved report documenting the trade study made to determine a liquid effluent treatment concept.

W.B Barton Wm. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Identify TWRS Technology Needs for FY96

Schedule ID: PSW04070A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.03

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-144

Completion Date: 05/30/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): TDPO
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The most recent revision of the TWRS Process Flowsheet will be reviewed to identify the highest priority technology and technology development needs to verify the flowsheet. The findings will be documented.

Acceptance Criteria:

Deliverables:

A completed SD document cleared for and transmitted to the TDPO (or other development management organization)

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Issue LLW Pretreatment F&R Document

Schedule ID: PSW01050A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02.08

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-145

Completion Date: 02/15/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC-Internal

Description and what constitutes completion of this commitment:

This activity develops the Functions and Requirements (F&Rs) document necessary to support design of the LLW Pretreatment Facilities. The document is used to define the scope and provide the baseline control for the project. Preparation of the document includes development of the functional analysis, preparation of a draft document, WHC review, and WHC approval of the final document. The commitment will be complete with WHC appoval of the study document according to the appropriate Impact Level (assumed to be N/A or level 4).

Acceptance Criteria:

Acceptance will be provided by WHC approval of the study document.

Deliverables:

One F&R document will be prepared according to the description above.

W.B. Barton W B Barton 9/23/94
Cost Account Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (acceptance) Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

L. Erickson
DOE Manager (agreement) Date

WHC TWRS Milestone Description Sheet

Title: Complete Decant and Fill of Tank AZ-101

Schedule ID: PSW49005A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02.15

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-146

Completion Date: 01/31/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[X]	Other (Specify):		

Description and what constitutes completion of this commitment:

The first step in preparing tank AZ-101 for mixer pump installation and sludge washing is to decant the supernatant liquid and refill the tank with dilute waste. This requires the installation and operation of a decant pump, instrumentation, and a computer control system. This milestone commitment will be met when the decanting of tank AZ-101 has been completed.

Acceptance Criteria:

Tank has been decanted to a level ≤ 2 feet above the solid/liquid interface.

Deliverables:

A nearly empty tank ready to be refilled with supernatant.

W.B. Barton W B Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Issue a Time-Phased Flowsheet Focusing on Feed Variability

Schedule ID: PSW04035A

Revision: 0

Assigned to: TWRS Process Engineering

WBS Designator: 1.1.1.3.01.04.03.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-148

Completion Date: 12/30/94

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This work is a precursor to the FY 1995 update of the TWRS Process Flowsheet. Rev. 0 of the flowsheet issued in 1994 assumed that the feed was a uniform blend of all tank waste. The next step is to begin considering retrieval sequences. An early retrieval sequence report will be available at the end of FY 1994. The early retrieval sequence report will provide an ordering of tanks that will be inputted to the TWRS Process Flowsheet to provide a feed composition range for pretreatment.

Acceptance Criteria:

Deliverables:

The deliverable is an internally approved document showing the variability of retrieved waste composition for the duration of tank retrieval operations.

W.B. Barton W B Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Complete Functions and Requirements for HLW Pretreatment Facility

Schedule ID: PSW02050A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.0210

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-149

Completion Date: 05/15/95

Milestone Class:		Deliverable:			Addressed to:	
[ ]	TPA	[X]	REPORT		[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER		[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS		[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify):	Validation Package		

Description and what constitutes completion of this commitment:

To the extent that additional facilities are needed for the solids treatment beyond In-Tank Processing (sludge washing with water and sodium hydroxide solution), they will be provided by a HLW pretreatment facility, WBS element 1.1.1.3.01.06, which may be a stand-alone facility or may be combined with the LLW pretreatment facility or with the HLW immobilization facility. This capability is scheduled to be operational by June, 2008, TPA Milestone 50-04, to support the HLW immobilization activity.

A Functions and Requirements (F&Rs) Document will be prepared to support conceptual design of the HLW pretreatment facility. The F&R document will define the functions and requirements for pretreating selected types of HLW sludges/solids to meet feed specifications of the HLW vitrification facility by an engineering study which will identify candidate processes for pretreating sludges/solids for cases where simple in-tank processing may not result in an acceptable product.

Acceptance Criteria:

The acceptance will be provided by contractor approval of the HLW F&R document.

Deliverables:

The deliverable is a contractor approved F&Rs document.

W.B. Barton W B Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Issue Approved Disposal Basis Document

Schedule ID: PSW04635A

Revision: 0

Assigned to: Process Technology

WBS Designator: 1.1.1.3.01.04.03.42

ADS No.: 1220-00-AF

Milestone Control No.: T3A-95-154

Completion Date: 11/30/94

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC-Internal
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

BACKGROUND
The Characterization Program is responsible for DNFSB Commitment # 1.23 of the Recommendation 93-5 Implementation Plan (RL 1994), "Identify "Bounding Tanks" for disposal. This will include defining limiting tank contents criteria for each area of interest".

This commitment supports Phase I (Define Present Conditions) of the sampling strategy described in the plan. "Phase I focuses on resolving tank safety issues and performing tank screening on all the tanks. Any data (e.g., bounding tank data) required for retrieval and pretreatment design will also be obtained during this phase."

SCOPE
This milestone provides for the Pretreatment Program's contribution towards meeting this commitment. Pretreatment's contribution should satisfy the needs of the Retrieval, HLW, and LLW programs. A draft Disposal Basis Document was prepared in August 94. Comment resolution will extend into FY 95.

The identification of "bounding tanks" will consider historical records that indicate which tanks may contain limiting concentrations of key disposal analytes, limiting tank contents criteria (what chemicals control the design) for the Pretreatment program element, and waste types and volumes.

Reference: RL 1994, Recommendation 95-3 Implementation Plan, January 1994, DOE/RL 94-0001.

Acceptance Criteria:

The disposal basis document shall:
- Address the Pretreatment Program element's sampling and data needs.
- Be approved by appropriate organizations within WHC
- Be cleared for public release
- Be in a format acceptable to the Characterization Program's requirements

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverable is a supporting document that meets the acceptance criteria and addresses the scope.

W.B. Barton W.B. Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

I.E. Reep I.E. Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Submit Report Summarizing the Testing of Enhanced Sludge Washing and Related Tank Waste Sludge Pretreatment Methods for Samples of Tank Waste Sludge

Schedule ID: PSW04760A/PXW04-2A

Revision: 0

Assigned to: Process Technology

WBS Designator: 1.1.1.3.01.04.03.43

ADS No.: 1220-00-AF

Milestone Control No.: T3A-96-100

Completion Date: 09/30/96

Milestone Class:

- [X] TPA M-50-03-T2B
- [ ] DOE-HQ
- [ ] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Perform testing of enhanced sludge washing and related tank waste sludge pretreatment methods using actual tank waste samples. Document and issue results of testing completed to that time. This annual report will also document preliminary candidate tank waste pretreatment sequence and tank blending strategies. Goals for both early progress on waste immobilization and minimization of the production of high level glass will be addressed in these strategies.

These preliminary strategies will be utilized to predict the production of high level waste glass associated with candidate enhanced sludge washings and related tank waste sludge pretreatment methods. The prediction of the HLW glass volume production will be updated.

Acceptance Criteria:

The report will include the latest laboratory data available on sludge washing and enhanced sludge washing through second quarter of FY 1996 and the expected impacts on HLW glass volume will be provided.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverables are:

- Contractor approved report to DOE-RL for review and comment by 07/31/96.
- Final WHC-approved report for external publication and transmittal by 09/01/96.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I. E. Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Update Pretreat Sludges/Solids F&R Document

Schedule ID: PSW02120A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02.11

ADS No.: 1220-00-AF

Milestone Control No.: T3A-96-121

Completion Date: 08/01/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity updates the functions and requirements (F&Rs) document initially prepared in FY 1995 to incorporate any baseline changes in FY 1996. The document is used to define the scope and provide the baseline control for the project. Update of the document includes information gathering (ie. any relevant change packages/documents), preparation of the draft revised document, and WHC review and approval of the document. RL review and approval is not within the scope of this milestone. Completion of this milestone is provided by submittal of the WHC-approved document to DOE-RL.

Acceptance Criteria:

Acceptance will be provided by WHC approval of the document revision.

Deliverables:

One revised F&R document will be provided.

W.B Barton W B Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

D7-48

WHC TWRS Milestone Description Sheet

Title: Identify TWRS Technology Needs for FY97

Schedule ID: PSW04075A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.03.03

ADS No.: 1220-00-AF

Milestone Control No.: T3A-96-130

Completion Date: 05/30/96

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): TDPO

Description and what constitutes completion of this commitment:

The most recent revision of the TWRS Process Flowsheet will be reviewed to identify the highest priority technology and technology development needs to verify the flowsheet. The findings will be documented.

Acceptance Criteria:

Deliverables:

A completed supporing document (SD) cleared for and transmitted to the TDPO (or its successor).

W.B. Barton W.B. Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

I.E. Reep I.E. Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Issue TWRS Process Flowsheet, Rev. 2

Schedule ID: PSW04055A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.03.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-96-131

Completion Date: 08/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Internal
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Using the latest process requirements, processing sequences development results, and information from vendors, revise the previous year's issue of the Tank Waste Remediation System (TWRS) Process Flowsheet.

Acceptance Criteria:

Deliverables:

A completed internal supporting document (SD) will be issued for reference use within the TWRS Process Engineering organization.

W.B. Barton W.B. Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

I.E. Reep I.E. Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Retrieval Sequence (a) Selected

Schedule ID: PSW04003A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.02.25

ADS No.: 1220-0-AF

Milestone Control No.: T3A-96-132

Completion Date: 04/03/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Internal
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Background: TPA milestone number M-45-02A "Initial Retrieval Sequence Report" calls for the transmittal of the initial SST retrieval sequence to Ecology for their approval by September 30, 1996. Although not required by the TPA milestone, the report will include the retrieval sequence of all 177 SSTs and DSTs. The preparation of that report is the responsibility of the Retrieval Program. The technical basis for that report is the subject of this milestone description sheet.

The sequence selected for this milestone is an update of the preliminary retrieval sequence to be established circa May 1995 and documented in the Preliminary Retrieval Sequence Report to be issued circa September 1995. This sequence shall be selected from alternatives based upon the metrics estimated by a computer simulation of the TWRS. In the event that the computer simulation is not ready on time, the retrieval sequence (a) can be based upon manual estimation of a subset of the metrics. The selected sequence shall be documented in a report.

Acceptance Criteria:

The retrieval sequence shall:

- Be approved by appropriate organizations within WHC,
- Be cleared for public release,
- Provide the order and estimated timing of the retrieval of all 177 SSTs and DSTs,
- Be based upon the metrics estimated by a computer simulation of the behavior of the Tank Waste Remediation System (TWRS) to alternative retrieval sequences and blending strategies, or manual estimates thereof,
- Be developed using assumptions consistent with the current TWRS baseline.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverable is one or more supporting documents, that together meet the above acceptance criteria.

W.B. Barton W.B. Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/23/94
Program Element Manager Date

I.E. Reep I.E. Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Update of Determine Waste Processing Strategy and Waste Separations Process (4.2.2/4.2.2.1)

Schedule ID: PSW00114A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-96-140

Completion Date: 08/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Internal
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity will provide for the first update to the current technical justification (via a trade study) for the "case Beta" separations strategy and establish the basis for additional development work for advance separations. The study assessed separations alternatives consistent with environmental impact statement (EIS) preparation including no pretreatment, treatment of waste to an intermediate form, enhanced sludge washing, and extensive pretreatment separations (e.g., CLEAN). A trade study report was prepared in FY 1995 which included information gathering, draft document preparation, WHC review, and WHC approval. This update to that document will be complete with WHC approval of the updated study document according to the appropriate Impact Level. The study will also include the cost and schedule impacts of implementing advanced separations processes assuming that enhanced sludge washing will not result in an acceptably low volume of HLW.

Acceptance Criteria:

Acceptance will be provided by WHC approval of the update to the study document.

Deliverables:

Annual update to previous study document which incorporates latest data.

W.B. Barton W. Blaine Barton 9/28/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/28/94
Program Element Manager Date

I.E. Reep I E Reep 9/28/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Submit Report Summarizing the Testing of Enhanced Sludge Washing and Related Tank Waste Sludge Pretreatment Methods for Samples of Tank Waste Sludge

Schedule ID: PSW04790A/PW05-0A

Revision: 0

Assigned to: Process Technology

WBS Designator: 1.1.1.3.01.04.03.44

ADS No.: 1220-00-AF

Milestone Control No.: T3A-97-101

Completion Date: 09/30/97

Milestone Class:			Deliverable:			Addressed to:	
[X]	TPA	M-50-03-T2C	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ		[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL		[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR		[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Perform testing of enhanced sludge washing and related tank waste sludge pretreatment methods using actual tank waste samples. Document and issue results of testing completed to that time. This annual report will also document preliminary candidate tank waste pretreatment sequence and tank blending strategies. Goals for both early progress on waste immobilization and minimization of the production of high level glass will be addressed in these strategies.

These preliminary strategies will be utilized to predict the production of high level waste glass associated with candidate enhanced sludge washings and related tank waste sludge pretreatment methods. The prediction of the HLW glass volume production will be updated.

Acceptance Criteria:

The report will include the latest laboratory data available on sludge washing and enhanced sludge washing (through second quarter of FY 1997) and the expected impacts on HLW glass volume will be provided.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverables are:

- Contractor approved report to DOE-RL for review and comment by 07/31/97.
- Final WHC-approved report for external publication and transmittal by 09/01/97.

W.B. Barton L. M. Blair Barton 9/23/94
Cost Account Manager Date

K.A Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep L. E. Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Issue Draft Recommendation on Evaluation Sludge Washing To Determine if Advanced Sludge Separation Process are Required

Schedule ID: PSW04423A

Revision: 0

Assigned to: TWRS Strategic Analysis

WBS Designator: 1.1.1.3.01.04.02.22

ADS No.: 1220-00-AF

Milestone Control No.: T3A-97-105

Completion Date: 09/30/97

Milestone Class:

[ ]	TPA	
[ ]	DOE-HQ	
[X]	DOE-RL	
[ ]	CONTRACTOR	

Deliverable:

[X]	REPORT	
[ ]	LETTER	
[ ]	DRAWINGS	
[ ]	Other (Specify):	

Addressed to:

[ ]	DOE-HQ	
[X]	DOE-RL	
[ ]	Other (Specify):	

Description and what constitutes completion of this commitment:

This milestone provides the basis for completing TPA M-50-03 "Complete evaluation of enhanced sludge washing to determine whether advanced sludge separation processes are required" by 03/31/98. The performance of sludge washing and related tank waste sludge pretreatment methods will be evaluated to determine if these processes will be established during FY 1995. A decision methodology will be developed with stakeholder participation and implemented. A draft recommendation will be developed based on data available during FY 1997 which will:

- Provide a basis for a decision on the need for advanced sludge separations if a decision is required earlier than the planned date of 03/31/98.
- Be revised consistent with results from all testing, engineering, and development efforts completed during FY 1996 and serve as the review and comment draft for the Final Recommendation.

Acceptance Criteria:

The acceptance criteria, including the plan for accomplishing this milestone, will be documented in the deliverable submitted to DOE-RL to fulfill TPA Milestone M-50-03A by 09/30/94. A draft of the deliverable will be submitted three months prior to the completion date for review by DOE and stakeholders. A final report approved for external publication will be transmitted to DOE-RL one month prior to the completion date for transmittal to WDOE by the completion date.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverables are:

- A contractor approved draft report transmitted to DOE-RL for review by 06/30/97.
- A final report approved for external publication transmitted to DOE-RL by 08/31/97.

W.B. Barton W B Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Complete In-Tank Sludge Washing Process Test and Issue Report (Tank AZ-101)

Schedule ID: PSW49026A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02.15

ADS No.: 1220-00-AF

Milestone Control No.: T3A-97-107

Completion Date: 09/30/97

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify):		

Description and what constitutes completion of this commitment:

The solids/liquids separation will be done by decanting off liquid from DSTs (including salt cake which has been dissolved in SSTs and transferred to the DSTs). The solids treatment will consist of In-Tank Processing (sludge washing with water and sodium hydroxide solution) to remove solubles including some of the aluminum and zirconium) to reduce the volume of solids going to the HLW immobilization facility.

A sludge washing test will be conducted to determine if sludge can be adequately mobilized with two mixer pumps, and if the sludge can be washed and separated from the waste solution as assumed in the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement).

Completion of this activity includes accomplishing the following activities in Tank 241-AZ-101:

- Installation of a decant pump and control system
- Decanting the neutralized current acid waste (NCAW) supernatant to another tank
- Adding dilute low-activity supernatant from another tank
- Installing and testing mixer pumps supplied by Project W-151, Tank 241-AZ-101 Waste Retrieval System (performed by others)
- Allowing the washed solids to settle
- Measuring the suspended solids profile before and after the mixer pump/sludge washing test
- Sampling and analyzing the supernatant before and after the mixer pump/sludge washing test
- Updating computer model for simulating solid-liquid separation and leaching based on analytical results
- Preparing a report documenting efficiency of a single sludge wash of NCAW

WHC TWRS Milestone Description Sheet

Acceptance Criteria:

The acceptance criteria includes issuing a contractor approved test plan describing the planned waste retrieval mixer pump and sludge washing process tests prior to initiating the process tests. Status report documenting activities accomplished and planned accomplishments will be submitted in FY 1995 and FY 1996. A contractor approved report documenting the results of the sludge washing demonstration in Tank 241-AZ-101 will be transmitted to DOE-RL on the completion date.

Deliverables:

The deliverables are:

- Contractor approved test plan by 04/30/95
- Sludge washing test status report by 09/30/95
- Sludge washing test status report by 09/30/96
- Contractor approved report documenting results of the sludge washing test in Tank 241-AZ-101 by 09/30/97

W.B. Barton W.B. Barton 9/28/94
Cost Account Manager — Date

K.A. Gasper K.A. Gasper 9/28/94
Program Element Manager — Date

I.E. Reep 9/28/94
Activity Manager — Date

L. Erickson
DOE Manager (agreement) — Date

L. Erickson
DOE Manager (acceptance) — Date

WHC TWRS Milestone Description Sheet

Title: Update Pretreat Sludges/Solids F&R Document

Schedule ID: PSW02190A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02.18

ADS No.: 1220-00-AF

Milestone Control No.: T3A-97-109

Completion Date: 08/01/97

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity updates the functions and requirements (F&Rs) document initially prepared in FY 1995 to incorporate any baseline changes in FY 1997. The document is used to define the scope and provide the baseline control for the project. Update of the document includes information gathering (ie. any relevant change packages/documents), preparation of the draft revised document, and WHC review and approval of the document. RL review and approval is not within the scope of this milestone. Completion of this milestone is provided by submittal of the WHC-approved document to DOE-RL.

Acceptance Criteria:

Acceptance will be provided by WHC approval of the document revision.

Deliverables:

One revised F&R document will be provided.

W.B Barton W B Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

D7-60

WHC TWRS Milestone Description Sheet

Title: Retrieval Sequence (b) Selected

Schedule ID: PSW04004A

Revision: 0

Assigned to: TWRS Process Technology

WBS Designator: 1.1.1.3.01.04.02.25

ADS No.: 1220-0-AF

Milestone Control No.: T3A-97-110

Completion Date: 04/03/97

Milestone Class:

[ ]	TPA	
[ ]	DOE-HQ	
[ ]	DOE-RL	
[X]	CONTRACTOR	

Deliverable:

[X]	REPORT	
[ ]	LETTER	
[ ]	DRAWINGS	
[ ]	Other (Specify):	

Addressed to:

[ ]	DOE-HQ	
[ ]	DOE-RL	
[X]	Other (Specify):	WHC-Internal

Description and what constitutes completion of this commitment:

Background: TPA milestone number M-45-02B "Initial Retrieval Sequence Report" calls for the transmittal of the initial SST retrieval sequence to Ecology for their approval by September 30, 1997. Although not required by the TPA milestone, the report will include the retrieval sequence of all 177 SSTs and DSTs. The preparation of that report is the responsibility of the Retrieval Program. The technical basis for that report is the subject of this milestone description sheet.

The sequence selected for this milestone is an update of the retrieval sequence to be established circa May 1996 (Retrieval Sequence (a) Selected) and documented in the Retrieval Sequence Report to be issued by the Retrieval Program circa September 1996. This sequence shall be selected from alternatives based upon the metrics estimated by a computer simulation of the TWRS. In the event that the computer simulation is not ready on time, the retrieval sequence (b) can be based upon manual estimation of a subset of the metrics. The selected sequence shall be documented in a report.

Acceptance Criteria:

The retrieval sequence shall:

- Be approved by appropriate organizations within WHC,
- Be cleared for public release,
- Provide the order and estimated timing of the retrieval of all 177 SSTs and DSTs,
- Be based upon the metrics estimated by a computer simulation of the behavior of the Tank Waste Remediation System (TWRS) to alternative retrieval sequences and blending strategies, or manual estimates thereof,
- Be developed using assumptions consistent with the current TWRS baseline.

WHC TWRS Milestone Description Sheet

Deliverables:

The deliverable is one or more supporting documents, that together meet the above acceptance criteria.

W.B. Barton W B Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Update of Determine Waste Processing Strategy and Waste Separations Process (4.2.2/4.2.2.1)

Schedule ID: PSW00117A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02

ADS No.: 1220-00-AF

Milestone Control No.: T3A-97-111

Completion Date: 08/29/97

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Internal
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity will provide for the second update to the current technical justification (via a trade study) for the "case Beta" separations strategy and establish the basis for additional development work for advance separations. The study assessed four categories of separations alternatives consistent with environmental impact statement (EIS) preparation including no pretreatment, treatment of waste to an intermediate form, enhanced sludge washing, and extensive pretreatment separations (e.g., CLEAN). A trade study report was prepared in FY 1995, and updated in FY 1996, which included information gathering, draft document preparation, WHC review, and WHC approval. This update to that document will be complete with WHC appoval of the updated study document according to the appropriate Impact Level (assumed to be N/A or level 4).

Acceptance Criteria:

Acceptance will be provided by WHC approval of the update to the study document.

Deliverables:

Annual update to previous study document which incorporates latest data.

W.B. Barton W. Blaine Barton 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

I.E. Reep I E Reep 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

Title: Initiate Tank AZ-101 Sludge Washing Process Test

Schedule ID: PSW49020A

Revision: 0

Assigned to: TWRS Process Design

WBS Designator: 1.1.1.3.01.04.02.15

ADS No.: 1220-00-AF

Milestone Control No.: T3A-97-114

Completion Date: 10/01/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The first test of sludge washing tank waste will be conducted in tank AZ-101. This test will be a joint effort between the Waste Retrieval and Waste Pretreatment program elements. Waste Retrieval will install two mixer pumps in the tank. Waste Pretreatment will install additional instrumentation, e.g. turbidity profilers, some interface analyzers, and thermal dispersion probes. In addition, the computer control system installed to support the decanting operation will be expanded to support the new instrumentation. The pumps will be tested and simultaneously the sludge washing process test will be carried out. Process Design will measure waste suspended solids and dissolved solids concentrations before and after the operation of the mixer pumps. This milestone commitment will be completed when the measurements have been made and the tank is ready for mixer pump operation.

Acceptance Criteria:

Suspended solids measurements have been made and samples have been taken to measure dissolved solids concentrations.

Deliverables:

A transmittal letter documenting readiness to initiate the mixer pump (supplied by Project W-151, DST Retrieval Pumps) and sludge washing tests.

W.B. Barton W B Barton 9/23/94		K.A. Gasper K A Gasper 9/23/94	
Cost Account Manager	Date	Program Element Manager	Date
I.E. Reep I E Reep 9/23/94		L. Erickson	
Activity Manager	Date	DOE Manager (agreement)	Date
L. Erickson			
DOE Manager (acceptance)	Date		

MDSs for W-236B Pretreatment Facility IPM (1.1.1.3.01.05)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: TDPO and ESPIP (EM-50) Results for Sr, TRU, Tc Speciation Evaluated

Schedule ID: PDW22170A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-103

Completion Date: 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): RR GADD

Description and what constitutes completion of this commitment:

Evaluation of activities funded through TDPO and ESPIP (EM-50) concerning Sr, Tc, and TRU removal from supernatant will be documented in a draft progress report to support design of LLW pretreatment facility.

Acceptance Criteria:

The report will include test/development results and evaluations from test personnel.

Deliverables:

The deliverable will be a letter transmitting the report.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

DM-1.1

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Lab Automation Complete

Schedule ID: PDW21405A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.02

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-104

Completion Date: 09/29/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will be complete when the laboratory automation equipment is delivered and installed and PNL notifies WHC via letter that it has been accomplished.

Acceptance Criteria:

The automation of the laboratory and analytical procedures must be able to reduce turnaround time for pretreatment analytical samples by at least 3-6 months and reduce laboratory worker radiation exposure from hot wastes (ALARA).

Deliverables:

The deliverable will be a letter documenting installation and readiness to use automated laboratory equipment to support hot testing for pretreatment.

S.A. Barker S.A. Barker 9-21-94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R.R. Gadd 9-21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Report on Vendor Testing for S/L Separation and Polishing Filtration Simulant

Schedule ID: PDW21191A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-106

Completion Date: 07/31/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

This milestone will report progress in vendor testing for S/L (solids/liquid) separation and polishing filtration conducted in FY 1995. These tests will consist of developing sludge simulant that have the same physical properties as those measured in real sludge for the purpose of studying S/L separations and studying the effect that organic complexants have on the removal of Sr and TRU from alkaline waste by ultrafiltration. Actual tank supernatant from C-106 is required to develop the supernatant characterization information and to validate simulant development.

Acceptance Criteria:

This interim report will include tests results and evaluation on S/L separations that will support 60% conceptual design of LLW pretreatment facility.

Deliverables:

The deliverable will be an interim report.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: TDPO 1st Quarter Activities to Support Other Separation Requirements Evaluated

Schedule ID: PDW21190A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-107

Completion Date: 02/28/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will report progress in 1st quarter FY 1995 TDPO funded activities concerning Sr, Tc, and TRU removal from supernatant/sludge. These activities include batch solvent extraction tests for Sr and TRU, TRU and Sr removal by extraction chromatography.

Acceptance Criteria:

The interim report will include evaluations based on PNL laboratory data for Sr, Tc, and TRU removal from supernatant.

Deliverables:

The deliverable for this milestone will be an interim report issued for WHC review on Sr, Tc, and TRU removal.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-69

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Report on Vendor Testing of S/L Separation Equipment

Schedule ID: PDW21150A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-108

Completion Date: 07/31/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

The results of testing of commercial solid/liquid separations (coarse filtration) equipment by vendors and SRTC will be documented in a report to be delivered to WHC for approval.

Acceptance Criteria:

Testing results and evaluations must be suitable for use in conceptual design.

Deliverables:

A letter transmitting the report on vendor and SRTC testing of commercial equipment using simulated NCAW and/or 106-C wastes for solids/liquids separation will be the deliverable for this milestone.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Sludge and Supernatants for Vendor Testing of S/L Separations Equipment

Schedule ID: PDW21155A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-109

Completion Date: 01/31/95

Milestone Class:		Deliverable:			Addressed to:		
[ ]	TPA	[ ]	REPORT		[ ]	DOE-HQ	
[ ]	DOE-HQ	[X]	LETTER		[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS		[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[X]	Other (Specify):	C-106 Simulant			

Description and what constitutes completion of this commitment:

This milestone consists of producing a suitable simulant that has the same physical properties as those measured in real C-106 sludge for the purposes of studying solid/liquid separations. Pacific Northwest Laboratory will develop the simulant based on information from Characterization.

Acceptance Criteria:

The simulant physical properties must provide satisfactory correlation to actual waste to support cold testing of S/L equipment.

Deliverables:

The deliverable is a letter documenting the simulant characteristicss, justifies its suitability, and that required quantities of the simulant are available to support testing needs.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (acceptance) — Date

L.K. Holton
PNL Activity Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

DOE Manager (agreement) — Date

D7-71

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Report on Vendor Testing of Polishing Filters

Schedule ID: PDW21135A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-110

Completion Date: 07/31/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

The results of testing of commercial polishing filtration equipment by vendors and SRTC will be documented in a report to be delivered to the WHC for support of 60% conceptual design of LLW pretreatment facility.

Acceptance Criteria:

This report must include test results and evaluations to support 60% conceptual design.

Deliverables:

A letter transmitting the report on vendor and SRTC testing of commercial polishing filtration equipment will be the deliverable for this milestone.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9.21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-72

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Sample Truck Delivered on Site

Schedule ID: PDW21205A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.02

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-111

Completion Date: 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): RR Gadd

Description and what constitutes completion of this commitment:

Delivery of a 25-L sludge sampler truck modified to specifications.

Acceptance Criteria:

The truck must meet specifications as outlined on the purchase order.

Deliverables:

The deliverable for this milestone is the sludge sampler truck.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-13

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue 30% Conceptual Design Review Package

Schedule ID: PDW31105A

Revision: 0

Assigned to: IPM Contract Management & Training

WBS Designator: 1.1.1.3.01.05.03.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-116

Completion Date: 02/28/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): IPM Project Manager

Description and what constitutes completion of this commitment:

The selected architecture/engineering firm (A/E) will issue the 30% Conceptual Design Review Package for WHC review and comment as defined in the negotiated work scope for Conceptual Design. (Incorporation of Design Review comments will be accomplished as part of Activity PDW 31110)

Acceptance Criteria:

The package will contain the items identified in the negotiated work scope and will provide evidence that the functional requirements of the design will be met when the Conceptual Design phase is completed.

Deliverables:

The detailed list of deliverables established in the early planning of the Conceptual Design effort will be provided. Changes to the list of deliverables will be handled by the change control process.

L.D. Swenson Lee D Swenson 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-14

WHC TWRS Milestone Description Sheet

Title: Issue Approved Project Specific Training Plan

Schedule ID: PDW11505A

Revision: 0

Assigned to: IPM Contract Management & Training

WBS Designator: 1.1.1.3.01.05.01.01.05

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-117

Completion Date: 02/28/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): IPM Project Manager
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

A project specific training plan will be developed which outlines the individual training requirements necessary to assure that all WHC project participants are appropriately trained to perform their assigned tasks. The implementation plan will delineate required training and the schedule for completing that training. This plan will be approved by appropriate WHC management.

Acceptance Criteria:

The plan will include the list of specific training requirements for each project employee with a schedule for completeing the identified training. The plan will be approved by appropriate WHC management.

Deliverables:

A letter report will be issued to formally document the approved Project Specific Training Plan.

L.D. Swenson Leon D Swenson 9/21/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-15

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete the LLW Pretreatment 30% Conceptual Design Review

Schedule ID: PDW12305A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.03

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-120

Completion Date: 03/31/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): Signed off RCR's

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): IPM Project Manager

Description and what constitutes completion of this commitment:

The design media will be reviewed at 30% of completion by the IPM Project, Program, Operations, Safety, QA etc. All comments will be collected and resolved. The milestone will be considered complete when all comment resolutions have been accepted as evidenced by the reviewers signature on an RCR.

Acceptance Criteria:

Signed off RCR's.

Deliverables:

Signed off RCR package

Horsager B.K. Horsager 9/21/94
Cost Account Manager — Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R.R. Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-76

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Resolution of 30% Design Review Comments

Schedule ID: PDW12355A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.03

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-121

Completion Date: 03/31/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): IPM Project Manager
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

WHC will issue documented resolution of 30% Conceptual Design Review comments to demonstrate the resolution of all comments submitted during this phase of the design. This information will be reflected in the succeeding design work.

Acceptance Criteria:

The documentation will provide a record of the comments and their disposition (i.e., incorporated into design media, plan for incorporation, rejection of comment, other). Comment resolution will be provided in a timely fashion to preclude impact on the next design phase.

Deliverables:

A letter report will be provided to supplement the A/E prepared 30% Conceptual Design Review Package.

B.K. Horsager BK Horsager 9/21/94
Cost Account Manager — Date

K. A. Gasper KA Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd RR Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D1-17

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue 60% Conceptual Design Review Package

Schedule ID: PDW31110A

Revision: 0

Assigned to: IPM Contract Management & Training

WBS Designator: 1.1.1.3.01.05.03.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-127

Completion Date: 07/31/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): IPM Project Manager

Description and what constitutes completion of this commitment:

The selected architecture/engineer firm (A/E) will issue the 60% Conceptual Design Review Package for WHC review and comment as defined in the negotiated work scope for Conceptual Design. (Incorporation of Design Review comments will be accomplished as part of Activity PDW 31115.)

Acceptance Criteria:

The package will contain the items identified in the negotiated work scope and will provide evidence that the functional requirements of the design will be met when the Conceptual Design phase is completed.

Deliverables:

The detailed list of deliverables established in the early planning of the Conceptual Design effort will be provided. Changes to the list of deliverables will be handled by the change control process.

L.D. Swenson Leon D Swenson 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-18

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Resolution of 60% Design Review Comments

Schedule ID: PDW12360A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.03

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-129

Completion Date: 08/31/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): IPM Project Manager
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

WHC will issue documented resolution of 60% Conceptual Design Review comments to demonstrate the resolution of all comments submitted during this phase of the design. This information will be reflected in the succeeding design work.

Acceptance Criteria:

The documentation will provide a record of the comments and their disposition (i.e., incorporated into design media, plan for incorporation, rejection of comment, other). Comment resolution will be provided in a timely fashion to preclude impact on the next design phase.

Deliverables:

A letter report will be provided to supplement the A/E prepared 60% Conceptual Design Review Package.

B.K. Horsager BK Horsager 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete the LLW Pretreatment 60% Conceptual Design Review

Schedule ID: PDW12310A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.03

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-130

Completion Date: 08/31/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): IPM Project Manager
[X]	CONTRACTOR	[X]	Other (Specify): Signed off RCR's		

Description and what constitutes completion of this commitment:

The design media will be reviewed at 60% of completion by the IPM Project, Program, Operations, Safety, QA etc. All comments will be collected and resolved. The milestone will be considered complete when all comment resolutions have been accepted as evidenced by the reviewers signature on an RCR.

Acceptance Criteria:

Signed off RCR's.

Deliverables:

Signed off RCR package

Horsager B K Horsager 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-80

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Design Document of 1-I IX Hot Testing Unit Completed

Schedule ID: PDW21175A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-134

Completion Date: 09/29/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[X]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The design for the 1-Liter ion exchange hot test unit located in WESF will be completed and sent to the Project Manager for transmittal to AE for construction.

Acceptance Criteria:

The design must be WHC approved.

Deliverables:

The deliverable for this milestone is the approved design document.

S.A. Barker S.A. Barker 9-21-94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R.R. Gadd 9-21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-81

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Report on need for Hot Pilot Plant

Schedule ID: PDW21196A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-150

Completion Date: 10/31/94

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will report the results of an evaluation on the strategy for performing hot test work and the need for hot pilot plant(s) to support pretreatment activities. This activity is an extension of the pretreatment testing requirements study underway in FY94. The completion of this milestone will be met by the issuance of a WHC approved supporting document discussing the purpose, justification, and strategy for performing hot test work in support of pretreatment.

Acceptance Criteria:

The acceptance criteria is a document that has been WHC approved and comments incorporated.

Deliverables:

The deliverable for this milestone will be a WHC approved SD report issued for DOE to review the need and scale of hot test work to support pretreatment activities. Within this document will be a section (or sections) discussing Hot Pilot Plant testing.

S.A. Barker S A Barker 9/19/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/19/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/19/94
Activity Manager — Date

L. Erickson
DOE Manager (agreement) — Date

R.L. Long, Jr.
DOE Manager (acceptance) — Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Report on Facility Assessment for Pretreatment Hot Pilot Plant(s)

Schedule ID: PDW21197A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-151

Completion Date: 12/30/94

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will report the results of an evaluation of various Hanford and other DOE sites and infrastructure for applicability to site and support hot test units for pretreatment activities. The activity performing this assessment is a follow-on activity to the determination of the purpose and justification for performing hot testing for the pretreatment program element. The completion of this milestone will be met by the issuance of a WHC approved supporting document discussing the assessment of Hanford sites to support hot pilot plant testing for pretreatment activities.

Acceptance Criteria:

The acceptance criteria is a document that has been WHC approved and comments incorporated.

Deliverables:

The deliverable for this milestone will be a WHC approved SD report issued for DOE to review the assessment of sites for hot testing to support pretreatment activities. Within this document will be a section (or sections) discussing Hot Pilot Plant testing.

S.A. Barker S A Barker 9/19/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/19/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/19/94
Activity Manager — Date

L. Erickson
DOE Manager (agreement) — Date

R.L. Long, Jr.
DOE Manager (acceptance) — Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Test Requirements for 1-L IX Hot Test Unit Completed

Schedule ID: PDW21189A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-152

Completion Date: 12/30/94

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): Test Requirements

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): RR GADD

Description and what constitutes completion of this commitment:

The Test Requirments document for the 1-Liter ion exchange hot test unit located in WESF will be prepared and issued with incorporated comments. The document will be transmitted to the Project Manager.

Acceptance Criteria:

The acceptance criteria is a document that has been WHC approved.

Deliverables:

The Test Requirments document will be the deliverable for this milestone.

S.A. Barker 9-22-94
Cost Account Manager Date

K.A. Gasper 9/22/94
Program Element Manager Date

R.R. Gadd 9/22/94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-84

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Safety Management Plan (W-236B)

Schedule ID: PDW62125A

Revision: 0

Assigned to: IPM Permitting & Safety

WBS Designator: 1.1.1.3.01.05.06.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-95-153

Completion Date: 02/03/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): Planning Document

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): Low Level Waste Pretreatment Project (IPM)

Description and what constitutes completion of this commitment:

Preparation of a Safety Management Plan (SMP) that describes requirements and responsiblities for safety analysis and safety reviews.

Acceptance Criteria:

Approval of the Engineering Data Transmittal form

Deliverables:

.ety Management Plan

D.L. Banning D L Banning 9/26/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/26/94
Program Element Manager Date

R.R. Gadd R R Gadd 9/26/94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-85

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Evaluation of Resin Selection Information Complete

Schedule ID: PDW22171A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-0-AB

Milestone Control No.: T3A-96-101

Completion Date: 11/30/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Preliminary information on CS-100, R-F and CST resins will be evaluated and reported to design.

Acceptance Criteria:

The report will contain all available tests/development information on the three resins.

Deliverables:

A letter trasnmitting the report will be the deliverable.

S.A. Barker S A Barker 9-21-94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R R Gadd 9.21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D1-86

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Preliminary Resin Selection and Organic Fouling Determination

Schedule ID: PDW22105A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-102

Completion Date: 11/27/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

R-F and CS-100 resins will be cold tested to determine the effect of feed variability on performance, to develop bench-scale column loading and to develop a quantitative understanding of the factors governing cesium removal from Hanford tank waste streams by ion exchange. This preliminary determination will be reported to the Project Manager although final determination will not be made until 4/96. This information will be compiled with other reports to support resin down selection.

Acceptance Criteria:

The report will provide preliminary data that can be utilized in resin selection and organic fouling determination.

Deliverables:

A letter transmitting the report to WHC will be the deliverable for this milestone.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

L.K. Holton
PNL Activity Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

DOE Manager (acceptance) — Date

DOE Manager (agreement) — Date

D7-87

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Report on Cs IX Resin Testing

Schedule ID: PDW21192A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-103

Completion Date: 11/30/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

ESPIP funded Cs IX resin development will be reviewed and evaluated to support selection of a resin for advanced conceptual design. The evalautions will be documented in a draft progress report which will include the test/development results.

Acceptance Criteria:

The report must include test/development results and evaluations to support conceptual design.

Deliverables:

The report will be the deliverable.

S.A. Barker S.A. Barker 9-21-94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R.R. Gadd 9-21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-88

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Cs IX Resin Selection Complete

Schedule ID: PDW22172A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-104

Completion Date: 03/29/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The selection of the resin for the Cs IX will be based on previous reports and testing. The resin selection will then be transmitted to design through an evaluation/recommendation report.

Acceptance Criteria:

This report must make a selection of which resin to use for the Cs IX and be approved by WHC.

Deliverables:

A letter transmitting the report to the Architect Engineer will be the deliverable.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-89

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: SRTC Evaluation of CST, CS-100, and R-F Resin Completed

Schedule ID: PDW22172B

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-105

Completion Date: 03/29/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

WHC personnel will evaluate and review the skid mounted facility pilot testing activities at SRTC. The results of column aspect ratio, resin shrinkage/swelling, column channeling multiple cycle performance and resin loading/unloading will be compiled into a report.

Acceptance Criteria:

The report must include testing data and present a direction for resin selection for the LLW Pretreatment facility.

Deliverables:

A letter transmitting the report is the deliverable.

S.A. Barker S.A. Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R.R. Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-90

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Report on SRTC Skid Unit Testing of CS-100, R-F, and CST Resin

Schedule ID: PDW22110A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-106

Completion Date: 03/29/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Tests on R-F and CS-100 resins, performed at SRTC using an existing skid mounted pilot facility, will be performed to determine effect of column aspect ratio, evaluate resin shrinkage and/or swelling, evaluate column channeling evaluate resin loading/unloading and attrition and evaluate multiple cycle performance of the resins. Completion of this milestone will be the draft report on the cold tests at SRTC.

Acceptance Criteria:

The report must include all information regarding the physical properties of available CS-100, R-F, and CST resins tested and evaluations of the resins to support Cs IX downselection.

Deliverables:

The deliverable for this milestone will be a letter transmitted of the report describing the test results and evaluation from the skid mounted facility at SRTC.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

W. Tamosaitis (original fax signed) 9/23/94
SR PI — Date

D7-91

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Fabrication of TRU Monitor and Test Equipment

Schedule ID: PDW21305A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.03

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-107

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

A TRU monitor will be fabricated and procured to be used in conjunction with in-tank washing tests. This instrument will be used to verify that liquids discharged to LLW Vitrification will be less than NRC class C limits for TRU. This procurement utilizes CENRTC funding.

Acceptance Criteria:

The monitor procured must be able to detect TRU in supernatant at better than the 10 μCi.

Deliverables:

The deliverable is a letter documenting delivery of the TRU monitor at the Hanford site.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-26-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D1-92

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Evaluation of Polishing Filters for NCAW Supernatant Simulant Complete

Schedule ID: PDW21166A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-108

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

The results of cold testing of the polishing filtration equipment using NCAW simulant will be reported. This report will include laboratory and/or bench-scale test results and evaluations.

Acceptance Criteria:

The report must include results as well as evaluations of the testing usable for Title I design of the LLW pretreatment facility.

Deliverables:

The deliverable will be the report.

S.A. Barker S.A. Barker 9-21-94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R.R. Gadd 9-21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-93

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Evaluation of S/L Separation Equipment for NCAW and 106-C Simulants Complete

Schedule ID: PDW21146A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-109

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The cold testing of S/L separations at WHC Chemical Engineering Laboratory will be performed using NCAW and C-106 simulants. The progress and results of these tests will be documented in a report to WHC. This testing is required prior to Title I design for equipment selection/design.

Acceptance Criteria:

The report must include test results as well as evaluations from the engineers performing the tests.

Deliverables:

The deliverable will be the report.

S.A. Barker S.A. Barker 9-21-94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R.R. Gadd 9-21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

DT-94

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue A/E Approved Conceptual Design Report

Schedule ID: PDW31115B

Revision: 0

Assigned to: IPM Contract Management & Training

WBS Designator: 1.1.1.3.01.05.03.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-112

Completion Date: 01/31/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): IPM Project Manager

Description and what constitutes completion of this commitment:

The selected architecture/engineering firm (A/E) will issue the Approved Conceptual Design Package (including the cost and schedule estimate) for WHC review and comment. The approved package will be defined in the negotiated work scope for Conceptual Design.

Acceptance Criteria:

The package will contain the items identified in the negotiated work scope and will provide evidence that the functional requirements of the design will be met when the Conceptual Design phase is completed.

Deliverables:

The detailed list of deliverables established in the early planning of the Conceptual Design effort will be provided. Changes to the list of deliverables will be handled by the change control process.

L.D. Swenson Leon D Swenson 9/21/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-95

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: WHC Approved CDR

Schedule ID: PDW12365A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.03

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-114

Completion Date: 02/28/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): IPM Project Manager
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

WHC will issue documented resolution of 90% Conceptual Design Review comments to demonstrate the resolution of all comments submitted during this phase of the design. This information will be incorporated into the 100% Conceptual Design Package which is submitted for DOE-RL approval.

Acceptance Criteria:

The documentation will provide a record of the comments and their disposition (i.e., incorporated into design media, plan for incorporation during Title I design, rejection of comment, other). Comment resolution will be provided to enable timely approval of the CDR by DOE-RL to support the request for HQ approval of KD-1.

Deliverables:

A letter report will formally transmit the WHC approved Conceptual Design Report to DOE-RL for approval.

B.K. Horsager BK Horsager 9/21/94
Cost Account Manager Date

K.A. Gasper KA Gasper 9/22/94
Program Element Manager Date

R.R. Gadd RR Gadd 9/21/94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

DT-96

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Preliminary Safety Evaluation (W-236B)

Schedule ID: PDW62155A

Revision: 0

Assigned to: IPM Permitting & Safety

WBS Designator: 1.1.1.3.01.05.06.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-115

Completion Date: 02/29/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

A preliminary safety evaluation report will be completed. This includes hazard evaluations, mitigations, and systems safety classifications.

Acceptance Criteria:

Project approval and issuance to the A & E for inclusion in the Conceptual Design Report.

Deliverables:

'iminary Safety Evaluation report

D.L. Banning R.R. Gadd for 9-21-94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R.R. Gadd 9-21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-97

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete The 90% Conceptual Design Review

Schedule ID: PDW12315A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.03

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-116

Completion Date: 02/29/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): Signed off RCR's

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): IPM Project Manager

Description and what constitutes completion of this commitment:

The design media will be reviewed at 90% of completion by the IPM Project, Program, Operations, Safety, QA etc. All comments will be collected and resolved. The milestone will be considered complete when all comment resolutions have been accepted as evidenced by the reviewers signature on an RCR.

Acceptance Criteria:

Signed off RCR's.

Deliverables:

Signed off RCR package

. Horsager BK Horsager 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-98

WHC TWRS Milestone Description Sheet

Title: Safety Management Plan (W-236B) **WHC-SP-1101** Schedule ID: PDW62125A

Revision: 0

Assigned to: IPM Permitting & Safety

WBS Designator: 1.1.1.3.01.05.06.02.01 ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-117 Completion Date: 02/03/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): Low Level Waste Pretreatment Project (IPM)
[X]	CONTRACTOR	[X]	Other (Specify): Planning Document		

Description and what constitutes completion of this commitment:

Preparation of a Safety Management Plan (SMP) that describes requirements and responsiblities for safety analysis and safety reviews.

Acceptance Criteria:

Approval of the Engineering Data Transmittal form

Deliverables:

fety Management Plan

..L. Banning A R Gadd for 9-21-94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-99

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue The IPM Quality Assurance Program Plan (QAPP)

Schedule ID: PDW13135A

Revision: 0

Assigned to: TWRS Projects QA

WBS Designator: 1.1.1.3.01.05.01.03.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-118

Completion Date: 03/31/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): (PLAN) SUPPORT DOCUMENT

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): PROJECT

Description and what constitutes completion of this commitment:

WHC will issue a WHC approved project specific Quality Assurance Program Plan.

Acceptance Criteria:

The Quality Assurance Program Plan will incorporate all relevant DOE and WHC quality related requirements.

Deliverables:

The deliverable will be the Quality Assurance Progam Plan.

J.S. Sparks J.S. Sparks 9/19/94
Cost Account Manager — Date

K.A. Gasper K.A. Gasper 9/19/94
Program Element Manager — Date

R.R. Gadd R.R. Gadd 9/19/94
Activity Manager — Date

L. Erickson
DOE Manager (agreement) — Date

R.L. Long, Jr.
DOE Manager (acceptance) — Date

D7-100

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Advanced Conceptual Design

Schedule ID: PDW31120A

Revision: 0

Assigned to: IPM Contract Management & Training

WBS Designator: 1.1.1.3.01.05.03.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-122

Completion Date: 09/27/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): IPM Project Manager

Description and what constitutes completion of this commitment:

The selected architecture/engineering firm (A/E) will issue the A/E approved completed Advanced Conceptual Design Package for WHC review and comment as defined in the negotiated work scope for Conceptual Design.

Acceptance Criteria:

The package will contain the items identified in the negotiated work scope and will provide evidence that the functional requirements of the design will be met when the Advanced Conceptual Design phase is completed.

Deliverables:

The detailed list of deliverables established in the early planning of the Conceptual Design effort will be provided. Changes to the list of deliverables will be handled by the change control process.

L.D. Swenson Leon D Swenson 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-101

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete the LLW Pretreatment Advanced Conceptual Design Review

Schedule ID: PDW12320A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.03

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-123

Completion Date: 09/30/96

Milestone Class:		Deliverable:			Addressed to:		
[ ]	TPA	[ ]	REPORT		[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER		[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS		[X]	Other (Specify):	IPM Project Manager
[X]	CONTRACTOR	[X]	Other (Specify):	Signed off RCR's			

Description and what constitutes completion of this commitment:

The design media will be reviewed at completion of the Advanced Conceptual Design by the IPM Project, Program, Operations, Safety, QA etc. All comments will be collected and resolved. The milestone will be considered complete when all comment resolutions have been accepted as evidenced by the reviewers signature on an RCR.

Acceptance Criteria:

Signed off RCR's.

Deliverables:

Signed off RCR package

Horsager BK Horsager 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-102

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Produce the LLW Pretreatment Interface Control Plan (IFC)

Schedule ID: PDW12110A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-124

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The IFC will identify all project interfaces with existing utilities etc. and with projects which are in various phases of design or construction. It will describe the nature of these interfaces and discuss how they will be managed. This milestone will be considered complete when the IFC is issued as a supporting document.

Acceptance Criteria:

Review and approval by IPM Project, Pretreatment Program and the interfacing organizations.

Deliverables:

Issue the IFC as a supporting document.

B.K. Horsager BK Horsager 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

DT-103

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Produce LLW Pretreatment Project Management Plan (PMP)

Schedule ID: PDW11105A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-125

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Produce the Project Management Plan in accordance with DOE Order 4700.1 and TWRS Projects Integrating Procedures. The milestone will be considered complete when the PMP is approved by WHC.

Acceptance Criteria:

Review and approval by WHC.

Deliverables:

The Project Management Plan as a supporting document.

B. Horsager BR Horsager 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-104

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Produce LLW Pretreatment Project Design Criteria (PDC)

Schedule ID: PDW12105A

Revision: 0

Assigned to: IPM Project Engineering

WBS Designator: 1.1.1.3.01.05.01.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-126

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The PDC will be a controlled document that will be based on the approved Functioons and Requirements and will serve as the basis for title I and title II design. When the document is completed and approved by WHC and issued as a Supporting Document,this milestone will be considered complete.

Acceptance Criteria:

Review and approval by the IPM project, program and independent reviewers.

Deliverables:

Issue the PDC as a supporting document

B Horsager BK Horsager 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-105

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: All Cell Decon, Repair, & Light Installation Complete

Schedule ID: PDW21106C

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-133

Completion Date: 12/29/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

The WESF cells B-E will be cleaned out, spent equipment removed, the cells washed down, floor pans tested and repaired, cranes replaced and new lights fixtures installed to support the installation of equipment necessary to perform hot testing in these cells.

Acceptance Criteria:

Solid and liquid waste will be dispositioned and repairs completed, cranes and new lighting installed.

Deliverables:

The deliverable will be a letter certifying that the cells are ready for installation of necessary equipment for hot testing.

S.A. Barker S A Barker 9-22-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-22-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

DY-106

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Downselect Other Radionuclide Separation Processes Completed

Schedule ID: PDW22173A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-135

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Information concerning the downselect of other radionuclide separation process(es) will be compiled and evaluated. A report making recommendations based on literary searches and test data will be issued.

Acceptance Criteria:

The report must make recommendations for other radionuclide separation process(es) downselect based on information obtained from literary searches and test data.

Deliverables:

A letter transmitting the report will be the deliverable.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-107

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Select HLW Pretreatment A/E

Schedule ID: PHW09070A

Revision: 0

Assigned to: Pretreatment Project Engineering

WBS Designator: 1.1.1.3.01.06.03.01.01

ADS No.: 1220-00-AC

Milestone Control No.: T3A-96-136

Completion Date: 07/31/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): Selected A/E

Description and what constitutes completion of this commitment:

Based on responses to Commerce Business Daily (CBD) announcement, WHC will provide evaluations of proposals select the architect/engineering firm (A/E) to perform high level waste (HLW) pretreatment facility engineering design.

Acceptance Criteria:

Selection of qualified A/E to perform HLW pretreatment engineering design.

Deliverables:

The deliverable is the notification of the A/E as section as Project A/E.

K.A. Gasper K A Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

K.A. Gasper K A Gasper 9/25/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

D7-108

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue 90% Conceptual Design Review Package

Schedule ID: PDW31115A

Revision: 0

Assigned to: IPM Contract Management & Training

WBS Designator: 1.1.1.3.01.05.03.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-137

Completion Date: 12/01/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): IPM Project Manager

Description and what constitutes completion of this commitment:

The selected architecture/engineering firm (A/E) will issue the 90% Conceptual Design Review Package for WHC review and comment as defined in the negotiated work scope for Conceptual Design. This package will include the complete technical content of the design, but will not include the cost estimate.

Acceptance Criteria:

The package will contain the items identified in the negotiated work scope and will provide evidence that the functional requirements of the design will be met when the Conceptual Design phase is completed.

Deliverables:

The detailed list of deliverables established in the early planning of the Conceptual Design effort will be provided. Changes to the list of deliverables will be handled by the change control process.

L.D. Swenson Leon D Swenson 9/21/94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-109

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue RFQ for Publication in Commerce Business Daily (CBD)

Schedule ID: PHW09052A

Revision: 0

Assigned to: Pretreatment Project Engineering

WBS Designator: 1.1.1.3.01.06.01.01

ADS No.: 1220-00-AC

Milestone Control No.: T3A-96-138

Completion Date: 12/30/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify): Selected A/E
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Prepare Commerce Business Daily (CBD) announcement of Request for Quotes (RFQ) to perform high level waste pretreatment engineering design. Responses to RFQ will provide basis for selection of architect/engineering firm (A/E) to perform conceptual engineering design, with options to perform Title I, Title II, and Title III engineering.

Acceptance Criteria:

WHC approved CBD announcement is provided to DOE for concurrence/publication in CBD.

Deliverables:

The deliverable is the WHC approved CBD announcement provided to DOE.

K.A. Gasper K A Gasper 9/23/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/23/94
Program Element Manager Date

K.A. Gasper K A Gasper 9/23/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

L. Erickson
DOE Manager (acceptance) Date

D7-110

WHC TWRS Milestone Description Sheet

Title: PSE Approved by DOE-RL

Schedule ID: PDW00015

Revision: 0

Assigned to: DOE-RL

WBS Designator: 1.1.1.3.01.05.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-142

Completion Date: 04/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC
[ ]	CONTRACTOR	[X]	Other (Specify): PSE		

Description and what constitutes completion of this commitment:

DOE-RL must review and approve the Preliminary Safety Evaluation. This milestone will be considered complete when DOE-RL notifies WHC that it has approved it.

Acceptance Criteria:

Deliverables:

Letter from DOE-RL to WHC.

		K.A. Gasper K A Gasper	9/19/94
Cost Account Manager	Date	Program Element Manager	Date
R.R. Gadd R R Gadd	9-19-94	L. Erickson	
Activity Manager	Date	DOE Manager (agreement)	Date
R.L. Long, Jr.			
DOE Manager (acceptance)	Date		

DY-111

WHC TWRS Milestone Description Sheet

Title: Conceptual Design Report Approval by DOE-RL

Schedule ID: PDW00005

Revision: 0

Assigned to: DOE-RL

WBS Designator: 1.1.1.3.01.05.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-143

Completion Date: 04/30/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC

Description and what constitutes completion of this commitment:

This milestone will be met when DOE-RL approves the IPM CDR and notifies WHC via a letter that the approval has taken place.

Acceptance Criteria:

WHC will provide a CDR to DOE-RL for review. Subsequent to that review and any comment incorporation, DOE-RL will approve the CDR.

Deliverables:

Letter from DOE-RL to WHC

	Cost Account Manager / Date	K.A. Gasper K A Gasper 9/19/94	Program Element Manager / Date
R.R. Gadd R R Gadd 9-19-94	Activity Manager / Date	L. Erickson	DOE Manager (agreement) / Date
R.L. Long, Jr.	DOE Manager (acceptance) / Date		

D7-112

WHC TWRS Milestone Description Sheet

Title: Complete Independent Cost Estimate Review

Schedule ID: PDW00010

Revision: 0

Assigned to: DOE-RL

WBS Designator: 1.1.1.3.01.05.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-144

Completion Date: 03/29/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

An Independent Cost Estimate (ICE) is required to be performed by DOE. This milestone will be met when DOE-RL notifies WHC that the review is complete.

Acceptance Criteria:

The ICE is a prerequisite for the granting of KD-1 and will be preformed by a DOE subcontractor to DOE specification.

Deliverables:

Letter from DOE-RL to WHC

		K.A. Gasper K A Gasper 9/19/94	
Cost Account Manager	Date	Program Element Manager	Date
R.R. Gadd R R Gadd 9-19-94		L. Erickson	
Activity Manager	Date	DOE Manager (agreement)	Date
R.L. Long, Jr.			
DOE Manager (acceptance)	Date		

D7-113

WHC TWRS Milestone Description Sheet

Title: Key Decision 1 and Project Authorization

Schedule ID: PDW00100

Revision: 0

Assigned to: DOE-RL

WBS Designator: 1.1.1.3.01.05.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-145

Completion Date: 08/30/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC
[ ]	CONTRACTOR	[X]	Other (Specify): Project Authorization		

Description and what constitutes completion of this commitment:

This milestone will be met when DOE-RL notifies WHC that DOE-HQ has issued Key Decision 1 and DOE-RL issues the Project Authorization Modification to fund initiation of Title I design.

Acceptance Criteria:

Signed Project Authorization Modification from DOE-RL to initiate Title I design.

Deliverables:

- DOE-HQ will issue Key Decision 1 (KD-1).
- DOE-RL will issue Project Authorization to initiate Title I design.

Cost Account Manager	Date	K.A. Gasper	9/22/94
		Program Element Manager	Date
R.R. Gadd	9-21-94	L. Erickson	
Activity Manager	Date	DOE Manager (agreement)	Date
R. L. Long, Jr.			
DOE Manager (acceptance)	Date		

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Cold Testing Results for S/L Separation and Polishing Filtration Tests Evaluated

Schedule ID: PDW21193A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-146

Completion Date: 09/30/96

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

The progress on cold testing of S/L (solids/liquid) separations and polishing filtration equipment at WHC Chemical Engineering Laboratory will be evaluated. The progress and results of these tests will be documented in a progress report. This testing is required prior to Title I design for S/L equipment selection/design.

Acceptance Criteria:

The report must include test/development results and evaluations by test personnel usable in conceptual design.

Deliverables:

The deliverable is a progress report.

S.A. Barker S A Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-115

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Test Requirements for Other Separations Completed

Schedule ID: PDW22184A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-96-147

Completion Date: 03/29/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): RR GADD
[X]	CONTRACTOR	[X]	Other (Specify): Test Requirements		

Description and what constitutes completion of this commitment:

The Test Requirements document for the hot test unit for other separations (Sr, TRU, Tc) located in WESF will be prepared and issued with incorporated comments. The document will be transmitted to WHC for approval.

Acceptance Criteria:

The acceptance criteria is a document that has been WHC approved.

Deliverables:

The Test Requirements document will be the deliverable.

S.A. Barker S.A. Barker 9-22-94
Cost Account Manager Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R.R. Gadd 9-22-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D1-116

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Complete Conceptual Design and Initiate Definitive Design of LLW Pretreatment Facility

Schedule ID: PDW32105A

Revision: 0

Assigned to: IPM Contract Management & Training

WBS Designator: 1.1.1.3.01.05.03.02.01

ADS No.: 1280-0-AB

Milestone Control No.: T3A-97-100

Completion Date: 12/31/96

Milestone Class:		Deliverable:		Addressed to:	
[X]	TPA M-50-01-T02	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The liquid treatment for low level waste (LLW) will ensure that the LLW can be successfully processed, and will be immobilized by the LLW vitrification process. The Conceptual Design report (CDR) for the Initial Pretreatment Module (IPM) will provide documented evidence that the pretreatment can be successfully accomplished and provide the basis for preparation of the validation package to be submitted to DOE-HQ. Various trade studies will be performed in the evaluation of facility features that must be included in the design to meet the functional requirements of the project, as identified in the TWRS systems engineering evaluation. The trade results will be reflected in the CDR. The validation package will include the CDR and other such information as may be required to support the request for project validation. The Project Authorization to commence Title I design will be provided by DOE-HQ, and is required to complete this WHC milestone.

Acceptance Criteria:

Approval of the conceptual Design Report by WHC, and formal submittal of the CDR to DOE-RL will constitute completion of the WHC portion of the first phase of this milestone. Completion of the TPA milestone will require DOE-HQ approval of KD-1, and include Project Authorization to commence Title I design. The project A/E will then be authorized to by Letter of Instruction (LOI) to initiate Title I design. Initiation of Title I design will be signified by initiation of A/E work directly in support of Title I work scope.

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Deliverables:

The deliverables are:

- WHC will issue a letter to DOE-RL informing them that Title I design has been initiated by the A/E.

L.D. Swenson Leon D Swenson 9/21/94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R R Gadd 9/21/94
Activity Manager Date

L. Erickson
DOE Manager (agreement) Date

R.L. Long, Jr.
DOE Manager (acceptance) Date

D7-118

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Design Document of Hot Testing Unit for Other Separations Completed

Schedule ID: PDW22186A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.02.01

ADS No.: 1280-0-AB

Milestone Control No.: T3A-97-102

Completion Date: 12/31/96

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [X] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): RR GADD

Description and what constitutes completion of this commitment:

The design for the hot test unit for other separations (Sr, TRU, Tc) to be located in WESF will be completed.

Acceptance Criteria:

The design must be suitable for competitive procurement of the hot test unit.

Deliverables:

The deliverable is a letter documenting the completion of the approved design documents.

S.A. Barker S.A. Barker 9-21-94
Cost Account Manager — Date

K.A. Gasper K.A. Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R.R. Gadd 9-21-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-119

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Evaluation of Polishing Filters for T-111 and 102-C Supernatant Simulant Complete

Schedule ID: PDW21167A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-97-103

Completion Date: 09/30/97

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

The results of cold testing of the polishing filtration equipment using T-111 and C-106 simulant will be reported. This report will include laboratory and/or bench-scale test results and evaluations.

Acceptance Criteria:

The report must include results as well as evaluations of the testing usable for Title I design of the LLW pretreatment facility.

Deliverables:

The deliverable will be the report.

S.A. Barker S A Barker 9-21-94
Cost Account Manager Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager Date

R.R. Gadd R R Gadd 9-21-94
Activity Manager Date

DOE Manager (agreement) Date

DOE Manager (acceptance) Date

D7-120

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Evaluation of S/L Separation Equipment for T-111 and 102-C Simulants Complete

Schedule ID: PDW21147A

Revision: 0

Assigned to: IPM Program & Technology Integration

WBS Designator: 1.1.1.3.01.05.02.01.01

ADS No.: 1280-00-AB

Milestone Control No.: T3A-97-104

Completion Date: 09/30/97

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	RR GADD
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

The results of cold testing of the S/L separations equipment using T-111 and C-106 simulant will be reported. This report will include laboratory and/or bench-scale test results and evaluations.

Acceptance Criteria:

The information must include test results as well as evaluations usable for Title I design of the LLW pretreatment facility.

Deliverables:

The deliverable will be the report.

S.A. Barker S A Barker 9-22-94
Cost Account Manager — Date

K.A. Gasper K A Gasper 9/22/94
Program Element Manager — Date

R.R. Gadd R R Gadd 9-22-94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

D7-121

MDSs for Technology Integration & Planning (1.1.1.3.02.01)

WHC-SP-1101

Title : Complete MYPP/Baseline input to P3

Schedule ID: L195MS01

Revision: 0

Assigned to: LOW LEVEL WASTE PROGRAM

WBS Designator: 1.1.1.3.02.01

ADS No.: 1230

Milestone Control No.: T3B-95-101

Completion Date: February 3, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[X] DOE-RL
[ ] DOE-R	[ ] DRAWINGS	[ ] Other (Specify) :
[X] CONTRACTOR	[X] Other schedule (Specify) :	

Description and what constitutes completion of this commitment:

The completion of this milestone will be deemed complete upon the issuance of the draft MYPP/Baseline schedule to RL as part of the baseline package. The development of this schedule will be based upon data being built from the bottom up (APFs and CEs) which will support the logic and resources allocated to a specific activity. In addition, milestones will be identified along with interfaces between program elements/WHC. This document will be transmitted to RL via DSI from WHC LLW Program Element Manager. (L195MS01)

Acceptance Criteria:

Acceptance of this milestone will be a determination by the cognizant program element manager of his delegate that the schedule is resource loaded and logically tied schedule.

Deliverables:

The deliverable will be the issuance of the program element schedule to RL as part of the baseline draft product.

Ralph F. Wood — Date
Cost Account Manager

R. J. Murkowski — 9-16-94 — Date
Program Element Manager

Ralph F. Wood — 9/14/94 — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

ORIGINAL
SEP 02 1994

D8-2

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: WHC-APPROVED LLW PROGRAM STRATEGY DOCUMENT

Schedule ID: L195MS02

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-102

Completion Date: March 6, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[X]	Other (Specify): Strategy document		

Description and what constitutes completion of this commitment:

This deliverable will be deemed complete upon the issuance of the LLW Disposal Program Technical Strategy document. The document will be reviewed each year and updated yearly based upon the course of Program, emerging technical issues/discoveries, etc. This document which is WHC-SD-WM-OLN-067 will be issued via EDT and ultimately approved by the Program Element Manager (L195MS02).

Acceptance Criteria:

The acceptance criteria of this document will be the signed off EDT in meeting the rigors of the review/comment process within WHC.

Deliverables:

The deliverable will be the issuance of a WHC-approved updated LLW Strategy document.

R. F. Wood — Date
Cost Account Manager

R. J. Murkowski 9-16-94 — Date
Program Element Manager

R. F. Wood — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

WHC-SP-1101

Title Submit MYPP/Basseline document to RL :

Schedule ID: L195MS03

Revision: 0

Assigned to: LOW-LEVEL WASTE PROGRAM

WBS Designator: 1.1.1.3.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-103

Completion Date: March 9, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[X] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[ ] Other (Specify) :
[ ] CONTRACTOR	[X] Other (Specify) : Baseline documentation	

Description and what constitutes completion of this commitment:

This work will be culminated by the packaging of the LLW Program Baseline documentation, which will consist of: Cost estimates, Activity Planning Forms, Basis of Estimates, logic driven resource loaded schedules, milestone description sheets and other documentation as required based on guidance. This document will be provided to the RL LLW program staff for a preliminary review. (L195MS03)

Acceptance Criteria:

T ceptance criteria is not applicable since the document is draft

Deliverables:

The deliverable will be the issuance of the program element baseline schedule and supporting documentation to RL Program staff.

Ralph F. Wood — Date
Cost Account Manager

R. J. Murkowski — 9-16-94 — Date
Program Element Manager

Ralph F. Wood — 9/14/94 — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-4

WHC-SP-1101

Title Submit ADS 1230 to RL
:

Schedule ID: L195MS04

Revision: 0

Assigned to: LOW-LEVEL WASTE PROGRAM

WBS Designator: 1.1.1.3.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-104

Completion Date: May 30, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[X] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[ ] Other (Specify) :
[ ] CONTRACTOR	[X] Other (Specify) : Activity Data Sheet	

Description and what constitutes completion of this commitment:

The Activity Data Sheet will be prepared subsequent to the preparation of the MYPP/Baseline documentation. The baseline will be the source of the data for the ADS. This milestone will be complete upon resolution of comments from RL LLW Program Office. The document which will be commented on will be that of a draft. (L195MS04)

Acceptance Criteria:

The acceptance criteria is not applicable since the document is draft. However, it should be noted that acceptance of the fianl document must meet guidance criteria since this document supports the budget submittal process.

Deliverables:

The deliverable will be the issuance of ADS 1230 in draft form to RL for their review/comment/concurrance.

Ralph F. Wood — Date
Cost Account Manager

R. J. Murkowski — 9-16-94 — Date
Program Element Manager

Ralph F. Wood — 9/14/94 — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

ORIGINAL
SEP 02 1994

D8-5

WHC-SP-1101

Title: Submit Work Plan to RL for Approval

Schedule ID: L195MS05

Revision: 0

Assigned to: LOW-LEVEL WASTE PROGRAM

WBS Designator: 1.1.1.3.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-105

Completion Date: July 31, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[X] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[ ] Other (Specify):
[ ] CONTRACTOR	[X] Other (Specify): Multi Year Work Plan	

Description and what constitutes completion of this commitment:

The multi year work plan will be submitted by the LLW Program Element Manager to the RL LLW Program Office for review. Prior to this, RL staff will have been informally involved with the process of reviewing WBS, WBS logic, preparation APFs, CES, Basis of Estimates, selecting Milestones and MDS, and etc. This work plan will be developed using the baseline documentation as the basis. (L195MS05)

Acceptance Criteria:

The acceptance criteria of this document is based on good management practices by the LLW Program Element Manager of the decision to submit to RL.

Deliverables:

The deliverable will be the issuance of LLW Multi Year Work Plan for FY 1996, FY 1997 and FY 1998 for RL LLW Program Office review/comment/concurrance.

Ralph F. Wood — Date
Cost Account Manager

R. J. Murkowski — 9-16-94 — Date
Program Element Manager

Ralph F. Wood — 9/14/94 — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-6

MDSs for Technology Development & Applied Engineering (1.1.1.3.02.02)

WHC-SP-1101

Title: PHASE II SIMULANT RECIPE

Schedule ID: L295MS01

Revision: 0

Assigned to: E. T. Weber

WBS Designator: 1.1.1.3.02.02.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-201

Completion Date: March 30, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[X] LETTER	[X] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[ ] Other (Specify):
[ ] CONTRACTOR	[ ] Other (Specify):	

Description and what constitutes completion of this commitment:

Develop first simulant for Phase II testing, to include outlining the simulant needs and developing a recipe for simulant.

Acceptance Criteria:

Development and laboratory testing of first simulant for Phase II testing.

Deliverables:

Letter to DOE-RL with simulant recipe.

E. T. Weber — Date
Cost Account Manager

K C Burgard — 9/23/94
K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (acceptance)

R. J. Murkowski — Date
Program Element Manager

J. C. Peschong — Date
DOE Manager (agreement)

ORIGINAL

SEP 21 1994

D8-8

WHC-SP-1101

Title : DEFINE PRELIMINARY REQUIREMENTS FOR PILOT SCALE VIT PLANT

Schedule ID: L295MS02

Revision: 0

Assigned to: J. H. Westsik (PNL)

WBS Designator: 1.1.1.3.02.02.06

ADS No.: 1230-0

Milestone Control No.: T3B-95-202

Completion Date: July 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[X]	LETTER	[X]	DOE-RL
[X]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify) :
[ ]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

Preliminary report by PNL on pilot scale melter needs for LLW vitrification.

Acceptance Criteria:

Report on need for pilot and logic of hot testing and cold testing.

Deliverables:

Final draft of report on pilot.

E. T. Weber/J. H. Westsik — Date
Cost Account Manager

K C Burgard 9/23/94
K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (acceptance)

R. J. Murkowski — Date
Program Element Manager

J. C. Peschong — Date
DOE Manager (agreement)

ORIGINAL

SEP 21 1994

D8-9

WHC-SP-1101

Title PHASE I VENDOR TEST REPORT
:

Schedule ID: L295MS03

Revision: 0

Assigned to: E. T. Weber

WBS Designator: 1.1.1.3.02.02.01.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-203

Completion Date: June 22, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify) :
[X]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

Complete Phase I melter testing, complete analytical work and receive vendors required information.

Acceptance Criteria:

Report describing testing, test results, and mass balance for vendors tests.

Deliverables:

Letter report of results of Phase I testing.

E. T. Weber — Date
Cost Account Manager

R. J. Murkowski — Date
Program Element Manager

K C Burgard 9/23/94
K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-10

WHC-SP-1101

Title: START PHASE II VENDOR TEST PROCESS

Schedule ID: L296MS04

Revision: 0

Assigned to: E. T. Weber

WBS Designator: 1.1.1.3.02.02.01.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-204

Completion Date: July 27, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[X] LETTER	[X] DOE-RL
[ ] DOE-R	[ ] DRAWINGS	[ ] Other (Specify):
[X] CONTRACTOR	[ ] Other (Specify):	

Description and what constitutes completion of this commitment:

Select vendors from Phase I testing to go into Phase II, notify vendors of Phase II with letter contract.

Acceptance Criteria:

Vendors will begin preparation of Phase II test plans.

Deliverables:

Letter to RL stating selection of vendors and that vendors have been given letter contract to begin Phase II.

E. T. Weber — Date
Cost Account Manager

K. C. Burgard — 9/23/94
K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (acceptance)

R. J. Murkowski — Date
Program Element Manager

Date
DOE Manager (agreement)

ORIGINAL

SEP 02 1994

D8-11

WHC-SP-1101

Title : LETTER REPORT WITH PHASE II VENDOR GLASS FORMULATIONS

Schedule ID: LL95201A

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-206

Completion Date: April 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify) : WHC-Key
[X]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

Letter report describing glass formulations developed and tested by PNL prior to Phase II of the melter vendor tests. Glasses may be used by melter vendors in Phase II testing. Report will include objectives, approach, testing description, and results and analyses. Issuance of the letter report constitutes completion.

Acceptance Criteria:

Report transmittal to WHC by PVTD project manager.

Deliverables:

Letter report with Phase II vendor glass formulations.

P. Hrma — Date
Cost Account Manager

K C Burgard 9/23/94
K. C. Burgard — Date
Activity Manager

Date
DOE Manager (acceptance)

R. J. Murkowski — Date
Program Element Manager

J. C. Peschong — Date
DOE Manager (agreement)

ORIGINAL
SEP 21 1994

DB-12

WHC-SP-1101

Title: MINOR COMPONENT SOLUBILITIES DATA PACKAGE

Schedule ID: LL95201B

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-207

Completion Date: August 30, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[ ] DOE-RL
[ ] DOE-R	[ ] DRAWINGS	[X] Other (Specify): WHC-Key
[X] CONTRACTOR	[X] Other (Specify): Data package	

Description and what constitutes completion of this commitment:

Data package describing solubilities of minor components including P_2O_5, SO_3, F, Cl, and Cr_2O_3 in the melter vendors glass LDG-5413. Issuance of the data package constitutes completion.

Acceptance Criteria:

Transmittal of data package to WHC by PVTD project manager.

Deliverables:

Data package on minor component solubilities.

P. Hrma — Date
Cost Account Manager

R. J. Murkowski — Date
Program Element Manager

K C Burgard 9/23/94
K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 21 1994

DR-13

WHC-SP-1101

Title: INITIAL GLASS FORMULATION DEVELOPMENT LETTER REPORT

Schedule ID: LL95201C

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-208

Completion Date: September 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify): WHC
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Letter report discussing glass formulation development work completed in FY 1994 and FY 1995. Report will include formulations initially at 20 wt% Na_2O, over the range 15-35 wt% Na_2O and for Phase I and II melter vendor testing. Report will include objectives, approach, testing description and results and analyses. Issuance of the letter report constitutes completion.

Acceptance Criteria:

Transmittal of report to WHC by PVTD project manager.

Deliverables:

Letter report on initial glass formulation development.

P. Hrma — Date
Cost Account Manager

K C Burgard 9/23/94
K. C. Burgard — Date
Activity Manager

Date
DOE Manager (acceptance)

R. J. Murkowski — Date
Program Element Manager

J. C. Peschong — Date
DOE Manager (agreement)

ORIGINAL

SEP 21 1994

D8-14

WHC-SP-1101

Title: LETTER REPORT EVALUATING MATRIX/PACKAGING OPTIONS

Schedule ID: LL95202B

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-209

Completion Date: September 30, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[ ] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[X] Other WHC (Specify):
[ ] CONTRACTOR	[X] Other WHC (Specify):	

Description and what constitutes completion of this commitment:

Letter report describing matrix materials identified and results of first year's testing of glass/matrix samples for chemical compatibility, mechanical integrity, and degradation mechanisms. Report will include objectives, approach, testing description and results and analyses. Issuance of the letter report constitutes completion.

Acceptance Criteria:

Transmittal of letter report to WHC by PVTD project manager.

Deliverables:

Letter report evaluating matrix/packaging options.

P. Hrma — Date
Cost Account Manager

R. J. Murkowski — Date
Program Element Manager

K. C. Burgard 9/23/94
K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 21 1994

D8-15

WHC-SP-1101

Title: DRAFT REPORT ON FY 1995 PROCESS CHEMISTRY INVESTIGATIONS

Schedule ID: LL95203A

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-210

Completion Date: September 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Key
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Letter report describing process chemistry investigations including waste denitration, high activity glass formers and waste drying. Report will include objectives, approach, testing description and results and analyses. Issuance of the letter report constitutes completion.

Acceptance Criteria:

Transmittal of draft report to WHC by PVTD project manager.

Deliverables:

Draft report on FY 1995 process chemistry investigations.

P. A. Smith Date
Cost Account Manager

K C Burgard 9/23/94
K. C. Burgard Date
Activity Manager

Date
DOE Manager (acceptance)

R. J. Murkowski Date
Program Element Manager

J. C. Peschong Date
DOE Manager (agreement)

ORIGINAL

SEP 21 1994

D8-16

WHC-SP-1101

Title: LETTER REPORT ON SIMULANTS FOR PHASE II MELTER VENDOR TESTS

Schedule ID: LL95203B

Revision: 0

Applied to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-211

Completion Date: March 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify): WHC-Key
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Letter report providing simulant recipe(s) and simulant characteristics for Phase II melter vendor testing. Issuance of the letter report constitutes completion.

Acceptance Criteria:

Transmittal of letter report to WHC by PVTD project manager.

Deliverables:

Letter report on simulants for Phase II melter vendor tests.

P. A. Smith — Date
Cost Account Manager

R. J. Murkowski — Date
Program Element Manager

K C Burgard 9/23/94

K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 21 1994

D8-17

WHC-SP-1101

Title : REVISED PILOT-SCALE VITRIFICATION FACILITY DESIGN STUDY

Schedule ID: LL95302F

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-212

Completion Date: July 30, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[X] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[ ] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[X] Other (Specify) : WHC
[ ] CONTRACTOR	[ ] Other (Specify) :	

Description and what constitutes completion of this commitment:

Preconceptual design study for a Pilot-Scale Vitrification Facility. The preconceptual design will be updated to incorporate findings from Phase I of the melter vendor testing. Issuance of report constitutes completion.

Acceptance Criteria:

Transmittal of design study to WHC by PVTD project manager.

Deliverables:

Revised Pilot-Scale Vitrification Facility design study.

G. A. Whyatt Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

K C Burgard 9/23/94
K. C. Burgard Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 21 1994

D8-18

WHC-SP-1101

Title : REPORT ON METHODOLOGY AND HYDRAULIC PROPERTY MEASUREMENTS

Schedule ID: LL95402B

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-213

Completion Date: September 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other WHC-Key
[X]	CONTRACTOR	[ ]	Other (Specify) :		(Specify) :

Description and what constitutes completion of this commitment:

Draft report describing methodology and results of first field experiment and hydraulic property measurements to support glass PA. Report will include objectives, approach, test description and results and analysis. Issuance of the draft report constitutes completion.

Acceptance Criteria:

Transmittal of draft report to WHC by PVTD project manager.

Deliverables:

Draft report on methodology and hydraulic property measurements.

M. P. Bergeron — Date
Cost Account Manager

R. J. Murkowski — Date
Program Element Manager

K C Burgard 9/23/94

K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL
SEP 21 1994

D8-19

WHC-SP-1101

Title: REPORT COMPARING RECHARGE MODEL PREDICTIONS WITH FIELD DATA

Schedule ID: LL95402G

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-214

Completion Date: September 30, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[X] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[ ] DOE-RL
[ ] DOE-R	[ ] DRAWINGS	[X] Other WHC-Key
[X] CONTRACTOR	[ ] Other (Specify):	(Specify):

Description and what constitutes completion of this commitment:

Report comparing recharge model predictions with estimated recharge rates from 200E lysimeter data and deep well testing. Selected thermal profile and water flow data from deep well test will be compared with unsat-N simulator. Report will include objectives, approach, test description, results and analyses. Issuance of report constitutes completion.

Acceptance Criteria:

Transmittal of report to WHC by PVTD project manager.

Deliverables:

Report comparing recharge model predictions with field data.

M. P. Bergeron Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

K C Burgard 9/23/94

K. C. Burgard Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 21 1994

D8-20

WHC-SP-1101

Title FINAL MELTER SELECTION CRITERIA :

Schedule ID:

Revision: 0

Assigned to: E. T. Weber

WBS Designator: 1.1.1.3.02.02.01.04

ADS No.: 1230-0

Milestone Control No.: T3B-95-215

Completion Date: May 30, 1995

Milestone Class:

[ ] TPA
[ ] DOE-H
[X] DOE-R
[ ] CONTRACTOR

Deliverable:

[X] REPORT
[ ] LETTER
[ ] DRAWINGS
[ ] Other (Specify) :

Addressed to:

[ ] DOE-HQ
[X] DOE-RL
[ ] Other (Specify) :

Description and what constitutes completion of this commitment:

Draft document describing the down selection process and criteria for selection, the reference melter.

Acceptance Criteria:

Draft document out for review by DOE-RL, WHC and PNL.

Deliverables:

Draft supporting document.

E. T. Weber Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

K. C. Burgard 9/23/94
K. C. Burgard Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 21 1994
ORIGINAL

D8-21

WHC-SP-1101

Title PHASE I MELTER SELECTION CRITERIA :

Schedule ID:

Revision: 0

Assigned to: E. T. Weber

WBS Designator: 1.1.1.3.02.02.01.04

ADS No.: 1230-0

Milestone Control No.: T3B-95-216

Completion Date: December 15, 1994

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[X] LETTER	[X] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[ ] Other (Specify) :
[ ] CONTRACTOR	[ ] Other (Specify) :	

Description and what constitutes completion of this commitment:

Development of a selection criteria to determine if the seven melter vendors will go from Phase I to Phase II melter testing. This can either be a pass/fail type or a selection based on type of melter, number of melter type, unique features, and performance during tests. Other factors are cost of Phase II testing and ability to meet schedule will be included.

Acceptance Criteria:

Criteria will be acceptable to DOE-RL, Procurement, technical staff and the Program Office. The criteria could include such items as ab[illegible] to accelerate the testing programs or funding considerations.

Deliverables:

Written letter report to be released later as a published document.

E. T. Weber Date
Cost Account Manager

K C Burgard 9/23/94
K. C. Burgard Date
Activity Manager

Date
DOE Manager (acceptance)

R. J. Murkowski Date
Program Element Manager

Date
DOE Manager (agreement)

SEP 21 1994

ORIGINAL

D8-22

WHC-SP-1101

Title: COMPLETE MELTER FEASIBILITY AND SYSTEM OPERABILITY TESTS, SELECT REFERENCE MELTER(S), AND ESTABLISH REFERENCE LLW GLASS FORMULATION WHICH MEETS COMPLETE SYSTEM REQUIREMENTS

Schedule ID: L296MS02

Revision: 0

Assigned to: K. C. Burgard

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: M-60-02
T3B-96-100

Completion Date: June 1996

Milestone Class:	Deliverable:	Addressed to:
[X] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[X] DOE-RL
[ ] DOE-R	[ ] DRAWINGS	[ ] Other (Specify):
[ ] CONTRACTOR	[X] Other (Specify): Supporting document	

Description and what constitutes completion of this commitment:

Completion of melter testing with simulants and a report in the form of a supporting document with a recommendation of the melter system for the Low-Level Waste Vitrification Facility. The report's recommendation is based on feed variability, process throughput and reliability, maturity of process offgas product handling and feed system needs, maintainability and availability to run the reference glass formulation. This milestone is proceeded by M-60-01 for starting the melter testing.

Acceptance Criteria:

Deliverables:

Externally release supporting document.

E. T. Weber — Date
Cost Account Manager

K C Burgard 9/23/94
K. C. Burgard — Date
Activity Manager

G. F. Williamson — Date
DOE Manager (acceptance)

R. J. Murkowski — Date
Program Element Manager

L. A. Huffman — Date
DOE Manager (agreement)

ORIGINAL

SEP 02 1994

D8-23

WHC-SP-1101

Title: PHASE II MELTER TEST REPORT

Schedule ID: L296MS01

Revision: 0

Assigned to: E. T. Weber

WBS Designator: 1.1.1.3.02.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-96-201

Completion Date: July 1, 1996

Milestone Class:

- [ ] TPA
- [ ] DOE-H
- [ ] DOE-R
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Completion of Phase II testing, collection of test data.

Acceptance Criteria:

Completion of testing with Phase II vendors, analytical results and WHC report on testing.

Deliverables:

Draft report to DOE-RL.

E. T. Weber — Date
Cost Account Manager

R. J. Murkowski — Date
Program Element Manager

K C Burgard 9/23/94

K. C. Burgard — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-24

WHC-SP-1101

Title: REPORT ON FY 1994 SMALL-SCALE MELTER TEST

Schedule ID: LL95301C

Revision: 0

Assigned to: Low-Level Waste Program

WBS Designator: 1.1.1.3.02.02

ADS No.: 1230-0

Milestone Control No.: T3B-96-202

Completion Date: November 30, 1995

Milestone Class:

- [ ] TPA
- [ ] DOE-H
- [ ] DOE-R
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC-Key

Description and what constitutes completion of this commitment:

Letter report on FY 1994 small-scale melter test of processability of simulant and glass formulation conducted prior to Phase I melter vendor testing. Report will include objectives, approach, test description and results and analyses. Issuance of report constitutes completion.

Acceptance Criteria:

Transmittal of report to WHC by PVTD project manager.

Deliverables:

Letter report on FY 1994 small-scale melter test.

J. M. Perez — Date
Cost Account Manager

K C Burgard 9/23/94

K. C. Burgard — Date
Activity Manager

Date
DOE Manager (acceptance)

R. J. Murkowski — Date
Program Element Manager

J. C. Peschong — Date
DOE Manager (agreement)

ORIGINAL

SEP 21 1994

D8-25

MDSs for Facility Operations (1.1.1.3.02.03)

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: PREPARE ORR ROLES AND RESPONSIBILITIES DEFINITION DOCUMENT

SCHEDULE ID: L396MS01
REVISION: 0

ASSIGNED TO: CHARACTERIZATION SUPPORT
WBS DESIGNATOR: 1.1.1.3.02.03.02.01
MILESTONE CONTROL NO: T3B-96-301

ADS NO: 1230-AC
COMPLETION DATE: 9/30/96

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY) Program Manager
[X] CONTRACTOR	[X] OTHER (SPECIFY) Internal WHC Document	

Description and what constitutes completion of this commitment:

Prepare a Operational Readiness Review roles and reponsibilities definition document for the Low Level Waste Vitrification Plant Project. This document will indentify the roles and responsibilities of the Department of Energy, the project organization (WHC Projects, A/E and Constructor) and the operating organization in preparation for and during the operational readiness reviews for cold testing and hot operation of the plant.

Acceptance Criteria

Approval by the LLWVP Project Manager and Program Manager.

Deliverables: (Describe the specific products or condition)

WHC Internal Document.

for C. S. Haller 9/22/95
Cost Account Manager Date

R. J. Murkowski 9-22-94
Program Element Manager Date

J. A. Voogd 9-22-94
Activity Manager Date

J. C. Peschong
DOE Monitor Date

DOE Manager (acceptance) Date

ORIGINAL

SEP 02 1994

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET

TITLE: PREPARE STAFFING AND TRAINING PLAN

SCHEDULE ID: L397MS01
REVISION: 0

ASSIGNED TO: CHARACTERIZATION SUPPORT
WBS DESIGNATOR: 1.1.1.3.02.03.02.01
MILESTONE CONTROL NO: T3B-97-301

ADS NO: 1230-AC
COMPLETION DATE: 9/30/97

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[ ] TPA _____	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[ ] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[X] OTHER (SPECIFY) Program Manager
[X] CONTRACTOR	[X] OTHER (SPECIFY) Internal WHC Document	

Description and what constitutes completion of this commitment:

Prepare a top level Operations and Maintenance Staffing and Training Plan for the Low Level Waste Vitrification Plant Project. This document will indentify the general approach to providing a complete trained staff in time to support various plant milestones such as preoperational testing, cold chemical testing and hot operations.

Acceptance Criteria

The Staffing and Training Plan shall include estimated schedules for staffing and training activities, including hiring rates and resulting staffing curves.

Deliverables: (Describe the specific products or condition)

WHC Internal Document.

C. S. Haller M M Elwell for 9/22/95
Cost Account Manager Date

R. J. Murkowski 9-22-94
Program Element Manager Date

J. A. Voogd 9-22-94
Activity Manager Date

J. C. Peschong
DOE Monitor Date

DOE Manager (acceptance) Date

ORIGINAL

SEP 02 1994

lhwvp023.mds

D8-28

MDSs for System Definition (1.1.1.3.02.04)

WHC-SP-1101

Title : ISSUE UPDATED FACILITY OPTIONS CONFIGURATION STUDY

Schedule ID: L495MS01

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.04.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-401

Completion Date: December 28, 1994

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify) : WHC
[X]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

The Facility Options Configuration Study was submitted to RL on June 29, 1994 and subsequently to Ecology on June 30, 1994 to meet TPA milestone M-60-03-T1. This milestone will include the incorporation of DOE comments and other comments received on the main report and appendices.

Acceptance Criteria:

Issue the updated report with EDT and all appendices for public release.

Deliverables:

C. Complete set of released report and appendices to the LLW Program Office.

R. C. Hoyt Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date	N/A DOE Manager (agreement)	Date
N/A DOE Manager (acceptance)	Date		

ORIGINAL

SEP 02 1994

D8-30

WHC-SP-1101

Title PERFORMANCE SCENARIOS FOR INTERIM PA :

Schedule ID: L495MS02

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.02.01.02

ADS No.: 1230-0

Milestone Control No.: T3B-95-402

Completion Date: January 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify) : WHC PO
[X]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

This task is comprised of preparing and reviewing the performance scenarios to be used for the interim PA and preparation of a letter report for Program Office approval documenting these agreed upon scenarios.

Acceptance Criteria:

Letter report prepared and delivered to the LLW Program Office for approval.

Deliverables:

I report prepared and delivered to the LLW Program Office for approval.

J. A. Rawlins Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

N/A Date
DOE Manager (agreement)

N/A Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-31

WHC-SP-1101

Title PERFORMANCE OBJECTIVES FOR INTERIM PA :

Schedule ID: L495MS03

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.02.01.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-403

Completion Date: January 27,1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify) : WHC PO
[X]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

This task is comprised of preparing and reviewing the performance objectives to be used for the interim PA and preparation of a letter report for Program Office approval documenting these agreed upon objectives.

Acceptance Criteria:

Letter report prepared and delivered to the LLW Program Office for approval.

Deliverables:

1 report prepared and delivered to the LLW Program Office for approval.

J. A. Rawlins Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

N/A Date
DOE Manager (agreement)

N/A Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

DP-32

WHC-SP-1101

Title : ISSUE FUNCTIONS AND REQUIREMENTS DOCUMENT, REVISION 0

Schedule ID: L495MS04

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.01.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-404

Completion Date: March 28, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[X] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[ ] Other (Specify) :
[ ] CONTRACTOR	[X] Other Document (Specify) :	

Description and what constitutes completion of this commitment:

The initial version of the LLW Functions and Requirements (F&R) document, Revision A, is planned for submittal to RL for review on September 30, 1994. This milestone represents the incorporation of DOE comments approved by DOE, and issuance of the Revision 0 document. The milestone date assumes receipt of DOE review comments by December 31, 1994.

Acceptance Criteria:

The milestone is met when the WHC/DOE-approved document is issued as a publicly released document.

Deliverables:

The deliverable is the approved F&R document.

R. C. Hoyt Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-33

WHC-SP-1101

Title : ISSUE LLW FEED ACCEPTANCE CRITERIA DOCUMENT FOR WHC APPROVAL

Schedule ID: L495MS05

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-405

Completion Date: January 27, 1995

Milestone Class:

[ ] TPA
[ ] DOE-H
[ ] DOE-R
[X] CONTRACTOR

Deliverable:

[ ] REPORT
[ ] LETTER
[ ] DRAWINGS
[X] Other (Specify): Supporting document

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): WHC document approvers

Description and what constitutes completion of this commitment:

This deliverable will consist of the preparation of a supporting document to define the chemical limits of the waste feed for LLW vitrification and the basis for these limits. Expected radionuclide concentrations in the waste feed will also be listed (radionuclide limits in the waste feed will ultimately be developed by the PA needs and process flowsheets reflecting information and decisions resulting from development programs).

Acceptance Criteria:

The milestone is met when the SD with EDT is sent to all pertinent functional organizations for approval.

Deliverables:

The deliverable is the EDT and LLW feed acceptance criteria supporting document.

R. C. Hoyt Cost Account Manager	Date
R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date
N/A DOE Manager (agreement)	Date
N/A DOE Manager (acceptance)	Date

ORIGINAL

SEP 02 1994

D8-34

WHC-SP-1101

Title: ISSUE TRADE STUDY FOR LLW PROCESS CONTROL

Schedule ID: L495MS06

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.04.03

ADS No.: 1230-0

Milestone Control No.: T3B-95-406

Completion Date: May 25, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify): WHC Program Office
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity will evaluate a variety of process control schemes for the LLW vitrification and disposal functions (i.e. feed forward vs. recycle) and recommend the plan which is best suited to the mission. The activity will be documented in an engineering study.

Acceptance Criteria:

Engineering study approved via EDT and public release.

Deliverables:

Report and EDT issued by Document Control.

R. C. Hoyt Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date		Date DOE Manager (agreement)
	Date DOE Manager (acceptance)		

ORIGINAL

SEP 02 1994

D8-35

WHC-SP-1101

Title : DRAFT PRELIMINARY LLW TECHNICAL BASELINE DOCUMENT FOR REVIEW

Schedule ID: L495MS07

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.03.01.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-407

Completion Date: June 27, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[ ] DOE-RL
[ ] DOE-R	[ ] DRAWINGS	[X] Other (Specify) : WHC reviewers
[X] CONTRACTOR	[X] Other (Specify) : Supporting document	

Description and what constitutes completion of this commitment:

Prepare a LLW Technical Baseline document to include baseline and planning assumptions, flowsheet summary, development requirements and technical issues with plans for resolution.

Acceptance Criteria:

Prepare draft document and sent out for full functional review via EDT.

Deliverables:

Prepare draft document and sent out for full functional review via EDT.

R. C. Hoyt Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-36

WHC-SP-1101

Title : DRAFT TWRS COMPLEX SOIL BASELINE SAMPLING AND ANALYSIS PLAN

Schedule ID: L495MS08

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.02.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-408

Completion Date: September 30, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[ ] DOE-RL
[ ] DOE-R	[ ] DRAWINGS	[X] Other (Specify): WHC reviewers
[X] CONTRACTOR	[X] Other (Specify): Analysis Plan	

Description and what constitutes completion of this commitment:

This activity provides a draft of the TWRS Complex Soil Baseline Sampling and Analysis Plan available for WHC review and comment. The plan is intended to represent the needs of site characterization for establishing an environmental baseline, provide input to facility designers and provide site preparation data input to the PA.

Acceptance Criteria:

Draft Analysis Plan with EDT sent out for full WHC functional review.

Deliverables:

Draft Analysis Plan with EDT sent out for full WHC functional review.

J. A. Rawlins Cost Account Manager	Date
R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date
N/A DOE Manager (agreement)	Date
N/A DOE Manager (acceptance)	Date

ORIGINAL

SEP 02 1994

D8-37

WHC-SP-1101

Title TOTAL INVENTORY FOR INTERIM PA :

Schedule ID: L495MS09

Revision: 0

A ned to: LLW Program

WBS Designator: 1.1.1.3.02.04.02.01.04

ADS No.: 1230-0

Milestone Control No.: T3B-95-409

Completion Date: June 22, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify) : WHC PO
[X]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

This task is a letter report documenting the total inventory of radionuclides and chemicals expected in the disposal system for the interim PA.

Acceptance Criteria:

Letter report prepared and delivered to the LLW Program Office for approval.

Deliverables:

L report prepared and delivered to the LLW Program Office for approval.

J. A. Rawlins Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date	N/A DOE Manager (agreement)	Date
N/A DOE Manager (acceptance)	Date		

ORIGINAL

SEP 0 2 1994

D8-38

WHC-SP-1101

Title: ISSUE LLW PROJECT MEDIA HANDLING MASTER PLAN

Schedule ID: L496MS10

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.05.01.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-410

Completion Date: June 22, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[X] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[ ] DOE-RL
[ ] DOE-R	[ ] DRAWINGS	[X] Other WHC
[X] CONTRACTOR	[ ] Other Supporting document (Specify):	(Specify):

Description and what constitutes completion of this commitment:

This activity includes identifying the classes of documentation and media to be used to develop and implement the LLW vitrification and disposal, including hardware and software, and preparing a master plan for management of this information.

Acceptance Criteria:

Issue WHC approved Project Media Handling Master Plan.

Deliverables:

I WHC approved Project Media Handling Master Plan.

R. H. Rieck Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 0 2 1994

D8-39

WHC-SP-1101

Title ISSUE LLW QUEUING STUDY
:

Schedule ID: L495MS11

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.03.03.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-411

Completion Date: May 25, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other WHC (Specify) :
[X]	CONTRACTOR	[X]	Other (Specify) : Supporting document		

Description and what constitutes completion of this commitment:

Prepare, review and issue a document identifying the logistical needs and impacts of the LLW process flowsheet, including critical internal and external factors and linkages with other TWRS functions and the LLW disposal system.

Acceptance Criteria:

Prepare, review, and issue WHC approved document via EDT and public release.

Deliverables:

Prepare, review, and issue WHC approved document via EDT and public release.

R. C. Hoyt Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-40

WHC-SP-1101

Title : ISSUE PRELIMINARY LLW TECHNICAL BASELINE DOCUMENT

Schedule ID: L495MS12

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.03.01.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-412

Completion Date: June 27, 1995

Milestone Class:

[ ] TPA
[ ] DOE-H
[ ] DOE-R
[X] CONTRACTOR

Deliverable:

[ ] REPORT
[ ] LETTER
[ ] DRAWINGS
[X] Other (Specify): Supporting document

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): WHC

Description and what constitutes completion of this commitment:

Prepare and issue a LLW Technical Baseline document to include baseline and planning assumptions, flowsheet summary, development requirements and technical issues with plans for resolution.

Acceptance Criteria:

Prepare, review, approve and issue document via EDT and public release.

Deliverables:

Prepare, review, approve and issue document via EDT and public release.

R. C. Hoyt Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

ORIGINAL

SEP 02 1994

D8-41

WHC-SP-1101

Title : ISSUE DISPOSAL SYSTEM DECISION ANALYSIS DOCUMENT

Schedule ID: L495MS13

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.04.08

ADS No.: 1230-0

Milestone Control No.: T3B-95-413

Completion Date: September 27, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify) :
[X]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

This activity will incorporate the findings of a LLW Disposal Options Configuration Study and document a decision analysis culminating in a recommendation to RL for proposed vitrified waste disposal system configurations.

Acceptance Criteria:

Submit report and transmittal letter from WHC to RL.

Deliverables:

Submit report and transmittal letter from WHC to RL.

R. C. Hoyt Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date	N/A DOE Manager (agreement)	Date
N/A DOE Manager (acceptance)	Date		

ORIGINAL

SEP 0 2 1994

D8-42

WHC-SP-1101

Title : DRAFT TWRS COMPLEX SOIL BASELINE SAMPLING AND ANALYSIS PLAN

Schedule ID: L4020201

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.02.02.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-414

Completion Date: June 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify) :
[ ]	CONTRACTOR	[X]	Other (Specify) : Analysis Plan		

Description and what constitutes completion of this commitment:

This activity provides a draft of the TWRS Complex Soil Baseline Sampling and Analysis Plan available for WHC and RL review and comment. The plan is intended to represent the needs of site characterization for establishing an environmental baseline, provide input to facility designers and provide site preparation data input to the PA.

Acceptance Criteria:

Draft Analysis Plan with EDT sent out for full WHC functional review and RL review.

Deliverables:

Draft Analysis Plan with EDT sent out for full WHC functional review and RL review.

J. A. Rawlins Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date	J. C. Peschong DOE Manager (agreement)	Date
N/A DOE Manager (acceptance)	Date		

SEP 23 1994

ORIGINAL

D8-43

WHC-SP-1101

Title SUBMIT TOTAL INVENTORY FOR INTERIM PA :

Schedule ID: L4020104

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.02.01.04

ADS No.: 1230-0

Milestone Control No.: T3B-95-415

Completion Date: July 31, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify) :
[ ]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

This task is a letter report documenting the total inventory of radionuclides and chemicals expected in the disposal system for the interim PA.

Acceptance Criteria:

Letter report prepared and delivered from the LLW Program Office to RL for information.

Deliverables:

I report prepared and delivered from the LLW Program Office to RL for information.

J. A. Rawlins Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

N/A Date
DOE Manager (acceptance)

SEP 23 1994
ORIGINAL

D8-44

WHC-SP-1101

Title: PREPARE LLW DISPOSAL OPTIONS CONFIGURATION STUDY REPORT

Schedule ID: L4010404

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.04.04

ADS No.: 1230-0

Milestone Control No.: T3B-95-416

Completion Date: January 15, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify): WHC reviewers
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity will compile and document the preferred LLW disposal option(s) based primarily upon the results of the LATA disposal concepts study (September 1994), the Fluor-Daniel trade studies for LLW product and the preliminary Performance Assessment guidance from the August 1994 white paper.

Acceptance Criteria:

Report generated by WHC documenting preferred LLW disposal option(s).

Deliverables:

Issue report for internal review and comments.

R. C. Hoyt — Date
Cost Account Manager

R. J. Murkowski — Date
Program Element Manager

G. F. Williamson — Date
Activity Manager

N/A — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 23 1994

ORIGINAL

D8-45

WHC-SP-1101

Title: SUBMIT LLW DISPOSAL OPTIONS CONFIGURATION STUDY REPORT

Schedule ID: L4010404

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.04.04

ADS No.: 1230-0

Milestone Control No.: T3B-95-417

Completion Date: March 1, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This activity will compile and document the preferred LLW disposal option(s) based primarily upon the results of the LATA disposal concepts study, the Fluor-Daniel trade studies for LLW product and the preliminary Performance Assessment guidance from the August 1994 white paper.

Acceptance Criteria:

Report approved by WHC documenting preferred LLW disposal option(s).

Deliverables:

Transmit WHC-approved report to RL for information and review.

R. C. Hoyt Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date	J. C. Peschong DOE Manager (agreement)	Date
DOE Manager (acceptance)	Date		

SEP 23 1994

ORIGINAL

D8-46

WHC-SP-1101

Title : ISSUE DISPOSAL SYSTEM DECISION ANALYSIS DOCUMENT

Schedule ID: L4010408

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.04.08

ADS No.: 1230-0

Milestone Control No.: T3B-95-418

Completion Date: September 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify) :
[X]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

This activity will incorporate the findings of a LLW Disposal Options Configuration Study and document a decision analysis culminating in a recommendation to RL for proposed vitrified waste disposal system configurations.

Acceptance Criteria:

Submit report and transmittal letter from WHC to RL.

Deliverables:

Submit report and transmittal letter from WHC to RL.

R. C. Hoyt Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

N/A Date
DOE Manager (agreement)

N/A Date
DOE Manager (acceptance)

SEP 2 3 1994

ORIGINAL

D8-47

WHC-SP-1101

Title: ISSUE LLW DISPOSAL SYSTEM DECISION DOCUMENT

Schedule ID: L4010408

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.04.08

ADS No.: 1230-0

Milestone Control No.: T3B-95-419

Completion Date: September 30, 1995

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[X] REPORT	[ ] DOE-HQ
[ ] DOE-H	[ ] LETTER	[X] DOE-RL
[X] DOE-R	[ ] DRAWINGS	[ ] Other (Specify):
[ ] CONTRACTOR	[ ] Other (Specify):	

Description and what constitutes completion of this commitment:

This document is intended to provide a WHC recommendation for immobilization and disposal of low-level tank waste using the recently developed TWRS decision analysis process based on trade studies and Performance Assessment guidance developed as of May 31, 1995.

Acceptance Criteria:

Decision analysis documentation prepared and concurrence reached with WHC decision makers.

Deliverables:

Document transmitted from WHC LLW Program Office to RL for review.

R. C. Hoyt Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date	J. C. Peschong DOE Manager (agreement)	Date
DOE Manager (acceptance)	Date		

SEP 23 1994

ORIGINAL

DS-48

WHC-SP-1101

Title : ISSUE DESIGN REQUIREMENTS BASELINE DOCUMENT, REV. 0

Schedule ID: L4010101

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.01.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-420

Completion Date: March 31, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify) :
[ ]	CONTRACTOR	[X]	Other Document (Specify) :		

Description and what constitutes completion of this commitment:

The initial version of the LLW Design Requirements Baseline Document, Rev. A, is planned for submittal to RL for review on September 30, 1994. This milestone represents the incorporation of DOE comments approved by DOE, and issuance of the Revision 0 document. The milestone date assumes receipt of DOE review comments by December 31, 1994.

Acceptance Criteria:

The milestone is met when the WHC/DOE-approved document is issued as a publicly released document.

Deliverables:

The deliverable is the approved Design Requirements Baseline Document.

R. C. Hoyt Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

G. F. Williamson Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 2 3 1994

ORIGINAL

D8-49

WHC-SP-1101

Title : SUBMIT FIRST DRAFT LLW DESIGN REQUIREMENTS BASELINE DOCUMENT, REV. 0, FOR INTERNAL REVIEW

Schedule ID: L4010101

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.01.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-421

Completion Date: February 14, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify): WHC reviewers
[X]	CONTRACTOR	[X]	Other (Specify): Draft SD		

Description and what constitutes completion of this commitment:

WHC will be submitting Rev. A of the LLW Design Requirements Baseline Document to RL for review on September 30, 1994. It is expected that RL and Systems Engineering organizations will review the document and provide formal comments to WHC by December 31, 1994. This milestone represents the initial resolution and incorporation of comments from the RL review of the Design Requirements Baseline Document and issuance for review.

Acceptance Criteria:

Comments received from RL by December 31, 1994, incorporated into the Design Requirements Baseline Document and issued for internal review.

Deliverables:

Draft LLW Design Requirements Baseline Document, Rev. 0.

R. C. Hoyt Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date	N/A DOE Manager (agreement)	Date
DOE Manager (acceptance)	Date		

SEP 2 3 1994

ORIGINAL

D8-50

WHC-SP-1101

Title: SUBMIT SECOND DRAFT LLW DESIGN REQUIREMENTS BASELINE DOCUMENT, REV. 0, FOR FINAL REVIEW

Schedule ID: L4010101

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.01.01

ADS No.: 1230-0

Milestone Control No.: T3B-95-422

Completion Date: March 15, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-R	[ ]	DRAWINGS	[X]	Other (Specify): WHC and RL for final review
[X]	CONTRACTOR	[X]	Other (Specify): Draft SD		

Description and what constitutes completion of this commitment:

Based on the review of the first draft of the LLW Design Requirements Baseline Document, Rev. 0, incorporate comments and submit the second draft for final review and approval.

Acceptance Criteria:

Comments received from reviewers and incorporated as necessary into a document ready for final review and approval.

Deliverables:

Submit draft of LLW Design Requirements Baseline Document, Rev. 0.

R. C. Hoyt Cost Account Manager	Date	R. J. Murkowski Program Element Manager	Date
G. F. Williamson Activity Manager	Date	N/A DOE Manager (agreement)	Date
DOE Manager (acceptance)	Date		

SEP 23 1994

ORIGINAL

D8-51

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: SUBMIT DATA PACKAGE TO RL FOR LLW CLASSIFICATION BY THE NRC (4.2.3.c)

Schedule ID: L4010501

Revision: 0

Assigned to: LLW Program

WBS Designator: 1.1.1.3.02.04.01.05.01

ADS No.: 1230

Milestone Control No.: T3B-96-401

Completion Date: November 30, 1995

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[X]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Data Package		

Description and what constitutes completion of this commitment:

This task will involve the preparation of a data package submitted to RL for subsequent transmittal to the NRC to obtain NRC concurrence that, like the DST waste, the pretreated fraction of the SST waste is not classified as HLW and therefore, can be disposed of at Hanford (Systems Engineering task 4.2.3.c).

Acceptance Criteria:

This milestone is complete when the data package, including comparisons with 10 CFR 61 class C limit and technology/cost considerations for additional radionuclide removal, is transmitted by WHC to RL.

Deliverables:

Data package suitable for subsequent RL submittal to DOE-HQ/NRC.

R. C. Hoyt — Date
Cost Account Manager

R.J. Murkowski — Date
Program Element Manager

G. F. Williamson — Date
Activity Manager

N/A — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

D8-52

MDSs for Low Level Waste Facility (1.1.1.3.02.05)

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Start Conceptual Design

Schedule ID: L595MS08

Revision: 0

Assigned to: Low Level Waste Program

WBS Designator: 1.1.1.3.2.5.3.1

ADS No.: 1230-0

Milestone Control No.: T3B-95-501

Completion Date: 03/20/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): Architect-Engineer
[X]	CONTRACTOR	[X]	Other (Specify): Letter Order Contract Award		

Description and what constitutes completion of this commitment:

Architect-engineer/construction management (AE/CM) services must be solicited via public notification in the Commerce Business Daily. AE/CM selection will be based on qualifications as evaluated by the Architect-Engineer (A-E) Evaluation Board and approved by the Source Selection Officer. The design will be performed based on a functional and operational requirements (F&OR) document supplied by WHC and a statement of work (SOW) document supplied by WHC. After review of the A-E's cost and fee proposal, RL approval must be obtained for award of letter order to A-E.

Acceptance Criteria:

Letter order award to A-E on March 17, 1995. Architect-engineer mobilization plan is in effect March 20, 1995.

Deliverables:

Westinghouse Hanford Company Purchasing and Materials Management letter order contract award to A-E and A-E mobilization plan is in effect and personnel are being transitioned to the Tri-Cities area. In addition, updated versions of the SOW document and the F&OR document will be given to the A-E as well as a full update of information from the ongoing melter technology test program.

J. D. Phillips 9/20/94
Cost Account Manager — Date

P. Felise 9/20/94
Program Element Manager — Date

J. D. Phillips 9/20/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

SEP 21 1994
SEP 21 1994
ORIGINAL

D8-54

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Letter Contract for Architect-Engineer/Construction Management Submittal to DOE for Approval

Schedule ID:

Revision: 0

Assigned to: WHC

WBS Designator: 1.1.1.3.2.5.1.1

ADS No.: 1230-AC

Milestone Control No.: T3B-95-502

Completion Date: 02/28/95

Milestone Class:	Deliverable:	Addressed to:
[ ] TPA	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[ ] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] Other (Specify):
[X] CONTRACTOR	[X] Other (Specify): Letter Contract	

Description and what constitutes completion of this commitment:

Architect-Engineer Evaluation Board prepares final source selection report and Source Selection Officer approves. Highest-ranked candidate submits cost and fee proposal and after WHC Procurement cost price review, RL approval is requested of letter order for award of subcontract to selected Architect-Engineer/Construction Management for conceptual design services for the LLWVP Project conceptual design with options for subsequent design phases (Title I, II, and III).

Acceptance Criteria:

WHC letter to RL requesting approval of letter order for award is submitted to RL by February 27, 1995.

Deliverables:

WHC formal letter to RL with attached proposed letter order.

J. D. Phillips — 9/20/94
Cost Account Manager — Date

P. Felise — 9/20/94
Program Element Manager — Date

J. D. Phillips — 9/20/94
Activity Manager — Date

DOE Manager (agreement) — Date

SEP 21 1994
ORIGINAL

DOE Manager (acceptance) — Date

D8-55

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Architect-Engineer/Construction Manager Letter Contract Approved by DOE

Schedule ID:

Revision: 0

ied to: DOE-RL

WBS Designator: 1.1.1.3.2.5.1.1

ADS No.: 1230-AC

Milestone Control No.: T3B-95-503

Completion Date: 03/16/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Letter Contract		

Description and what constitutes completion of this commitment:

WHC submits formal letter to RL requesting approval of attached proposed letter order for Architect-Engineer/Construction Management (AE/CM) services for conceptual design of the LLWVP Project with options for subsequent design phases (Title I, II, and III). RL approves letter order for subcontract award to selected AE/CM.

Acceptance Criteria:

RL formal approval by March 17, 1995, including any necessary DOE-HQ input, so the AE/CM may start mobilization for conceptual design immediately.

Deliverables:

RL approval letter to WHC.

J. D. Phillips — 9/20/94 — Date
Cost Account Manager

P. Felise — 9/20/94 — Date
Program Element Manager

J. D. Phillips — 9/20/94 — Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 21 1994

ORIGINAL

D8-56

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Key Decision 1/2, Initiate Title I/II Design of the Low-Level Waste Vitrification Plant

Schedule ID: L596MS01

Revision: 0

Related to: Low Level Waste Program

WBS Designator: 1.1.1.3.02.05.1.1

ADS No.: 1230-0

Milestone Control No.: T3B-96-501

Completion Date: 09/25/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[X]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Letter		

Description and what constitutes completion of this commitment:

A conceptual design report (CDR) will be prepared by an architect-engineer/construction management (AE/CM) firm(s). The CDR will meet the requirements of RLIP 4700.1A, "Project Management System" (DOE-RL 1991). The CDR will be approved by WHC and RL.

Acceptance Criteria:

In addition to an approved CDR, a WHC-approved updated project plan and an updated project baseline with a request for direction authorization to spend capital funds will be submitted.

Deliverables:

Letter to RL approving start of definitive design (Title I/II) of the Low-Level Waste Vitrification Plant.

D. H. Nyman 9/20/94
D. H. Nyman — Date
Cost Account Manager

P. Felise 9/20/94
P. Felise — Date
Program Element Manager

D. H. Nyman 9/20/94
D. H. Nyman — Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 21 1994
ORIGINAL

D8-57

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Start Low-Level Waste Vitrification Plant Advanced Conceptual Design

Schedule ID: L596MS085

Revision: 0

Related to: Low Level Waste Program

WBS Designator: 1.1.1.3.2.5.3.1

ADS No.: 1230-0

Milestone Control No.: T3B-96-502

Completion Date: 03/01/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): Architect-Engineer
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The Architect-Engineer will have completed the Conceptual Design Report (CDR) (first issue) after approximately one year of work. Westinghouse Hanford Company will have reviewed and accepted this report and will be using the cost information contained therein to process budget data sheets for plant construction that must be approved as part of FY 1998 budget validation. Westinghouse Hanford Company will issue a letter of direction to the A-E to start advanced conceptual design (ACD) and defining the scope to be performed. This added scope will include all A-E efforts necessary to obtain Key Decisions 1 and 2, approve new start, and start of definitive design.

Acceptance Criteria:

Westinghouse Hanford Company has reviewed and accepted the CDR (first issue) and has issued a letter of direction to the A-E to start ACD and defines the scope of work to be performed.

Deliverables:

- Letter of direction to A-E to start ACD
- Revised statement of work to A-E for ACD

J. D. Phillips — 9/20/94
Cost Account Manager — Date

P. Felise — 9/20/94
Program Element Manager — Date

J. D. Phillips — 9/20/94
Activity Manager — Date

DOE Manager (agreement) — Date

DOE Manager (acceptance) — Date

SEP 21 1994

ORIGINAL

D8-58

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Request/Supporting Documentation for Key Decision 1/2

Schedule ID:

Revision: 0

Assigned to: WHC

WBS Designator: 1.1.1.3.02.05.1.1

ADS No.: 1230-AC

Milestone Control No.: T3B-96-503

Completion Date: 07/27/96

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

A conceptual design report (CDR) will be prepared by an architect-engineer/construction management firm(s). The CDR will meet the requirements of RLIP 4700.1A, *Project Management Systems*, (DOE-RL 1991). The CDR will be approved by WHC.

Acceptance Criteria:

In addition to a WHC-approved CDR, a WHC-approved updated Project Plan and an updated project baseline with a Request for Direction Authorization to Spend Capital Funds will be submitted.

Deliverables:

Letter to RL requesting approval to start definitive design (Title I/II) of the LLWVP.

D. H. Nyman 9/20/94
D. H. Nyman — Date
Cost Account Manager

P. Felise 9/20/94
P. Felise — Date
Program Element Manager

D. H. Nyman 9/20/94
D. H. Nyman — Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 21 1994

ORIGINAL

D8-59

WESTINGHOUSE HANFORD COMPANY
TANK WASTE REMEDIATION SYSTEM DIVISION
MILESTONE DESCRIPTION SHEET
WHC-SP-1101

TITLE: Submit Conceptual Design and Initiate Definitive design of the LLW Vitrification Facility

2) SCHEDULE ID: L597MS02
3) REVISION: 0

ASSIGNED TO: Low Level Waste Program
WBS DESIGNATOR: 1.1.1.3.2.5

5) ADS NO: 1230-2
7) COMPLETION DATE: 11/30/96

MILESTONE CONTROL NO: T3B-97-100

MILESTONE CLASS:	DELIVERABLE:	ADDRESSED TO:
[X] TPA M-60-03	[ ] REPORT	[ ] DOE-HQ
[ ] DOE-HQ	[X] LETTER	[X] DOE-RL
[ ] DOE-RL	[ ] DRAWINGS	[ ] OTHER (SPECIFY)
[ ] CONTRACTOR	[ ] OTHER (SPECIFY)	

Description and what constitutes completion of this commitment:

Architect-engineer/construction management (AE/CM) services must be solicited via public notification in the Commerce Business Daily. AE/CM selection will be based upon qualifications. The conceptual design will be performed based on a functional and operational requirements document supplied by WHC. The minimum requirements for a CDR are provided in RLIP 4700.1A, "Project Management System"(DOE-RL 1991),but are specifically stated in the Statement of Work for the AE/CM for the Low-Level Waste Vitrification Plant Project, WHC document number WHC-SD-W378-RD-001.

Acceptance Criteria

A CDR will be submitted by the AE/CM and approved by WHC. Completion of Key Decision 1, approval to initiate Title I design per DOE Order 4700.1, will be granted by DOE.

Deliverables: (Describe the specific products or condition)

In addition to the CDR, the deliverables are a WHC-approved updated project baseline and a Request for Directive Authorization to spend capital funds to initiate Title I design. These documents will be transmitted to RL by September 30, 1996.

J. Phillips
Cost Account Manager: Date:

R. J. Murkowski
Program Element Manager: Date:

P. Felise
Activity Manager: Date:

L. A. Huffman
DOE Manager (agreement): Date:

DOE Manager (acceptance) Date:

SEP 06 1994

ORIGINAL

D8-60

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Key Decision 3, Initiate Construction of Low-Level Waste Vitrification Plant Project

Schedule ID: L597MS01

Revision: 0

/ ed to: Low Level Waste Program

WBS Designator: 1.1.1.3.02.05.1.1

ADS No.: 1230-0

Milestone Control No.: T3B-97-501

Completion Date: 09/26/97

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[X]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[X]	Other (Specify): Letter		

Description and what constitutes completion of this commitment:

Activities leading to initiation of construction of the low-level waste (LLW) vitrification facility include completion of the following: conceptual design and initiation of preliminary design, preliminary safety analysis report, applicable environmental documentation, and required project management documentation per DOE Order 4700.1 and DOE Order RL 4700.1.

Acceptance Criteria:

Preparation of project documentation (e.g., updated project plan) for DOE Acquisition Executive approval of Key Decision 3 for initiating construction of a major system acquisition. Construction is defined as site preparation.

Deliverables:

L / to RL approving start of construction of the Low-Level Waste Vitrification Plant.

D. H. Nyman 9/20/94
D. H. Nyman — Date
Cost Account Manager

Paul Felise 9/20/94
P. Felise — Date
Program Element Manager

D. H. Nyman 9/20/94
D. H. Nyman — Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 21 1994
ORIGINAL

D8-61

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Low-Level Waste Vitrification Plant Project Preliminary Safety Analysis Report/Revision 0

Schedule ID: L597MS03

Revision: 0

Related to: Low Level Waste Program

WBS Designator: 1.1.1.3.02.05.2.1

ADS No.: 1230-0

Milestone Control No.: T3B-97-503

Completion Date: 09/26/97

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [X] DOE-RL
- [ ] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [X] DOE-RL
- [ ] Other (Specify):

Description and what constitutes completion of this commitment:

Develop, prepare, and issue a PSAR/Rev. 0 for the Low-Level Waste Vitrification Plant (LLWVP) Project in support of Key Decision 3 for the start of facility construction activities. Work also includes the development of preliminary technical safety requirements and supporting technical evaluations necessary to address safety-significant issues such as the following: criticality safety evaluation report; preliminary safety class designations; fire hazards analysis; and human factors/ALARA analyses. Support for the PSAR/Rev. 0 review, comment, and approval cycles through RL and HQ are also included. Staff from WHC, other contractors and subcontractors, and consultants will be utilized to accomplish this milestone and associated activities.

Acceptance Criteria:

The LLWVP PSAR/Rev. 0 will meet the requirements of DOE Order 5480.23.

Deliverables:

WHC-approved LLWVP PSAR/Rev. 0 document will be transmitted to RL.

D. G. Baide — 9/20/94
D. G. Baide — Date
Cost Account Manager

P. Felise — 9/20/94
P. Felise — Date
Program Element Manager

D. G. Baide — 9/20/94
D. G. Baide — Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 21 1994

ORIGINAL

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Request/Supporting Documentation for Key Decision 3

Schedule ID:

Revision: 0

Assigned to: WHC

WBS Designator: 1.1.1.3.02.05.1.1

ADS No.: 1230-AC

Milestone Control No.: T3B-97-504

Completion Date: 07/27/97

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Activities leading to the initiation of construction of the low-level waste vitrification facility include completion of the following: conceptual design and initiation of preliminary design, Preliminary Safety Analysis Report, applicable environmental documentation, and required project management documentation per DOE Order 4700.1 and DOE Order RL 4700.1

Acceptance Criteria:

Preparation of project documentation (e.g., updated Project Plan) for DOE Acquisition Executive approval of Key Decision 3 for initiating construction of major systems acquisition. Construction is defined as site preparation.

Deliverables:

L[illegible] to RL requesting approval to start construction of the LLWVP.

D. H. Nyman 9/20/94
D. H. Nyman — Date
Cost Account Manager

P. Felise 9/20/94
P. Felise — Date
Program Element Manager

D. H. Nyman 9/20/94
D. H. Nyman — Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

SEP 21 1994
ORIGINAL

D8-63

Title : Issue Low-Level Waste Vitrification Plant Project Preliminary Safety Analysis Report/Revision 0

Schedule ID: L597MS07

Revision: 0

. ned to: P. Felise

WBS Designator: 1.1.1.3.02.05.2.1

ADS No.: 1230-AC

Milestone Control No.: T3B-97-505

Completion Date: 09/26/97

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-H	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-R	[ ]	DRAWINGS	[ ]	Other (Specify) :
[ ]	CONTRACTOR	[ ]	Other (Specify) :		

Description and what constitutes completion of this commitment:

Develop, prepare, and issue a PSAR/Rev. 0 for the Low-Level Waste Vitrification Plant (LLWVP) Project in support of Key Decision 3 for the start of facility construction activities. Work also includes the development of preliminary technical safety requirements and supporting technical evaluations necessary to address safety-significant issues such as the following: criticality safety evaluation report; preliminary safety class designations; fire hazards analysis; and human factors/ALARA analyses. Support for the PSAR/Rev. 0 review, comment, and approval cycles through RL and HQ are also included. Staff from WHC, other contractors and subcontractors, and consultants will be utilized to accomplish this milestone and associated activities.

Acceptance Criteria:

The LLWVP PSAR/Rev. 0 will meet the requirements of DOE Order 5480.23.

Deliverables:

/ 'IC-approved LLWVP PSAR/Rev. 0 document will be transmitted to RL.

D. G. Baide Date
Cost Account Manager

R. J. Murkowski Date
Program Element Manager

P. Felise Date
Activity Manager

Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

DR-64

MDSs for Grout Facility (1.1.1.3.02.06)

WHC TWRS Milestone Description Sheet

Title: Failed AP-102 Mixer Pump Removal

Schedule ID: L6020300

Revision: 0

Assigned to: R. Ni

WBS Designator: 1.1.1.3.02.06.02.03

ADS No.: 1230-0

Milestone Control No.: T3B-95-611

Completion Date: 06/30/95

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[X] DOE-RL
[ ] CONTRACTOR

Deliverable:

[ ] REPORT
[ ] LETTER
[ ] DRAWINGS
[X] Other (Specify): Mixer pump stored at CWC

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): R. J. Murkowski

Description and what constitutes completion of this commitment:

Failed AP-102 Mixer pump removed and stored at CWC

Acceptance Criteria:

Same

Deliverables:

Failed AP-102 mixer pump removed and stored at CWC

J. J. Badden — 9/21/94
Cost Account Manager — Date

R. J. Murkowski — 9-22-94
Program Element Manager — Date

R. Ni — 9/24/94
Activity Manager — Date

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

ORIGINAL
SEP 16 1994

D8-46

WHC TWRS Milestone Description Sheet

Title: DOE-RL FSAR Comments - Closure

Schedule ID: L6020300

Revision: 0

Assigned to: R. Ni

WBS Designator: 1.1.1.3.02.06.02.03

ADS No.: 1230-0

Milestone Control No.: T3B-95-612

Completion Date: 3/31/95

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[X] DOE-RL
[ ] CONTRACTOR

Deliverable:

[ ] REPORT
[ ] LETTER
[ ] DRAWINGS
[X] Other (Specify): completed RCRs

Addressed to:

[ ] DOE-HQ
[X] DOE-RL
[ ] Other (Specify):

Description and what constitutes completion of this commitment:

Provide responses to DOE_RL comments on the Grout FSAR

Acceptance Criteria:

Same

Deliverables:

Issue a letter to DOE_RL transmitting the responses.

J. J. Badden — Date 9/21/94
Cost Account Manager

R. Ni — Date 9/21/94
Activity Manager

J. C. Peschong — Date
DOE Manager (acceptance)

R. J. Murkowski — Date 9-22-94
Program Element Manager

J. C. Peschong — Date
DOE Manager (agreement)

SEP 16 1994

ORIGINAL

D8-67

WHC TWRS Milestone Description Sheet

Title: Complete equipment transfer activities for FY 96

Schedule ID: L6030400

Revision: 0

Assigned to: R. Ni

WBS Designator: 1.1.1.3.02.06.03.04

ADS No.: 1230-0

Milestone Control No.: T3B-96-607

Completion Date: 09/30/96

Milestone Class:

[ ] TPA
[ ] DOE-HQ
[ ] DOE-RL
[X] CONTRACTOR

Deliverable:

[ ] REPORT
[X] LETTER
[ ] DRAWINGS
[ ] Other (Specify):

Addressed to:

[ ] DOE-HQ
[ ] DOE-RL
[X] Other (Specify): R. J. Murkowski

Description and what constitutes completion of this commitment:

Operations transfers equipment in accordance with the criteria identified in the Grout Facilities Standby Plan

Acceptance Criteria:

Same

Deliverables:

Summary of all transfers made since deactivation of the facilities

J. J. Badden — Date
Cost Account Manager

R. J. Murkowski — Date
Program Element Manager

R. Ni — Date
Activity Manager

J. C. Peschong — Date
DOE Manager (agreement)

J. C. Peschong — Date
DOE Manager (acceptance)

ORIGINAL

SEP 06 1994

D8-68

MDSs for Technical Integration & Planning (1.1.1.3.03.01)

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Updated Baseline to DOE-RL

Schedule ID: PMW1340
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-101

ADS No.: 1240-0
Completion Date: 08-07-95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Update HLW Program baseline to include the most current cost and schedule estimates and projections. Provide information to DOE-RL in an acceptable format.

Acceptance Criteria:

Transmittal of revised baseline information to DOE-RL.

Deliverables:

Revised cost and schedule baseline data approved by TWRS management.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue HLW Strategy Document

Schedule ID: PMW1030
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-106

ADS No.: 1240-0
Completion Date: 02/02/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Update HLW Program Strategy document based on status of melter assessment activity, results of trade studies, facility configuration study, and other relevant documentation.

Acceptance Criteria:

Program Office approval.

Deliverables:

Revision 1 of HLW Program Strategy. (WHC-IP-1061. Rev. 1)

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Mission Analysis (RL)

Schedule ID: PM91115
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-112

ADS No.: 1240-0
Completion Date: 09/13/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[X] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Completion and documentation of a mission analysis for the High-Level Waste program.

Acceptance Criteria:

Completion of review of mission analysis by DOE-HQ, and resolution of all comments. Delivery of revised Mission Anaysis document.

Deliverables:

Mission Analysis document in final form with all comments resolved. Supporting material for DOE-RL and DOE-HQ review as necessary.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R W Powell 9/23/94
Activity Manager Date
R. W. Powell

R W Powell
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue HLW Program Mission Analysis Document

Schedule ID: PMW1101
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-113

ADS No.: 1240-0
Completion Date: 05/08/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Perform and document the HLW Program Mission Analysis using the TWRS Program Strategy, the HLW Program Strategy, TWRS System Engineering documentation and other relevant documentation as inputs.

Acceptance Criteria:

Transmittal of Mission Analysis document to DOE-RL.

Deliverables:

Mission Analysis document which supports mission justification, and will constitute part of supporting documentation for Key Decision Zero (KD-0).

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Justification of Mission Need to RL

Schedule ID: PMW1121
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-114

ADS No.: 1240-0
Completion Date: 07/12/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Prepare a "Justification of Mission Need" statement pursuant to WHC-CM-6-2/PM-22. Use current program planning and the HLW Mission Analysis as inputs.

Acceptance Criteria:

Transmittal of Justification of Mission Need to DOE-RL.

Deliverables:

Report, "Justification of Mission Need - High-Level Waste Vitrification."

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-6

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Report on Initial Project Acquisition Options & Strategy

Schedule ID: PMW5005
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-115

ADS No.: 1240-0
Completion Date: 02/08/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Analyze, select and document the project acquisition strategy for program and project planning. Document selected options for acquiring conceptual and detailed design services and plant & equipment at minimal cost and minimal schedule risk. Indclude discussion of alternatives such as privatization and delayed acquisition.

Acceptance Criteria:

Transmittal of initial project acquisition strategy document to DOE-RL.

Deliverables:

Initial Project Acquisition Strategy document.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Draft Conceptual Design Plan to DOE-RL

Schedule ID: PMW5036
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01.03
Milestone Control No.: T3C-95-116

ADS No.: 1240-0
Completion Date: 08/14/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Submit the draft HLW Facility Conceptual Design Plan to DOE-RL. the plan is to incorporate current HLW Program and Project strategies and schedules.

Acceptance Criteria:

Delivery of Plan to DOE interface.

Deliverables:

Draft HLW Facility Conceptual Design Plan.

Signatures:

Tom W. Crawford 7-23-94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Prepare High-Level Waste Operations & Maintenance Alternatives Report

Schedule ID: PMW5105
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-117

ADS No.: 1240-0
Completion Date: 02/08/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Survey current technologies and existing High-Level Waste processing operations at other locations. Assess plant Operations & Maintenance alternatives. Prepare a preliminary report detailing recommended alternatives for future engineering trade studies.

Acceptance Criteria:

Issue of report to DOE-RL High-Level Waste program office.

Deliverables:

High-Level Waste Operations & Maintenance Alternatives Report.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Initial HLW Operations Prep. & Project Support Plan

Schedule ID: PMW5115
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-118

ADS No.: 1240-0
Completion Date: 06/14/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Documentation of a plan to prepare for High-Level Waste vitrification operations and operation support to the HLW Facility Project.

Acceptance Criteria:

Approval by WHC Senior Management.

Deliverables:

Initial operations preparation and project support plan.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Justification of Mission Need (RL)

Schedule ID: PM91135
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-95-122

ADS No.: 1240-0
Completion Date: 09/13/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[X] DOE-HQ
[X] DOE-HQ	[ ] Letter	[ ] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	_____

Description:

Justification of Mission Need documentation suitable for obtaining Key Decision Zero approval.

Acceptance Criteria:

Completion of review of Justification of Mission Need by DOE-HQ and resolution of comments. Delivery of revised Justification of Mission Need to DOE-HQ.

Deliverables:

Justification of Mission Need document in final form with all comments resolved.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-11

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Final Vitrification System Devel. Plan & Strategy

Schedule ID: VTW4951
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02.05.02
Milestone Control No.: T3C-95-161

ADS No.: 1240-0
Completion Date: 01/06/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC TWRS Management

Description:

Prepare a vitrfication system development and testing plan and strategy to support the reference HLW plant melter system selection. Include explicit planning of lab- and small-scale, and engineering scale melter system testing, independent feature testing and engineering evaluations. Include a discussion of technical issues requiring resolution by testing vs. engineering evaluation.

Acceptance Criteria:

Issuance of Final Vitrification System Development Plan to WHC senior management.

Deliverables:

Final Vitrification System Development Plan.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
~~J. W. Creer~~

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Updated FY 1997 MYWP Baseline to RL

Schedule ID: PMW2340
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-96-101

ADS No.: 1240-0
Completion Date: 08/30/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[X] Other (Specify) Baseline Doc's.	

Description:

Update HLW Program baseline to include the most current cost and schedule estimates and projections. Provide information to DOE-RL in an acceptable format.

Acceptance Criteria:

Transmittal of revised baseline information to DOE-RL.

Deliverables:

Revised cost and schedule baseline data approved by TWRS management.

Signatures:

P. A Scharn 9/23/94
Cost Account Manager Date

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Prepare Key Decision Zero Documentation Package

Schedule ID: PMW5200
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-96-105

ADS No.: 1240-0
Completion Date: 07/12/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[X] DOE-HQ
[X] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Collect pertinent documentation prepared under other activities. Prepare further documentation as necessary. Obtain WHC and DOE-RL review and comment. Incorporate/resolve comments and issue documentation package.

Acceptance Criteria:

Transmittal of final package to DOE-RL.

Deliverables:

Complete documentation in support of key decision zero (KD-0).

Signatures:

P. S. Schaus
Cost Account Manager — Date
P. S. Schaus

R. W. Powell 9/21/94
Program Element Manager — Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager — Date
R. W. Powell

DOE Manager (Agreement) — Date
J. C. Peschong

DOE Manager (Acceptance) — Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: DOE-RL Approved ESAAB Key Decision Zero Briefing

Schedule ID: PMW5041
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-96-110

ADS No.: 1240-0
Completion Date: 09/26/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[X] Other (Specify) Briefing Materials	

Description:

Prepare and present KD-0 briefings to the ESAAB. Respond to requests for pre-briefings. Provide supporting documentation.

Acceptance Criteria:

Approval of material by DOE-RL. Presentation of the material to ESAAB.

Deliverables:

Presentation material and supporting documentation.

Signatures:

R. A. Schaus 9/23/94
Cost Account Manager Date

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Document High-Level Waste Operations & Maintenance Concept

Schedule ID: PMW5140
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-96-112

ADS No.: 1240-0
Completion Date: 01/23/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Document reference High-Level Waste Operations & Maintenance Concepts resulting from previous engineering trade studies and the TWRS decision process. Provide a WHC review and comment cycle. Obtain DOE-RL approval.

Acceptance Criteria:

Approval by DOE-RL.

Deliverables:

High-Level Waste Operations & Maintenance Concept Report.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DQ-16

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Preliminary Project Management Plan

Schedule ID: PMW5301
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-96-113

ADS No.: 1240-0
Completion Date: 10/19/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Incorporate approved HLW Program strategy and Initial Project Acquisition Strategy into a preliminary Project Management Plan/Proposed Project Organization Structure document for inclusion into KD-0 documentation. Revise final version as necessary following review and comment by WHC Management and DOE-RL.

Acceptance Criteria:

Preliminary Project Management Plan accepted by DOE-RL.

Deliverables:

Preliminary Project Management Plan.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-17

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: HLW Strategy Document, FY 1996, Rev. 2.

Schedule ID: PMW2030
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-96-115

ADS No.: 1240-0
Completion Date: 02/02/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Update HLW Program Strategy document based on status of melter assessment activity, results of trade studies, facility configuration study, and other relevant documentation.

Acceptance Criteria:

Program Office approval.

Deliverables:

Revision 2 of HLW Program Strategy. (WHC-IP-1061. Rev. 2)

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date

R. W. Powell 9/23/94
Activity Manager Date

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Key Decision #0 Approval (DOE)

Schedule ID: PMW5050
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-96-123

ADS No.: 1240-0
Completion Date: 09/30/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[X] DOE-RL	[ ] Drawings	[X] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	WHC

Description:

Authority to start Conceptual Design.

Acceptance Criteria:

Resolution of ESAAB comments on Key Decision #0. Documentation package and transmittal leter from DOE-RL authorizing the start of HLW Conceptual Design.

Deliverables:

Letter from DOE-RL to WHC authorizing the start of HLW conceptual Design.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: High-Level Waste Operations & Maintenance Concept

Schedule ID: PMW5120
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-96-125

ADS No.: 1240-0
Completion Date: 10/17/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC management

Description:

Prepare a recommendation for an overall reference High-Level Waste Operations & Maintenance Concept. Use the High-Level Waste Operations & Maintenance Alternative Report, and engineering trade studies as inputs.

Acceptance Criteria:

TWRS management approval of O & M concept document.

Deliverables:

Operations & Maintenance Concept document for High-Level Waste.

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date
P. S. Schaus

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Updated FY 1998 Baseline to DOE-RL.

Schedule ID: PMW3340
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.01
Milestone Control No.: T3C-97-101

ADS No.: 1240-0
Completion Date: 08/08/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[X] Other (Specify) Baseline Doc's.	

Description:

Update HLW Program baseline to include the most current cost and schedule estimates and projections. Provide information to DOE-RL in an acceptable format.

Acceptance Criteria:

Transmittal of revised baseline information to DOE-RL.

Deliverables:

Revised cost and schedule baseline data approved by TWRS management.

Signatures:

P. S. Schreiber 9/23/94
Cost Account Manager Date

R. W. Powell 9/23/94
Activity Manager Date

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: HLW Strategy Document, FY 1997 Rev. 3.

Schedule ID: PMW3030
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-97-112

ADS No.: 1240-0
Completion Date: 02/06/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Update HLW Program Strategy document based on status of melter assessment activity, results of trade studies, facility configuration study, and other relevant documentation.

Acceptance Criteria:

Program Office approval.

Deliverables:

Revision 3 of HLW Program Strategy. (WHC-IP-1061. Rev. 3)

Signatures:

P. S. Schaus 9/23/94
Cost Account Manager Date

R. W. Powell 9/23/94
Activity Manager Date

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

MDSs for Technical Development & Applied Engineering (1.1.1.3.03.02)

WHC TWRS Milestone Description Sheet

Title: Issue Final FY 1996 Project Work Plan **WHC-SP-1101** **Schedule ID:** VTD1022

Revision: 0

...ed to: High Level Waste

WBS Designator: 1.1.1.3. **ADS No.:** 1240-0

Milestone Control No.: T3C-95-103 **Completion Date:** 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

Project Work Plan Provides:
- Project objectives, approach, organization structure, and lead individual assignments
- Work description and element staff hours
- Individual tasks and list of documents produced
- List of milestones and deliverables
- Activity and milestone schedule for work control

' ...nce of the Project Work Plan Document Constitutes Completion.

Acceptance Criteria:

Approval sheet signed by appropriate authorities.

Deliverables:

Project Work Plan document.

J. M. Grau 9/23/94
Date
Cost Account Manager

P. D. Ichaus 9/23/94
Date
Activity Manager

Date
DOE Manager (acceptance)

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

J. C. Peschong Date
DOE Manager (agreement)

C95-01.01T.MDS

DQ-24

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: FY 1996 Technology Development Requirements

Schedule ID: TDW2020
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-95-108

ADS No.: 1240-0
Completion Date: 05/05/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	PNL - TDPO

Description:
Prepare and issue the FY 1996 HLW Technology Development Requirements to PNL. Include technology development needed to support WHC preconceptual design activities including melter selection, feed processability assessments, and alternative process and equipment options studies.

Acceptance Criteria:

Issuance of completed and approved requirements document to PNL.

Deliverables:

FY 1996 Technology Development Requirements document.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. S. Schraun 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DQ-25

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Melter Evaluation/Assessment Final Report

Schedule ID: MS91033
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-95-109

ADS No.: 1240-0
Completion Date: 02-28-95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Document the decision process and decision on the most viable high-level waste vitrification systems to be evaluated to determine the reference high-level waste plant vitrification system.

Acceptance Criteria:

Issance of draft report by DOE-RL.

Deliverables:

Report documenting selected alternatives and course of action to determine final choice for reference melter system.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Melter Evaluation/Assessment Draft Report

Schedule ID: MSW1031
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-95-110

ADS No.: 1240-0
Completion Date: 01-26-95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Document the decision process and decision on the most viable high-level waste vitrification systems to be evaluated to determine the reference high-level waste plant vitrification system.

Acceptance Criteria:

Issance of draft report by DOE-RL.

Deliverables:

Report documenting selected alternatives and course of action to determine final choice for reference melter system.

Signatures:

Tom W. Crawford 9-24-94
Cost Account Manager / Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager / Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Letter Report on Critical Minor Components

Schedule ID: VTD 1223

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C-95-111

Completion Date: 11/23/94

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC - KEY
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The Letter Report assesses expected waste feed compositions to be delivered to the HLW Vitrification Plant for Critical Minor Components with the greatest potential impact on waste loading in glass for DST and SST wastes.

Issuance of the Letter Report Constitutes Completion.

Acceptance Criteria:

Report Transmittal to WHC by PVTD Project Manager

Deliverables:

Letter Report

J. M. Crews 9/23/94
Date
Cost Account Manager

P. S. Schaus 9/23/94
Date
Activity Manager

Date
DOE Manager (acceptance)

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

J. C. Peschong Date
DOE Manager (agreement)

C95-02.01P.MDS

DG-28

Title: Issue Letter Report on Low Temperature Glass Formulation Support for Melter Selection

Schedule ID: VTNJ1202

Revision: 0

Assigned to: High Level Waste

Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C-95-119

Completion Date: 05/26/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC - KEY
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The Letter Report contains the following on the Laboratory Investigation of Low-Temperature Melting DST/SST Blend Waste Glasses for Melter Selection Testing:

- Objectives
- Approach
- Testing Description
- Testing Data
- Testing Results and Data Analyses

Issuance of the Letter Report Constitutes Completion.

Acceptance Criteria:

Report Transmittal to WHC by PVTD Project Manager

Deliverables:

Letter Report

J. M. Grens 9/23/94
Date
Cost Account Manager

R. A. Powell 9/23/94
R. W. Powell Date
Program Element Manager

P. S. Schaus 9/23/94
Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
Manager (acceptance)

C95-02.01D.MDS

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Draft Report on P_2O_5, Cr_2O_3, and SO_3 in Glass Experimental Study

Schedule ID: VTD 1227

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-125

Completion Date: 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

The Draft Report contains the following on the Laboratory Investigation of the solubility of P_2O_5, Cr_2O_3, and SO_3 in waste glass of various waste compositions:

- Objectives
- Approach
- Testing Description
- Testing Data
- ting Results and Data Analyses

Issuance of the Draft Report Constitutes Completion.

Acceptance Criteria:

Report Transmittal to WHC by PVTD Project Manager for comment.

Deliverables:

Draft Report

J. M. Grant 9/23/94
Date
Cost Account Manager

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

P. S. Schaus 9/23/94
Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

C95-02.01T.MDS

D9-30

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Draft Project Report on Glass Composition and Durability Data

Schedule ID: VTD1246

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-126

Completion Date: 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

The Draft Report contains an update of the Waste Composition/Glass Property Models for the High Melting Temperature Glasses investigated in FY 1994 and completed in FY 1995.

Issuance of the Draft Report Constitutes Completion.

Acceptance Criteria:

Report Transmittal to WHC by PVTD Project Manager for Comment

Deliverables:

Draft Report

J. M. Conca 9/23/94
Cost Account Manager — Date

R. W. Powell 9/23/94
R. W. Powell — Program Element Manager — Date

P. D. Lehman 9/23/94
Activity Manager — Date

J. C. Peschong
J. C. Peschong — DOE Manager (agreement) — Date

Date
DOE Manager (acceptance)

C95-02.01M.MDS

DQ-31

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Data Package on Melter Technology Comparison Flowsheet Testing

Schedule ID: VTD 1293

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-128

Completion Date: ~~09/29/95~~ 5/26/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

Data Package will contain the results of Laboratory Testing to Characterize processing flowsheet options that may be used in comparative melter testing, including feed preparation, offgas characterization, slurry characterization, and vitrification reactions.

Issuance of Data Package Constitutes Completion.

Acceptance Criteria:

Data Package Transmitted to WHC by PVTD Project Manager

Deliverables:

Letter Report

J. M. Conner 9/23/94
Cost Account Manager — Date

P. S. Schaus 9/23/94
Activity Manager — Date

_____
DOE Manager (acceptance) — Date

R. W. Powell 9/23/94
R. W. Powell — Program Element Manager — Date

_____
J. C. Peschong — DOE Manager (agreement) — Date

C95-02.02J.MDS

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue SSHTM-1 Letter Report

Schedule ID: VTD 1303

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-129

Completion Date: ~~02/24/95~~ 12/22/94

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC - KEY
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

Report contains the results of Small-Scale High Temperature Melter Testing performed in FY 1994 to demonstrate the viability of using glycolic acid or no reductant in the feed for vitrification of High Level Waste (HLW). The report will contain:

- Testing Objectives
- Approach
- Testing Description
  - sting Data
  - sting Results and Analyses

Issuance of Letter Report Constitutes Completion.

Acceptance Criteria:

Report Transmitted to WHC by PVTD Project Manager

Deliverables:

Letter Report

J. M. Conner 9/23/94
Date
Cost Account Manager

R. L. Powell 9/23/94
R. W. Powell Date
Program Element Manager

P. D. Schow 9/23/94
Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

C95-02.02R.MDS

D9-33

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Technical Procedure for Rheology Measurements

Schedule ID: VTD 1341

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-130

Completion Date: 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

The Rheology Measurement Technical Procedure will contain technical and operational requirements for making acurate and reproducable rheological measurements on newtonian and non-newtonian slurries. This data is needed to make slurry transport pressure drop calculations.

Issuance of Letter Constitutes Completion.

Acceptance Criteria:

Letter Transmitted to WHC by PVTD Project Manager

Deliverables:

Letter

J. M. Conner 9/23/94
Date
Cost Account Manager

R. S. Schaus 9/23/94
Date
Activity Manager

_____
Date
DOE Manager (acceptance)

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

_____
J. C. Peschong Date
DOE Manager (agreement)

C95-02.020.MDS

D9-34

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Revised Glass Formulation Test Plan for Melter Testing

Schedule ID: VTO 1211

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C-95-133

Completion Date: 07/28/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC - KEY
[X]	CONTRACTOR	[X]	Other (Specify): TEST PLAN		

Description and what constitutes completion of this commitment:

Revised Test Plan will lead to Glass Formulations for limited range of glasses which may contain limiting minor components for Melter Selection Testing and contains:

- Objectives
- Approach
- Testing Description
- Data to be Obtained
- Data Analyses to be made

Issuance of the Test Plan Document Constitutes Completion.

Acceptance Criteria:

Approval sheet and Review Comment Record (RCR) form signed by appropriate authorities

Deliverables:

Test Plan document

J. M. Grens 9/23/94
Date
Cost Account Manager

P. S. Schaus 9/23/94
Date
Activity Manager

Date
DOE Manager (acceptance)

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

J. C. Peschong Date
DOE Manager (agreement)

C95-02.01H.MDS

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Data Package Small-Scale Stirred Melter Test Run-2 **Schedule ID:** VTD 1611

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3. **ADS No.:** 1240-0

Milestone Control No.: T3C-~~96~~ 95 - 135 **Completion Date:** 07/28/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC - KEY
[X]	CONTRACTOR	[X]	Other (Specify): Data Package		

Description and what constitutes completion of this commitment:

The data package provides the testing results from run #2 for the Small-Scale Stirred Melter at Clemson University. The data package will contain relavent data for concept evaluation for melter selection comparison such as processing rate. Minimal data analyses will be included in the data package.

Issuance of the Data Package Constitutes Completion.

Acceptance Criteria:

Data Package Transmittal to WHC by PVTD Project Manager

Deliverables:

Data Package for Small-Scale Stirred Melter Test Run #2.

J. M. Grossi 9/23/94
Cost Account Manager — Date

P. D. Schaus 9/23/94
Activity Manager — Date

Date
DOE Manager (acceptance)

R. W. Powell 9/23/94
R. W. Powell — Date
Program Element Manager

J. C. Peschong — Date
DOE Manager (agreement)

C95-03.02K.MDS

D9-36

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Data Package Small-Scale Stirred Melter Test Run-3 **Schedule ID:** VTD 1621

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3. **ADS No.:** 1240-0

Milestone Control No.: T3C-95-136 **Completion Date:** 09/15/95

Milestone Class:		Deliverable:			Addressed to:		
[ ]	TPA	[ ]	REPORT		[ ]	DOE-HQ	
[ ]	DOE-HQ	[ ]	LETTER		[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS		[X]	Other (Specify):	WHC - KEY
[X]	CONTRACTOR	[X]	Other (Specify):	Data Package			

Description and what constitutes completion of this commitment:

The data package provides the testing results from run #3 for the Small-Scale Stirred Melter at Clemson University. The data package will contain relavent data for concept evaluation for melter selection comparison such as processing rate. Minimal data analyses will be included in the data package.

Issuance of the Data Package Constitutes Completion.

Acceptance Criteria:

Data Package Transmittal to WHC by PVTD Project Manager

Deliverables:

Data Package for Small-Scale Stirred Melter Test Run #3.

J. M. Grau 9/23/94
Date
Cost Account Manager

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

P. S. Schaus 9/23/94
Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

C95-03.02L.MDS

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Data Package Small-Scale Stirred Melter Test Run-4 **Schedule ID:** VTD 1631

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3. **ADS No.:** 1240-0

Milestone Control No.: T3C- 95-137 **Completion Date:** 09/29/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC - KEY
[X]	CONTRACTOR	[X]	Other (Specify): Data Package		

Description and what constitutes completion of this commitment:

The data package provides the testing results from run #4 for the Small-Scale Stirred Melter at Clemson University. The data package will contain relavent data for concept evaluation for melter selection comparison such as processing rate. Minimal data analyses will be included in the data package.

Issuance of the Data Package Constitutes Completion.

Acceptance Criteria:

Data Package Transmittal to WHC by PVTD Project Manager

Deliverables:

Data Package for Small-Scale Stirred Melter Test Run #4.

J. M. Cross 9/23/94
Date
Cost Account Manager

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

R. L. Schaus 9/23/94
Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

C95-03.02M.MDS

D9-38

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Initial SSHTM Data Package

Schedule ID: VTD1781

Revision: 0

Applied to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95- 138

Completion Date: 12/22/94

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[X]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[ ]	LETTER	[X]	DOE-RL
[X]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[ ]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

The data package will contain the data from SSHTM Melter performance for processing NCAW and a Double Shell Tank/Single Shell Tank (DST/SST) blend melter feed for melter selection comparisons.

Issuance of the Data Package Constitutes Completion.

Acceptance Criteria:

Transmittal of the data package to WHC by PVTD Project Manager.

Deliverables:

Data Package

J. M. Grigsby 9/23/94
Date
Cost Account Manager

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

R. J. Schaus 9/23/94
Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

C95-03.03B.MDS

D9-39

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue HTM Material Testing Letter Report

Schedule ID: VTD 1861

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-139

Completion Date: 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

The letter report will contain the results of HTM component materials such as electrode and walls to assess failure modes and melter life for melter selection comparison. The letter report will include:

- Objectives
- Testing Approach
- Testing Description
- Testing Data
- `ting results and data analyses.

Issuance of the Letter Report Constitutes Completion.

Acceptance Criteria:

Transmittal of report to WHC by PVTD Project Manager.

Deliverables:

Letter Report

J. M. Grens 9/23/94
Date
Cost Account Manager

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

P. S. Schaus 9/23/94
Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

C95-03.03F.MDS

D9-40

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Final Reports on Laboratory Scale System Testing

Schedule ID: VTD2001

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95- 140

Completion Date: 09/29/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

The report will contain the results on melter component materials such as electrode, internals, and walls to assess failure modes and melter life for melter selection comparison. The report will include;

- Objectives
- Testing Approach
- Testing Description
- Testing Data
  sting results and data analyses.

Issuance of the Final Report Constitutes Completion.

Acceptance Criteria:

Transmittal of completed report to WHC with completed Record Comment Review (RCR) form by PVTD Project Manager.

Deliverables:

Final Report

J. M. Cram 9/23/94
Date
Cost Account Manager

P. S. Schaus 9/23/94
Date
Activity Manager

Date
DOE Manager (acceptance)

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

J. C. Peschong Date
DOE Manager (agreement)

C95-03.04J.MDS

DG-41

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Final Test Plan(s) for Small-Scale Melter System Testing

Schedule ID: VTD 2041

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95- 141

Completion Date: 06/23/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [X] Other (Specify): Test Plans

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

Provide Test Plans for performance testing Melter Systems X and Y for selection comparison, ability to process different feeds and testing specific features.

Issuance of the Final Test Plan(s) Constitutes Completion.

Acceptance Criteria:

Approval sheet and Review Comment Record (RCR) form signed by appropriate authorities.

Deliverables:

Final Test Plan(s) for Small-Scale Melter System Testing

J. M. Conca 9/23/94
Date
Cost Account Manager

P. A. Scharn 9/23/94
Date
Activity Manager

Date
DOE Manager (acceptance)

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

J. C. Peschong Date
DOE Manager (agreement)

C95-03.04Q.MDS

DQ-42

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Publish Formal PNL CVS Report

Schedule ID: VTD 1243

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-146

Completion Date: 12/22/94

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

Report contains the results of HLW Waste Glass Composition and Resulting Properties (melt viscosity, melt electrical conductivity, liquidus temperature, transition temperature, durability [quenched and centerline cooled glass], crystal characterization) modeling studies performed between FY 1989 to 1994 for Hanford DST HLW.

Issuance of the PNL Document Constitutes Completion.

Acceptance Criteria:

Document Clearance Form Approved

Deliverables:

PNL Document

J. M. Bressa 9/23/94
Cost Account Manager — Date

R. W. Powell 9/23/94
R. W. Powell — Date
Program Element Manager

P. A. Scheele 9/23/94
Activity Manager — Date

J. C. Peschong — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

TDE-94-431.MDS

D9-43

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue a Feed Simulant Preparation Specification for Melter Technology Comparison

Schedule ID: VTD 1283

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-148

Completion Date: 02/24/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [ ] REPORT
- [X] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

The Feed Simulant Specification will contain the technical requirements for makeup of Double Shell Tank/Single Shell Tank (DST/SST) Waste Blend to be used in Melter Comparison Testing.

Issuance of Letter Constitutes Completion.

Acceptance Criteria:

Letter Transmitted to WHC by PVTD Project Manager

Deliverables:

Letter

J. M. Caren 9/23/94
Date
Cost Account Manager

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

P. D. Schaus 9/23/94
Date
Activity Manager

J. C. Peschong Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

C95-02.02H.MDS

DQ-44

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: HLW PO Approve PNL TD Work Plan

Schedule ID: TDW2090
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02.04
Milestone Control No.: T3C-95-149

ADS No.: 1240-0
Completion Date: 09/29/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[X] Other (Specify)	PNL
	Approved Work Plan	

Description:

A final Technology Development work plan, fully integrated with the HLW Program MYWP.

Acceptance Criteria:

Plan meeting scope, schedule and cost targets negotiated with the Program Office. All comments resolved.

Deliverables:

Technology Development Work Plan, approved by the Program Office.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. H. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

WHC TWRS Milestone Description Sheet

WHC-SP-1101

Title: Issue Final Radioactive Core 1-3 Process/Product Test Report

Schedule ID: VTD 1363

Revision: 0

Assigned to: High Level Waste

WBS Designator: 1.1.1.3.

ADS No.: 1240-0

Milestone Control No.: T3C- 95-152

Completion Date: 03/24/95

Milestone Class:

- [ ] TPA
- [ ] DOE-HQ
- [ ] DOE-RL
- [X] CONTRACTOR

Deliverable:

- [X] REPORT
- [ ] LETTER
- [ ] DRAWINGS
- [ ] Other (Specify):

Addressed to:

- [ ] DOE-HQ
- [ ] DOE-RL
- [X] Other (Specify): WHC - KEY

Description and what constitutes completion of this commitment:

Report will contain the results of data reduction and analyses of the first three radioactive NCAW core samples.

Issuance of the Final Report Constitutes Completion.

Acceptance Criteria:

Report with the completed Review Comment Record (RCR) form transmitted to WHC by PVTD Project Manager

Deliverables:

Final Report

J. M. Conner 9/23/94
Date
Cost Account Manager

P. S. Schaus 9/23/94
Date
Activity Manager

Date
DOE Manager (acceptance)

R. W. Powell 9/23/94
R. W. Powell Date
Program Element Manager

J. C. Peschong Date
DOE Manager (agreement)

TDE-94-433

DQ-46

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Decision Letter on Two High-Level Waste Vitrification Systems to DOE-RL

Schedule ID: MSW1111
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-96-103

ADS No.: 1240-0
Completion Date: 01/05/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Analyze programmatic and technical information and document decision on which two high-level waste vitrification systems will be investigated further.

Acceptance Criteria:

Issuance of decision letter to DOE-RL.

Deliverables:

Letter of decision specifying two high-level waste vitrification systems for further study.

Signatures:

T. W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

P. A. Scheele 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DQ-47

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Final Vitrification System Test Requirements Update

Schedule ID: VTW5041
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02.05.02
Milestone Control No.: T3C-96-106

ADS No.: 1240-0
Completion Date: 11/30/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Update the vitrificaation system development test requirements and issue an updated report.

Acceptance Criteria:

Issuance of report to WHC management.

Deliverables:

Updated vitrificaation system development test requirements.

Signatures:

E J W Tom W. Ladd 9-23-94
Cost Account Manager Date

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

R W Powell 9/23/94
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-08

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Initial Process Basis Data Compilation

Schedule ID: FPW3041
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-96-109

ADS No.: 1240-0
Completion Date: 06/30/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[X] Other (Specify) Database	

Description:
A compliation of process basis data for feed processing, off-gas treatment, and liquid waste process for high level tank waste processing suitable for use by the Conceptual Design A-E contractor.

Acceptance Criteria:

Acceptance of the database by WHC senior management.

Deliverables:

Database in form suitable for use.

Signatures:

T. W. Crawford 9-24-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Final Report on High-Level Waste Vitrification Alternatives

Schedule ID: MSW1121
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-96-111

ADS No.: 1240-0
Completion Date: 03-28-96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Document decision process and final decision on the two most promising high-level waste vitrification system alternatives for further evaluation to determine the final high-level waste vitrification system.

Acceptance Criteria:

Acceptance of the completed report by WHC senior management.

Deliverables:

Report detailing the alternatives considered, decision criteria, decision-making process and final decision selecting two alternatives for further investigation.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager / Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Establish TD (PNL) FY 1996 Deliverables Schedule ID: TDW3081
Revision: 0

Assigned To: High Level Waste ADS No.: 1240-0
WBS Designator: 1.1.1.3.03.02 Completion Date: 06/20/96
Milestone Control No.: T3C-96-122

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	PNL TDPO

Description:

Review the PNL FY 1997 Technology Development Work Plan for technical scope and scuedule. Identify deliverables. Provide comments and a list of deliverables to PNL. Provide a copy to the HLW Program Office.

Acceptance Criteria:

Transmittal of the list of deliverables to PNL.

Deliverables:

Letter to PNL transmitting list of deliverables for FY 1996.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager / Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-51

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: HLW PO Approve PNL TD Work Plan

Schedule ID: TDW3090
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02.04
Milestone Control No.: T3C-96-124

ADS No.: 1240-0
Completion Date: 09/13/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[X] Other (Specify) Approved Work Plan	PNL

Description:

A final Technology Development work plan, fully integrated with the HLW Program MYWP.

Acceptance Criteria:

Technology Development Work Plan, approved by the Program Office.

Deliverables:

Technology Development Work Plan, approved by the Program Office.

Signatures:

Jon W. Crawford 9-23-94
Cost Account Manager / Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager / Date
R. W Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

D9-52

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: FY 1997 Technology Development Requirements

Schedule ID: TDW3025
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-96-127

ADS No.: 1240-0
Completion Date: 09/30/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	PNL - TDPO

Description:
Prepare and issue the FY 1997 HLW Technology Development Requirements to PNL. Include technology development needed to support WHC preconceptual design activities including melter selection, feed processability assessments, and alternative process and equipment options studies.

Acceptance Criteria:

Issuance of completed and approved requirements document to PNL.

Deliverables:

FY 1997 Technology Development Requirements document.

Signatures:

T. W. Crawford 9-23-94
Cost Account Manager / Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. J. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Criticality Control Approach Recommendation for Conceptual Design

Schedule ID: FPW3091
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-97-103

ADS No.: 1240-0
Completion Date: 11-26-96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Assess criticality issues related to processing high-level tank waste. Identify required work to develop the criticality control approach to be used for conceptual design. Produce a written report.

Acceptance Criteria:

Receipt ~~Acceptance~~ by DOE-RL of report detailing the criticality control approach.

Deliverables:

Report recommending criticality control ~~method.~~ approach.

Signatures:

T. W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Decision Letter on Reference & Backup HLW Vitrification Systems

Schedule ID: MSW1141
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-97-104

ADS No.: 1240-0
Completion Date: 06-30-97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Analyze test and engineering data. Determine plant reference and backup vitrification systems for conceptual design.

Acceptance Criteria:

Issuance of letter to WHC senior management.

Deliverables:

Letter specifying decision on reference and backup HLW vitrification systems.

Signatures:

GJW Jan W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. J. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: FY 1998 Technology Development Requirements

Schedule ID: TDW4025
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02
Milestone Control No.: T3C-97-105

ADS No.: 1240-0
Completion Date: 05/30/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	PNL - TDPO

Description:
Prepare and issue the FY 1998 HLW Technology Development Requirements to PNL. Include technology development needed to support WHC preconceptual design activities including melter selection, feed processability assessments, and alternative process and equipment options studies.

Acceptance Criteria:

Issuance of completed and approved requirements document to PNL.

Deliverables:

FY 1998 Technology Development Requirements document.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager / Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Final Vitrification System Test Requirements Update Report

Schedule ID: VTW5000
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02.05.02
Milestone Control No.: T3C-97-108

ADS No.: 1240-0
Completion Date: 03/30/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Update the vitrification development test requirements. Issue updated report.

Acceptance Criteria:

Issuance of report to WHC management.

Deliverables:

Final vitrification system test requirements update report.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DQ-57

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Update Vitrification System Development Plan & Strategy

Schedule ID: VTW4966
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02.05.02
Milestone Control No.: T3C-97-113

ADS No.: 1240-0
Completion Date: 12/30/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Update the vitrification system plan and strategy report based on results and decisions made during FY 1995 and FY 1996.

Acceptance Criteria:

Issuance of the updated plan to WHC management.

Deliverables:

Updated vitrification system plan and strategy report.

Signatures:

T. W. Crawford 9-23-94
Cost Account Manager — Date
T. W. Crawford

R. W. Powell 9/23/94
Activity Manager — Date
R. W. Powell

R. W. Powell 9/23/94
Program Element Manager — Date
R. W. Powell

DOE Manager (Agreement) — Date
J. C. Peschong

DOE Manager (Acceptance) — Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: HLW PO Approve PNL TD FY 1998 Work Plan

Schedule ID: TDW4090
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.02.04
Milestone Control No.: T3C-97-115

ADS No.: 1240-0
Completion Date: 08/29/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[X] Other (Specify)	PNL
	Approved Work Plan	

Description:

A final Technology Development work plan, fully integrated with the HLW Program MYWP.

Acceptance Criteria:

Technology Development Work Plan, approved by the Program Office.

Deliverables:

Technology Development Work Plan, approved by the Program Office.

Signatures:

Cost Account Manager — Date
T. W. Crawford — 9-23-94

Program Element Manager — Date
R. W. Powell — 9/23/94

Activity Manager — Date
R. W. Powell — 9/23/94

DOE Manager (Agreement) — Date
J. Peschong

DOE Manager (Acceptance) — Date

MDSs for System Definition (1.1.1.3.03.04)

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

SDW9991

Title: Provide Report to Ecology and EPA on Evaluation of Alternative Concepts for Treatment and Disposal of High Level Hanford Tank Wastes.

Schedule ID: ~~SD99993~~
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-95-100

ADS No.: 1240-0
Completion Date: 12/31/94

Milestone Class:	Deliverable	Addressed to:
[X] TPA M-51-01	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	WA. State Dept. of Ecology; US EPA.

Description:

Provide report to the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA) an evaluation of alternative concepts for treatment and disposal of high-level Hanford tank wastes. Options may be identified that have the potential to significantly improve the tank waste disposal strategy. A systems engineering approach will be used to define and evaluate the options. Only those options that maintain or enhance environmental conditions and (1) significantly improve reference case schedules or (2) substantially reduce cost while maintaining or improving reference case schedules will be proposed through approved change control process.

Acceptance Criteria:

The acceptance criterion for this milestone is DOE-RL's issuance of the report to Ecology and EPA.

Deliverables:

Transmit a report prepared by WHC and reviewed and approved by DOE-RL to the Washington State Department of Ecology and the U.S. Environmental Protection Agency.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-61

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Action Plan for Cesium/Strontium Capsule Disposal

Schedule ID: SDW4305
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-95-102

ADS No.: 1240-0
Completion Date: 04/21/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Develop the strategy and planned course of activity to dispose of the Cesium/Strontium capsules.

Acceptance Criteria:

Approval of the Disposition Plan by WHC management.

Deliverables:

Cesium/Strontium capsule disposition plan.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager — Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager — Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager — Date
R. W. Powell

DOE Manager (Agreement) — Date
J. C. Peschong

DOE Manager (Acceptance) — Date

D4-C2

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Feed Processability Assessment Report

Schedule ID: SDW2005
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-95-104

ADS No.: 1240-0
Completion Date: 01/06/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Review available data from Pretreatment/Characterization and provide an evaluation of glass formulations, process compatibility, and melter operational performance characteristics for each waste. Develop estimates of total glass production ranges based on different blending, pretreatment and glass composition.

Acceptance Criteria:

Issuance of report to WHC management.

Deliverables:

Report on potential range of feed compositions.

Signatures:

Tom W. Crawford 9-24-94
Cost Account Manager / Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Draft Process Control Recommendation (WHC)

Schedule ID: SDW9970
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04.03.01
Milestone Control No.: T3C-95-107

ADS No.: 1240-0 04/28/95
Completion Date: ~~02/28/95~~

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Perform trade studies to evaluate feed forward process control vs. product sampling process control. Recommend a specific process control method for vitrified waste product.

Acceptance Criteria:

Issuance of draft recommendation to DOE-RL.

Deliverables:

Process control recommendation.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford with changes as marked

R W Powell 9/21/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-64

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Final Process Control Recommendation (RL)

Schedule ID: SD99976
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04.03.01
Milestone Control No.: T3C-95-120

ADS No.: 1240-0
Completion Date: ~~03/31/95~~ 05/31/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[X] DOE-HQ
[X] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Perform trade studies to evaluate feed forward process control vs. product sampling process control. Recommend a specific process control method for vitrified waste product.

Acceptance Criteria:

Issuance of final recommendation to DOE-HQ.

Deliverables:

Process control recommendation.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date with changes as marked.
T. W. Crawford

R H Powell 9/24/94
Program Element Manager Date
R. W. Powell

P. L. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-65

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Key Decision on Need/Ref. for Overpacking Cs/Sr.

Schedule ID: SDW4100
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-95-121

ADS No.: 1240-0
Completion Date: 08/18/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Documented RW decisions on the need, if any, for overpacking Cs or Sr capsules. Special canisterization or overpacking, if any, of canistered Cs and/or SR loaded glass.

Acceptance Criteria:

Transmittal of decision letter to DOE-RL.

Deliverables:

Documented decision by EM/TWRS.

Signatures:

Cost Account Manager — 9-23-94 — Date

Program Element Manager — Date
R. W. Powell

Activity Manager — 9/23/94 — Date

DOE Manager (Agreement) — Date
J. Peschong

DOE Manager (Acceptance) — Date

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Draft Recommendation for TRU Waste Classification

Schedule ID: SDW5025
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-95-124

ADS No.: 1240-0
Completion Date: 12/27/94

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

Assemble documentation for TRU waste classification including classification definitions issued by DOE, evaluate historical records of tank farm operations and tank characterization reports, and review previous disposition plans for "TRU" waste tanks. Provide a draft document containing a WHC position identifying potential TRU waste tanks and the bases for their classification.

Acceptance Criteria:

Transmittal of WHC draft recommendation to DOE-RL.

Deliverables:

WHC assessment and recommendation on TRU waste tanks.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager / Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. A. Schreiber 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-67

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Final TRU Waste Classification Document (RL)

Schedule ID: SD95075
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-95-127

ADS No.: 1240-0
Completion Date: 03/08/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[X] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Issue the final report on classification of TRU waste.

Acceptance Criteria:

Issuance of final TRU Waste Classification report by DOE-RL.

Deliverables:

Final TRU Waste Classification report.

Signatures:

Jon W. Ford 9-23-94
Cost Account Manager Date

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager Date

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

DQ-68

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Report on Evaluation of Alternative HLW Concepts

Schedule ID: SDW9993
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-95-131

ADS No.: 1240-0
Completion Date: 12/30/94

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Evaluate alternative concepts for treatment (vitrification) and disposal of HLW. Submit report to DOE-RL for review and approval.

Acceptance Criteria:

Approval of final report by DOE-RL.

Deliverables:

Report on alternatives for treatment and disposal of HLW.

Signatures:

JSG Tom W. Craft 9-23-94
Cost Account Manager Date

P. A. Powell 9/24/94
Program Element Manager Date
R. W. Powell

P. A. Schaus 9/23/94
Activity Manager Date

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-69

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: DOE-RL Approval of Draft HLW Facil. CD Plan

Schedule ID: PMW5037
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-95-142

ADS No.: 1240-0
Completion Date: 09/30/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

DOE-RL approval of the Draft HLW Facility Conceptual Design Plan.

Acceptance Criteria:

DOE-RL approval letter.

Deliverables:

Draft HLW Facility Conceptual Design Plan.

Signatures:

Tom W. Ard 9-23-94
Cost Account Manager Date

R. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. J. Schaus 9/23/94
Activity Manager Date

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

DQ-70

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Revise Flowsheet Document

Schedule ID: SDW6350
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04.03
Milestone Control No.: T3C-95-145

ADS No.: 1240-0
Completion Date: 10/18/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[X] Other (Specify)	WHC Management
	Flowsheet	

Description:

A supporting document detailing the TWRS flowsheet that has been updated to reflect current planning for HLW pretreatment and vitrification.

Acceptance Criteria:

Accceptance of document by WHC senior management.

Deliverables:

Updated HLW flowsheet document.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

DG-11

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Facility Configuration Decision Document

Schedule ID: SDW7300
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-95-147

ADS No.: 1240-0
Completion Date: 04/10/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	

Description:

A WHC letter report recommending a HLW specific facility configuration with supporting decision analysis. The decision analysis will be based on a preceeding trade study.

Acceptance Criteria:

Senior WHC management approval of HLW specific facility configuration recommendation.

Deliverables:

WHC letter report approved by senior WHC management.

Signatures:

JS6 Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. J. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

D9-12

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Alternate Containers Evaluation Report

Schedule ID: SDW7451
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-95-150

ADS No.: 1240-0
Completion Date: 03/17/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Evaluate Alternate waste package containers. Consider ability to satisfy interim and repository storage constraints, heat transport, production cost, and stakeholder values.

Acceptance Criteria:

Issuance of letter report to WHC management.

Deliverables:

Letter report detailing acceptability of alternate HLW repository waste containers.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-13

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Revise Facility Concept Document

Schedule ID: SDW7825
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.
Milestone Control No.: T3C-96-102

ADS No.: 1240-0
Completion Date: 10/10/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

A supporting document detailing the current HLW Facility comcept which incorporates decisions resulting from trade studies accomplished to date.

Acceptance Criteria:

Approval of document by DOE-RL.

Deliverables:

Supporting Document describing the HLW facility concept.

Signatures:

QS6 T. W. Crawford 9-23-94
Cost Account Manager — Date
T. W. Crawford

R. W. Powell 9/21/94
Program Element Manager — Date
R. W. Powell

R. A. Schaus 9/23/94
Activity Manager — Date
R. W. Powell

DOE Manager (Agreement) — Date
J. Peschong

DOE Manager (Acceptance) — Date

D9-14

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Update Feed Processability Evaluation

Schedule ID: SDW2100
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-96-107

ADS No.: 1240-0
Completion Date: 01/04/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Identify and develop strategies for controlling critical components through blending, pretreatment or glass formulation and dilution to maximize the waste oxide loading and optimize melter and plant performance. Issue updated feed processability assessment report.

Acceptance Criteria:

Transmittal of report to WHC management.

Deliverables:

Feed Processability Report.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D4-75

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Design Input Interface Control Procedure

Schedule ID: SDW9015
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-96-108

ADS No.: 1240-0
Completion Date: 09/30/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Define the procedure to be used in controlling the flow of technology information between WHC and the design contractor.

Acceptance Criteria:

Transmittal of the Design Input Interface Control Procedure to the design contractor.

Deliverables:

Design Input Interface Control procedure.

Signatures:

T. W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Shaus 9/23/94
Activity Manager Date
P. S. Shaus

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-76

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Updated Estimates of Tank Waste Types, Compositions & Quantities

Schedule ID: SDW1001
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-96-114

ADS No.: 1240-0
Completion Date: 10/02/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Critically review available data. Consider uncertainties in tank waste inventory, pretreatment performance, and blending alternatives. Provide estimates of the potential range of feed compositions to the HLW vitrification plant.

Acceptance Criteria:

Issuance of the report to WHC senior management.

Deliverables:

Report detailing estimates of potential feed composition ranges.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-77

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: TRU Waste Disposal Options
Cost-Benefit Analysis &
Draft Recommendation

Schedule ID: SDW5100
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-96-116

ADS No.: 1240-0
Completion Date: 11/28/95

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Perform a cost/benefit analysis for TRU waste segregation assessing the impact on retrieval, pretreatment and vitrification plant operation versus the alternative of blending with HLW for repository disposal. Include consideration of the number of canisters produced and the cost of disposal for the segregated and non-segregated cases.

Acceptance Criteria:

Acceptance of report by TWRS management.

Deliverables:

Cost-benefit analysis and recommendation report.

Signatures:

T. W. Crawford 9-23-94
Cost Account Manager — Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager — Date
R. W. Powell

R. A. Schaus 9/23/94
Activity Manager — Date
R. W. Powell

DOE Manager (Agreement) — Date
J. C. Peschong

DOE Manager (Acceptance) — Date

D9-18

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Preliminary Functions & Requirements Document

Schedule ID: SDW8050
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-96-118

ADS No.: 1240-0
Completion Date: 01/19/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Preliminary documentation of the High-Level Waste Functions, requirements, architecture and expected performance.

Acceptance Criteria:

F&R document approved by WHC senior management.

Deliverables:

Preliminary HLW F&R document.

Signatures:

JSC Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. A. Scharon 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-19

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Technology Design Strategy Recommendation

Schedule ID: SDW9010
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-96-121

ADS No.: 1240-0
Completion Date: 09/27/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Prepare a technology design strategy defining expected scope of design input information and recommending a detailed strategy for obtaining, documenting, approving and controlling government-developed technology information to be used as design input by the High Level Waste Vitrification facility design organization.

Acceptance Criteria:

Strategy approved by WHC senior management.

Deliverables:

Technology Design Strategy and Procedures report.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-80

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Initial Design Input Package for Conceptual Design

Schedule ID: SDW9020
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-97-106

ADS No.: 1240-0
Completion Date: 03/31/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[X] Other (Specify) Data Package	CD Contractor

Description:

Prepare design input data packages to transmit government-developed technology information to the Conceptual Design organization.

Acceptance Criteria:

Transmittal of initial design input data package to CD Contractor.

Deliverables:

Initial design input data package.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-81

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Recommend Design Basis Feeds for Conceptual Design

Schedule ID: SDW2200
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-97-107

ADS No.: 1240-0
Completion Date: 01/03/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Identify and develop strategies for controlling critical components through blending pretreatment or glass formulation and dilution to maximize the waste oxide loading and optimize melter and plant performance characteristics. Produce specific recommendations for design basis feeds for Conceptual Design.

Acceptance Criteria:

Issuance of recommended design basis feed specifications to WHC management.

Deliverables:

Recommended design basis feed specifications to WHC management.

Signatures:

Tom W. Crawford 9-4-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. J. Schaus 9/23/94
Activity Manager Date
R. J. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-82

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Documention of Potential Feed Composition Ranges Estimate

Schedule ID: SDW1100
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-97-109

ADS No.: 1240-0
Completion Date: 10/01/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Critically review available data. Consider uncertainties in tank waste inventory, pretreatment performance, and blending alternatives. Provide estimates of the potential range of feed compositions to the HLW vitrification plant.

Acceptance Criteria:

Issuance of the report to WHC senior management.

Deliverables:

Report detailing estimates of potential feed composition ranges.

Signatures:

Tom W. Crawford 9-28-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

R. W. Powell 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-83

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Approved Design Basis Feed Ranges for Conceptual Design

Schedule ID: SDW1200
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.04
Milestone Control No.: T3C-97-111

ADS No.: 1240-0
Completion Date: 03/31/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Obtain DOE-RL approval of design basis feed ranges for conceptual design.

Acceptance Criteria:

DOE-RL acceptance of report on design basis feed ranges for conceptual design.

Deliverables:

Report on design basis feed ranges for conceptual design.

Signatures:

R. W. Powell for 9/23/94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/21/94
Program Element Manager Date
R. W. Powell

P. J. Inhoff 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-84

MDSs for HLW Facility (1.1.1.3.03.05)

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Draft Conceptual Design Statement of Work

Schedule ID: BMW1076
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.05
Milestone Control No.: T3C-96-100

ADS No.: 1240-0
Completion Date: 06/21/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Prepare a draft Conceptual Design Statement of Work for HLW consistent with the HLW Project Acquisition Strategy, Conceptual Design Plan, System Definition studies, and the HLW Functions & Requirements.

Acceptance Criteria:

completion of WHC internal review, comment and revision cycle, and identification of required additional detail to constitute a final SOW.

Deliverables:

Draft Statement of Work with all initial review comments incorporated.

Signatures:

TGD
Cost Account Manager — Date

9/23/94
Program Element Manager — Date
R. W. Powell

9/23/94
Activity Manager — Date
R. W. Powell

DOE Manager (Agreement) — Date
J. C. Peschong

DOE Manager (Acceptance) — Date

DQ-86

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: WIPP Preliminary Acceptance of TRU Waste Data Package

Schedule ID: WFW1011
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.05
Milestone Control No.: T3C-96-117

ADS No.: 1240-0
Completion Date: 04/19/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WIPP

Description:

Resolve review comments on draft TRU waste data package and obtain preliminary acceptance of plan by WIPP.

Acceptance Criteria:

Approval of plan by WIPP.

Deliverables:

Preliminary TRU waste data package.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DG-87

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue Waste Form & Canister Description Document for Cs/Sr Capsule Disposal

Schedule ID: WFW1121
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.05
Milestone Control No.: T3C-96-119

ADS No.: 1240-0
Completion Date: 09/19/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	WHC Management

Description:

Prepare a Waste Form & Canister description document for the reference repository disposal of material presently stored at Hanford as Cesium and Strontium salts in metal capsules.

Acceptance Criteria:

Approval of Waste Form & Canister Description report by TWRS management.

Deliverables:

Waste Form and Canister Description for reference Cs and Sr disposal as product derived from Cesium and Strontium capsules.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date
T. W. Crawford

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Schreuer 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

D9-88

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Issue TRU Tank Waste Processing Strategy Document

Schedule ID: WFW1021
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.05
Milestone Control No.: T3C-96-126

ADS No.: 1240-0
Completion Date: 03/05/96

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[X] Report	[X] DOE-HQ
[X] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

Develop strategy to ~~segregate and~~ dispose of TRU tank waste ~~at WIPP~~. Provide internal review and approval. ~~Obtain DOE approval~~.

Address impacts and alternatives with respect to retrieval sequence, pretreatment methods, process flowsheet, design feed specifications, feed processability, and high-level waste functions and requirements.

Acceptance Criteria:

DOE-RL approval of TRU tank waste processing strategy document.

Deliverables:

TRU tank waste processing strategy document.

Signatures:

T. W. Crawford 9-23-94
Cost Account Manager — Date
T. W. Crawford

R. W. Powell 9/21/94
Program Element Manager — Date
R. W. Powell

P. A. Scheele 9/23/94
Activity Manager — Date
R. W. Powell

DOE Manager (Agreement) — Date
J. C. Peschong

DOE Manager (Acceptance) — Date

D9-89

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Incorporate Pretreatment CDR & Sludge Wash Decision

Schedule ID: CDW1050
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.05.04
Milestone Control No.: T3C-97-100

ADS No.: 1240-0
Completion Date: 09/29/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[X] Other (Specify)
[X] Contractor Key	[ ] Other (Specify)	A-E contractor

Description:

An interface with the Pretreatment program detailing final selection of pretreatment processes to be used in the HLW facility Conceptual Design.

Acceptance Criteria:

Transmittal of the pretreatment process selection decision to the HLW facility A-E contractor.

Deliverables:

Letter transmitting the pretreatment CDR and sludge wash decision to the A-E contractor.

Signatures:

Tom W. Crawford 9-23-94
Cost Account Manager Date

R. W. Powell 9/23/94
Program Element Manager Date
R. W. Powell

P. S. Schaus 9/23/94
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. Peschong

DOE Manager (Acceptance) Date

D9-90

WESTINGHOUSE HANFORD COMPANY

Tank Waste Remediation System Division

Milestone Description Sheet

WHC-SP-1101

Title: Start Conceptual Design

Schedule ID: CDW1200
Revision: 0

Assigned To: High Level Waste
WBS Designator: 1.1.1.3.03.05
Milestone Control No.: T3C-97-102

ADS No.: 1240-0
Completion Date: 03/26/97

Milestone Class:	Deliverable	Addressed to:
[ ] TPA	[ ] Report	[ ] DOE-HQ
[X] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-RL	[ ] Drawings	[ ] Other (Specify)
[ ] Contractor Key	[ ] Other (Specify)	

Description:

This Milestone signifies the start of Conceptual Design.

Acceptance Criteria:

Completion of all contracting actions necessary to begin Conceptual Design.

Deliverables:

None

Signatures:

For R.A. Smith.
Dennis Marshall 9/23/94
Cost Account Manager Date

R W Powell 9/21/94
Program Element Manager Date
R. W. Powell

R W Powell
Activity Manager Date
R. W. Powell

DOE Manager (Agreement) Date
J. C. Peschong

DOE Manager (Acceptance) Date

DQ-91

MDSs for HWVP Project Closeout (1.1.1.3.03.06)

Title: COMPLETE UNDERGROUND MECHANICAL UTILITIES PHASE I SUBCONTRACT WHC-SP-1101

Schedule ID: HWW6000

Revision: 0

Assigned to: UCAT

S Designator: 1.1.1.3.03.06.03

ADS No.: 1240-1

Milestone Control No.:

Completion Date: 01/27/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC HWVP Project Manager
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

This milestone will be complete upon notification by UCAT to WHC via letter that the mechanical utilities, C-160 contract, as scoped for TOB occupancy is complete and placed in operation. Included are the Sanitary Water, Raw Water, Fire Water and Sewer Systems, Manifold Shelter Building, and Fire Water Pumphouse for future project use.

Acceptance Criteria:

Receipt of invoice indicating final payment has been made.

Deliverables:

Letter of Notification

FOR 9-23-94
F. D. Pettit — Date
Responsible Contractor Project Manager

9/23/94
R. W. Powell — Date
Program Element Manager

9/23/94
R. A. Smith — Date
WHC Project Manager

9/23/94
R. L. Long — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

D9-93

Title: NOTIFICATION TO DOE-RL OF HWVP SUSPENSION WHC-SP-1101 WHC-SP-1101

Schedule ID: HWW1000

Revision: 0

Assigned to: WHC

WBS Designator: 1.1.1.3.03.06.01

ADS No.: 1240-1

Milestone Control No.: T3C-95-106

Completion Date: 03/24/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[X]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[ ]	Other (Specify):
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will be complete upon submission of notification to DOE-RL that activities in support of suspension of the HWVP contract have been completed including: Settlement of claims, turnover of equipment, completion of As-builting, turnover and archiving of documentation.

Acceptance Criteria:

Acceptance of letter to DOE-RL

Deliverables:

WHC formal letter of notification to DOE-RL

R. A. Smith — 9/23/94 — Date
Cost Account Manager

R. W. Powell — 9/23/94 — Date
Program Element Manager

R. A. Smith — 9/23/94 — Date
Activity Manager

R. L. Long — 9/23/94 — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

D9-94

Title: TERMINATE BATTCH PLANT SUBCONTRACT

Schedule ID: HWW6000

WHC-SP-1101 **Revision:** 0

Assigned to: UCAT

Designator: 1.1.1.3.03.06.03

ADS No.: 1240-1

Milestone Control No.: 1074

Completion Date: 01/27/95

Milestone Class:		Deliverable:		Addressed to:		
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ	
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL	
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify):	WHC HWVP Project Manager
[X]	CONTRACTOR	[ ]	Other (Specify):			

Description and what constitutes completion of this commitment:

This milestone will be complete upon notification by UCAT to WHC via letter that the subcontract termination negotiation and closeout are complete for the HWVP Batch Plant subcontract C-900 with Central Pre-Mix Concrete Company.

Acceptance Criteria:

Receipt of invoice indicating final payment has been made.

Deliverables:

Letter of Notification

for 9-23-94
F. D. Pettit — Date
Responsible Contractor Project Manager

9/23/94
R. W. Powell — Date
Program Element Manager

9/23/94
R. A. Smith — Date
WHC Project Manager

9/23/94
R. E. Long — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

DQ- 95

Title: TERMINATE CANISTER STORAGE BUILDING SUBCONTRACT

Schedule ID: HWW6000

WHC-SP-1101 **Revision:** 0

Assigned to: UCAT

Designator: 1.1.1.3.03.06.03

ADS No.: 1240-1

Milestone Control No.: 1073

Completion Date: 01/27/95

Milestone Class:		Deliverable:		Addressed to:	
[ ]	TPA	[ ]	REPORT	[ ]	DOE-HQ
[ ]	DOE-HQ	[X]	LETTER	[ ]	DOE-RL
[ ]	DOE-RL	[ ]	DRAWINGS	[X]	Other (Specify): WHC HWVP Project Manager
[X]	CONTRACTOR	[ ]	Other (Specify):		

Description and what constitutes completion of this commitment:

This milestone will be complete upon notification by UCAT to WHC via letter that the subcontract termination negotiation and closeout are complete for the HWVP Canister storage Building concrete subcontract C350-01 with David A. Mowat.

Acceptance Criteria:

Receipt of invoice indicating final payment has been made.

Deliverables:

Letter of Notification

FOR 9-23-94
F. D. Pettit — Date
Responsible Contractor Project Manager

R. W. Powell 9/23/94
R. W. Powell — Date
Program Element Manager

9/23/94
R. A. Smith — Date
WHC Project Manager

9/23/94
R. L. Long — Date
DOE Manager (agreement)

Date
DOE Manager (acceptance)

D9-96

APPENDIX E

BASES OF ESTIMATE

BASES OF ESTIMATE

E1.0 OVERVIEW

The Tank Waste Remediation System (TWRS) Program cost bases were prepared using a process that integrated the schedule and cost development in a manner consistent with the EM-30 Cost and Schedule Guidelines. An integral portion of the estimating and scheduling process is the establishment of the scope of work and categorization of the work into the Program's work breakdown structure (WBS) elements. Subsequently, the work scope in each WBS element was further decomposed into the activities where the work will be performed. It is at this level that the work is planned, managed, accomplished, controlled, and reported.

There are three objectives for the estimating process. The first is to determine the resources required to accomplish the Program's mission. The resources required include money, manpower, services, and materials. Normally, all the required resources except money are determined directly by estimating the resources required for each activity's work scope, and then summing each of these individual values to establish the Program's need for each resource. In order to simplify and standardize the activity estimates, a set of standard resources, resource units, and their associated unit cost was specified for the Program. The money resource, dollars, was determined by a simple extension of the number of units of a resource required multiplied by its set cost per unit. This calculation provided the cost of each resource for an activity. The sum of the resource costs for an activity is the total direct cost of the activity. To arrive at the total cost of an activity, the indirect costs are added, as well as any applicable multipliers, to the direct costs.

The second objective of the estimating process is to establish the total amount and the rates of usage for each resource required to accomplish the Program's mission. The total amount of each resource required is calculated directly by a simple summing process, but the usage rates require the activities be placed in time through the scheduling portion of this process. The resource usage rates developed are dependent on the schedule dates selected (e.g., early start dates or late start dates) and do vary markedly, dependent on the dates selected.

The third objective of the estimating process is to use an activity's resource requirements as a guide in establishing the amount of time required to complete that activity's work (i.e., the activity's schedule duration).

The resource estimates for activities are prepared under specific instructions provided by TWRS estimating procedures. Data development uses Activity Planning Forms as the documentation of work content and Estimating Worksheets for preparation of the estimating detail. The information from these worksheets is entered into the Program's scheduling software database, where the data are available to use for both estimating and scheduling purposes. The content of the database is controlled.

The initial baseline development was prepared in April of 1994. The baseline identified activities extending the forty plus years of the TWRS Program. In July of 1994, the level of detail for fiscal years 1995, 1996, and 1997 was expanded. The expansion process is conducted under an estimating procedure which implements a more precise estimating methodology, consistent with the better defined technical content and the need for budget level estimating certainty.

E2.0 ESTIMATE DEVELOPMENT BASES

The TWRS Program cost and schedule bases reflect the present technical strategy, are in conformance with applicable *Hanford Federal Facility Agreement and Consent Order*[1] milestones and other constraints, and cover the Program's entire life cycle (i.e., through the year 2040). Given this long lifespan, the definition of activities varies widely. Those activities in the near future have a well defined technical scope; those activities planned for execution 10 to 20 years in the future have a less well defined technical scope; and those in the far future are the least well defined of all. Estimating methods used range from definitive to rough-order-of-magnitude and are consistent with the activity's specificity of scope.

The resource estimates for activities are developed and presented in a format reflecting the breadth of activity scope definitions achievable. The estimate data were not generated more precisely than the overall technical basis of the activity dictated. The inclusion of precise estimate elements and costs do not add to the ultimate accuracy of the estimate if imprecise work scope exists.

The estimating-scheduling process recognizes that the final configuration of the TWRS Program facilities would not be established for some time to come. Therefore, in those instances where an alternative decision would occur in the future, the program element manager established what is presently perceived as the most likely configuration choice. The resultant estimates were based on the best technical information available for that choice.

The baseline expansion is based on well defined scope for fiscal year 1995 activities and less well defined scope in the succeeding two years.

E3.0 WORK SCOPE DEFINITION

The TWRS Program systems engineering process has decomposed the Program into nine major WBS elements (refer to Section 2, Figure 2-2). These nine WBS elements comprise Level IV of the TWRS Program WBS. In order to develop sufficient definition of scope for the estimate-schedule process, each program element manager decomposed the TWRS Program WBS one more level (i.e., Level V). This decomposition was done using a systems engineering approach that identified this lower level's functions and requirements from which more detailed technical scope was developed. This work scope is defined in the WBS Dictionary sheets of the Level V WBS elements (refer to Appendix A for the TWRS Program WBS Dictionary).

The baseline expansion process defined the TWRS Program work scope to WBS Level VI and below. WBS dictionaries are formally documented at Level VI. Each program element manager defined the set of activities making up their total scope of work, as defined by the WBS elements. The work scope of each activity is documented on an Activity Planning Form. The basis of that scope and qualifying assumptions are also defined on the Activity Planning Form.

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[1] *Hanford Federal Facility Agreement and Consent Order*, Fourth Amendment, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington (1994).

The process used to define an activity is explained in the preceding sections. Typical criteria used in the activity definition process are the uniqueness of the scope; natural consolidation points such as design, construction, and operations; logical interfaces of the activity with inter- and intra-program element activities; and depth of knowledge concerning the scope.

E4.0 ESTIMATE DEVELOPMENT

The resource estimates for each activity were developed by the program element technical and management personnel responsible for the work. The estimates were prepared on Estimating Worksheets using standardized procedures. The technical content of each estimate is described on the Activity Planning Form and supporting documentation.

The Estimating Worksheets are formatted to facilitate the estimating process and data entry. The process emphasizes definition of the quantity of the deliverable, use of resources required per unit of deliverable, substantiated pricing factors for labor and contractors, and documentation of estimate bases and assumptions. The estimators used reference materials such as historical data, estimates prepared by design contractors, construction data sheets and backup documentation, and relevant personal experience to prepare the estimate worksheets. For each activity, the resource totals are entered into the database. The allocation across the duration of the activity is achieved by specification of a distribution curve and appropriate time lags.

E5.0 ACTIVITY RESOURCE CATEGORIES

Resource categories are defined as the framework for the estimate. The precision of the categories is adjusted to be commensurate with the precision level of technical definition and the need for estimating accuracy. The resource categories are the most precise in the baseline expansion period. The manpower for the Hanford Site Management and Operating Contractor categorization changes as the schedules extends. In the baseline expansion period, labor is identified to the organizational code structure used by the financial data system. A cross reference to the U.S. Department of Energy detail labor categories is also maintained. Resource estimates for the nine labor families are input for activities that started between fiscal year 1997 and fiscal year 2000. Resources for activities starting after fiscal year 2000 are input to three categories only: exempt, nonexempt, and bargaining unit. The consolidation of labor data in the later years is in keeping with the amount of knowledge of future activities available today.

Non-labor elements are defined by the financial data system code structure. During the baseline expansion period, each code element is estimated explicitly. After fiscal year 1997, a resource category, Management and Operating Contractor materials, was developed. This category combines Hanford Site accounting cost elements dealing with the Management and Operating Contractor's office expenses into a single element rather than estimating the elements individually. The category was established as a function of the Management and Operating labor expenditures. A factor was established from historical data and includes the cost for approximately 40 elements, including information services, office supplies, tools and safety equipment, micro-computers, travel and living expenses, and miscellaneous purchases.

The definitions of costs used in the estimate bases are shown in the following paragraphs.

Labor wage rate pricing is based on the financial data system organizational factors including organizational overhead. The nine labor category wages are derived from composite rates. The cost and schedule database software is priced accordingly.

The material procurement rate provides recovery of the maintenance and operating cost for the procurement of materials and services. The rate used is a percent of procured materials and a percent of services contracts.

The general and administrative cost is derived from the factor specified as 15.9 percent of the labor, maintenance and operating purchased materials, contracted services, assessments and the material procurement rate. The factor is not applied to other organization costs.

The Site common service pool cost is 6.1 percent of the maintenance and operating labor, purchased materials, administrative materials, contracted services, assessments, and material procurement rate. The factor is not applied to laboratory costs.

The resources estimated for each activity are identified to two funding type, expense and capital. The resource estimates identify all work directly related to the TWRS Program, including the work scope funded under EM-50. Resource requirements for the U.S. Department of Energy are not included in the estimate.

E6.0 MODIFICATION TO THE ESTIMATE AFTER SCHEDULE PROCESSING

All information is in the database.

E7.0 ESTIMATE BASES

E7.1 ESTIMATE BASES COMMON TO ALL PROGRAM ELEMENTS

The estimate bases with categories in all of the program elements include the following. This makes up 43 percent of the total Program cost.

1. **Indirect Costs - 12 percent of the total.** Estimated and distributed to the direct activities by the Site standard allocation approved by the U.S. Department of Energy, Richland Operations Office (RL).

2. **Site Maintenance and Operating Contractor Procurement Services - 2 percent of the total.** Estimated as a percentage of procured materials and services per the fixed and approved allocation rate.

3. **Site Maintenance and Operating Contractor Administrative Materials - 5 percent of the total.** Derived as a percent of the Hanford Site Maintenance and Operating contractor direct labor per the last two years of historical data.

4. **Site Technology Development and Research Contractor - 3 percent of the total.** Estimated for each activity using specified estimating process. The Hanford Site Technology Development and Research Contractor provided estimates of the work scope and the costs for technical analysis and development in support of the TWRS Program elements.

5. **Site Architecture and Engineering Contractor - 2 percent of the total.** Estimated for each activity through the specified estimating process. The Hanford Site Architecture and Engineering Contractor provided estimates of the work scope and the costs for performing design functions and construction management of projects in support of the TWRS Program elements.

6. **Projects - 10 percent of the total.** Estimated within each program element for that work scope which has been designated with a project identification number. The estimate information is developed and validated through the Department of Energy budget process. The bases supporting the estimate are the project data sheet and ancillary information.

7. **U.S. Department of Energy and Non-Site Laboratories - 9 percent of the total.** Estimated by the U.S. Department of Energy for the support provided to the program elements. The cost of programs in support of TWRS by U.S. Department of Energy elements other than EM-30 are included in this resource category.

E7.2 ESTIMATE BASES SPECIFIC TO PROGRAM ELEMENTS

The remainder of the cost is developed through the estimating process performed by the program elements. Estimates identified the scope of work and pricing of the estimate items to obtain the direct cost resource estimates. Level III of the WBS classifies the work scope to Manage Program, Manage Tank Waste, and Process Tank Waste. This breakdown provides a good general categorization to describe the estimate bases.

NOTE: The percentage attributed to the "percent of the total cost" below excludes the cost of those resource categories identified above. The resource categories shown below include Hanford Site Maintenance and Operating Contractor labor, procured materials, procured services, and site assessments. The estimate bases specific to program elements make up 57 percent of the total Program cost.

1. **Manage Tank Waste - 17 percent of the total cost.**

   The estimates of labor, materials, and services to maintain and operate the existing and new tank farms are based on historical data of the activities required to safely operate the tank farm complex. This information is extrapolated to future years, but the future work scope is not expected to vary in technical content. The yearly expenditure of resources to maintain and operate the tank farm complex decreases commensurate with the reduction in the number of active tanks remaining after the retrieval sequence begins (6 percent).

   The major costs for maintenance activities are the interim stabilization actions for the single-shell tanks. The estimates for this work scope are estimated using information from tanks already stabilized. The stabilization activity is scheduled to be completed in 1998 (1 percent).

Resolving safety issues in the storage tanks is to be predominately completed by 2000. This work includes technical analysis and installation of mitigation equipment such as pumps and instrumentation. The estimate bases are built on well defined work plans with commensurate estimates of labor, materials, and services (1 percent).

Upgrades to the tank farms involve primarily project estimates. These estimates have been developed in detail as described above. The non-project work scope includes development of configuration drawings, procedures, and miscellaneous upgrades. The estimate bases of this work are the quantity of design documents required to perform the work. Upgrades are complete by 2005 (1 percent).

The characterization work scope includes taking samples from the stored wastes, performing analysis, and reporting results for use in the safety program and the disposal facilities design and processing activities. The resource estimates are based on historical information (1 percent).

The retrieval of wastes from the single-shell and double-shell tanks requires technology development, design, construction, training, and operation work. The tanks to be retrieved early in the Program have well defined, technical scope and estimates. The remaining tanks have limited technical definition at this time, necessitating an order of magnitude estimating approach (7 percent).

2. **Process Tank Waste - 38 percent of the total**

The pretreatment of tank waste is required prior to using the material in the low-level and high-level waste vitrification processes. The estimate of pretreatment facilities, equipment, and operation manpower is based on the engineering performed for the pretreatment facilities designed under the pre-1993 processing strategy (6 percent).

The low-level vitrification plant design and construction estimate is based on estimates for the Hanford Waste Vitrification Plant (HWVP) developed under the pre-1993 processing strategy. The operations manpower estimate is also developed with respect to the HWVP with adjustments for the size of equipment and the plant layout. The disposal facilities and disposal vaults estimates are based on the actual cost information from the Grout Program. Safety and permitting tasks estimates, particularly the Performance Assessment, are based on the actual cost of the Grout Program (12 percent).

The high-level vitrification plant design and construction estimate is based on the HWVP. The operations staffing, materials, and utilities estimates for both the low-level and high-level plants are developed from the precise planning for HWVP. The technical development activities, which primarily occur in the next 5 years, have been defined and estimated in conformance to the development work plan. Safety analysis, permitting, and the product formulation task estimates are based on costs experienced by the HWVP Project (15 percent).

The waste repository fee for high-level waste is established by Federal law and is a rate per unit of material accepted at the repository for storage. This estimate is based on that rate multiplied times the current estimate of material to be sent to the repository (5 percent).

3. **Manage Program - 2 percent of the total**

   The estimate of resources for the TWRS program management is based on manloading of the work scope assigned to the other program activities. Program element managers prepared the manpower assessments and the estimates of resources, such as computing equipment and contractor services. The estimates were developed recognizing four phases coinciding with the overall activity levels on the project. The phases are implementation of management systems; development, design, and construction of facilities; process operations; and the completion and shipping of the high-level waste canisters.

E8.0 BASELINE ESTIMATE VALIDATION

The TWRS Program estimate bases were prepared in conformance with the EM-30 Cost and Schedule Estimating Guide, which means the TWRS Program baseline estimate was prepared as an activity-based cost estimate. The TWRS Master Schedule is made up of the activities for which resource estimates were prepared. The processes and deliverable products identified in the Estimating Guide were specified at the onset of the TWRS Program estimating effort. Other aspects of the estimating-scheduling process that indicate conformance to the guidelines are provided below.

1. The documentation of the activity scope is developed and maintained on the Activity Planning Form.

2. The resource estimates are prepared on Estimate Worksheets.

3. Estimate bases information, such as quantification, unit pricing, parametric factors, and extrapolation from analogies, is documented on the Estimate Worksheets.

4. Activities are uniquely identified within the TWRS Program WBS and collectively cover the total Program work scope.

5. Use of estimating methodologies is appropriate to the technical specificity and reference information available.

6. Specific identification and application of indirect costs.

7. Collection and rollup summarization of cost utilizing appropriate software.

8. Addition of escalation to obtain escalated expenditure profiles.

9. Reviews have been performed at the working and management levels within program elements and for the estimate bases and schedule bases as a whole.

Compliance with the DOE RLID 5700.4, *Cost Estimating*, is exhibited by the following actions and products. The RL Implementing Directive applies to estimates prepared by RL or for RL by RL's contractors. The directive references the EM-30 Cost and Schedule Estimating Guide and specifies the principles and methodology identified in the Guide. The estimate preparation and documentation are in compliance with the Implementing Directive because the estimate preparation is in conformance with the EM-30 guidelines.

APPENDIX F

MAJOR DECISIONS LOGIC/SCHEDULE

MAJOR DECISIONS LOGIC/SCHEDULE

SUMMARY OF PROGRAM DECISIONS

A preliminary list of decisions affecting the technical requirements and/or scope of the Tank Waste Remediation System (TWRS) has been prepared from information contained in the *Tank Waste Remediation System Functions and Requirements* (DOE/RL-02-60). These preliminary decisions, alternative solutions, and planning basis adopted by the U.S. Department of Energy are listed in Table F-1. Figure F-1 graphically depicts the relationships between each decision and alternative solutions. The logical relationships between decisions identified in Figure F-1 do not imply relative importance of each decision. The methodology for conducting decisions and detailed discussion of each decision are provided in the *Tank Waste Remediation System Decisions and Risk Assessment* (WHC-EP-0786).

The solution selected for each decision will influence the scope and detailed plans of the TWRS Program. Development of information on each alternative solution, selection of a solution for each decision, and the influences on the detailed plans of the TWRS Program are identified in Figure F-2. Figure F-2 reflects integration of the identified decisions with the schedules developed for execution of the TWRS Program.

In order to proceed with the development and execution of the TWRS Program, a planning basis has been adopted for each of these decisions. There are several significan uncertainties in the TWRS Program derived from adopting a planning basis in lieu of having a formal basis for each decision. Other sources of program uncertainties are derived from the preliminary nature of the program definition and include the accuracy of the program cost and durations for conducting tasks (i.e., schedule), maturity and development of technologies necessary to execute the TWRS Program mission, and definition of actions necessary for resolution of safety issues associated with storage of tank wastes. These TWRS Program uncertainties are discussed in Sections 2 and 7 of the Multi-Year Work Plan.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2 DETERMINE DISPOSITION OF HANFORD TANK WASTE A strategic alternative for treatment and disposal of Hanford tank waste is selected.	a. Continued Storage (i.e Do Nothing). b. Retrieve "all waste" from all Hanford radioactive tanks. c. Retrieve some waste and dispose the remainder in situ. d. In situ dispose of all tank waste.	Retrieval of all tank waste was adopted in December 1991 by U.S. DOE as the planning basis for the TWRS (Secretary Decision Concerning the Tank Waste Remediation System, Hanford Site, U.S. DOE Assistant Secretary for the Environmental Restoration and Waste Management memorandum to Manager, DOE Field Office, Richland Washington).	This strategy is reflected in the Hanford Federal Facility Agreement and Consent Order. Currently, the TWRS program is developing and evaluating alternative technologies and facility concepts for treating tank waste for disposal. The TWRS program is not scheduled to engage in the detailed design of any major facility needed for treatment and disposal of Hanford tank wastes until after the completion of the environmental impact statement. Therefore, the financial exposure is low. Schedule risks arise if the TWRS EIS record of decision is delayed past September 1996 of it is significantly different than the planning basis adopted by the U.S. DOE.
4.2.1 DETERMINE TANK WASTE MANAGEMENT STRATEGY A strategy is needed for managing Hanford Site tank wastes until these wastes are removed from the tank system, treated, disposed, and the tank system is closed.	a. Compliant and safe operating system.	The DOE will continue compliant and safe operation of the tank system. Components which must remain operational for an extended period of time and are necessary to support tank waste remediation actions will be replaced or upgraded to a condition that complies with current codes and regulations.	Efficient use of the publics resources and demonstration of accomplishments is necessary to sustain public trust in the DOE's remediation of the Hanford Site. Without public confidence, funding for remediation of the Hanford Site is in doubt. The DOE is pursuing a graded approach for restoration of the tank system to compliant conditions. Identified deficiencies will be corrected expeditiously and cost effectively. Tank waste remediation activities will be conducted as the next priority, with emphasis on demonstration of progress toward clean up. This approach will ensure that the risk to the public, workers and environment remains low through continued maintenance of the tank system. Since the graded approach to restoration of the tank system is integrated with tank waste remediation actions, the schedule and cost impacts to the TWRS Program are being managed and remain low. Impacts to the baseline program would only occur if additional tank system deficiencies are discovered or the scope of currently identified upgrades changes.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.1.1.a DETERMINE DOUBLE-SHELL STORAGE SPACE REQUIRED TO SUPPORT TWRS ACTIVITIES The strategy for acceptance of new waste and management of existing waste in the Hanford Site double-shell tanks is established.	a. Accept no new waste into the double-shell tank system. b. Develop alternative storage methods. c. Consolidate wastes. d. Build new double-shell tanks.	As a planning basis, waste consolidation and construction of two new double-shell tanks has been adopted, based upon projections of tank space utilization and quantity of new tank waste generated from decontamination of previously used waste management facilities (WHC 1994b). An option to construct additional DSTs will be reviewed by September 1995.	The major uncertainty with pursuing waste consolidation and construction of new double-shell tanks, is the new tanks will not be required or not required in the time frame which the tanks are operational. Resources will have been expended which could have been directed toward other Hanford Site remediation activities. The source of this uncertainty is the assumptions used to project sources of radioactive liquid wastes requiring storage in the double-shell tank system. Compounding this uncertainty is risks associated with not providing sufficient double-shell tank storage space to allow timely stabilization of single-shell tanks or passive mitigation of tank waste safety issues. Delays to conducting stabilization of single-shell tanks could result in additional inadvertent leakage of radioactive liquids into the soil column. Delays to the passive mitigation of safety issues would require continued use of active mitigation systems (e.g. mixer pumps). The assumptions used to project sources of radioactive liquid wastes requiring storage in the double-shell tank system are being reviewed by stakeholder groups (e.g., DNFSB, Washington Department of Ecology) to reach consensus. The planning basis adopted by the U.S. DOE allows for the earliest possible stabilization of single-shell tanks, decontamination of older facilities and passive mitigation of tank waste safety issues. This approach represents the lowest environmental and safety risks, and does not commit funds for construction of new double-shell tanks until requirements for these tanks have been established. The environmental and safety risks would continue to be moderate, while the financial exposure could be reduced through confirmation of the need for these tanks.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.1.1.b DETERMINE SINGLE-SHELL TANK STORAGE CONCEPT The strategy for management of waste contained within single-shell tanks must be determined to establish TWRS requirements and determine programmatic scope, cost and schedule needs.	a. Seal SSTs until retrieval of waste. b. Continue current SSTs operating and storage plans. c. Perform major upgrades to SSTs. note: all alternatives would complete interim stabilization of SSTs to reduce impacts from potential tank leakage.	Continuation of current operating and storage plans for the single-shell tanks has been incorporated in the program. This is in accordance with DOE Order 5820.2A, Radioactive Waste Management, High-Level Waste and Washington state administrative codes.	Sixty-seven of the 149 single-shell tanks are suspected or have leaked radioactive solutions into the environment. Continued storage of waste within these tanks increases the likelihood that future leakage of radioactive solutions into the environment will occur. Stabilization of single-shell tanks is being conducted to remove liquids from these older underground storage tanks and is scheduled to be completed by September 2000. Removal of liquids from the single-shell tanks may influence waste mobilization concept selection, but the reduction in environmental risks from preventing radioactive solution leak is far more beneficial. Stakeholder groups participated in the development of this alternative, which is embodied in the Hanford Federal Facility Agreement and Consent Order. The likelihood of a change in this management approach is low. Sealing the SST until retrieval of waste or upgrading these tanks would be time consuming and probably not cost effective for the environmental and safety risk reduction obtained. Retrieval of waste from SSTs is scheduled to commence by December 2003.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.1.1.c DETERMINE CAPSULE INTERIM STORAGE CONFIGURATION Select a configuration for interim storage of cesium and strontium capsules which supports interim storage of the existing capsules until completion of capsule disposition.	a. Continue Interim Storage in WESF. b. New "Wet" Storage Facility. c. New "Dry" Storage Facility.	Interim storage of capsules in the Waste Encapsulation and Storage Facility (WESF) will be continued. The WESF facility is compliant with applicable state, federal, and local regulations.	Long term primary container integrity may be required until the capsules are dispositioned. Interim storage configuration criteria should be developed to maintain the capsule primary container integrity throughout the interim storage time frame. The impacts from the uncertainty in the interim storage configuration of the capsules are considered relatively low at this time. Sufficient time exists to determine the interim storage configuration and incorporate design features in either the capsule overpack or HLW/TRU immobilization facilities, if necessary. Constructing a new dry or wet storage facility may allow the shutdown of the WESF. However, storage of capsules in WESF is fully compliant with existing regulations. There may be increased risk to workers and the environmental by moving the capsules to a new facility, since handling of the capsules is involved. A cost reduction may occur if the life cycle cost of a new facility were less than the operating costs for WESF. An analysis of alternative storage methods is being conducted to evaluate these alternatives (milestone M-33-00).

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.1.1.d DETERMINE FUNCTIONAL RESPONSIBILITY FOR MISCELLANEOUS UNDERGROUND STORAGE TANKS There are approximately 50 miscellaneous underground storage tanks located in the 200 Area of the Hanford Site which potentially contain waste similar to other TWRS tank waste. These miscellaneous underground storage tanks were previously used in association with processing of defense wastes. A decision is needed whether the remediation of the waste is within the TWRS scope.	a. Remediation of the miscellaneous underground radioactive waste storage tanks is assigned to the TWRS. b. Remediation of the miscellaneous underground radioactive waste storage tanks is assigned to another Hanford Site program.	TWRS has assumed programmatic responsibility for remediating the waste contained in the miscellaneous underground storage tanks. Additionally, TWRS has assumed as a planning basis that retrieval of waste from the miscellaneous underground storage tanks will be the preferred alternative identified in the closure plan for these tanks.	A closure plan needs to be prepared addressing the proposed disposition of the miscellaneous underground storage tanks and wastes contained therein. The closure plan review will not effect programmatic responsibility for dispositioning the miscellaneous underground storage tanks and associated wastes. However, activities required for dispositioning these wastes will be defined in the closure plan and any associated NEPA actions. These activities need to be conducted regardless of the programmatic responsibility for these tanks. Therefore, TWRS is proactively reducing the risk to completion of the Hanford Site mission by conducting these activities. Since disposition of these tanks will not be conducted for a number of years, assessment of the safety and environmental conditions of these tanks is also being conducted to assess these risks, which are presently considered low.
4.2.1.2 DETERMINE PROCESS FOR OBTAINING TANK WASTE CHARACTERIZATION INFORMATION A methodology is selected for obtaining and analyzing the physical and chemical properties (i.e., characterization information) of the Hanford Site tank waste.	a. Use existing tank waste characterization information. b. Obtain and analyze tank waste samples. c. Analyze tank waste in situ. d. Where appropriate, use existing tank waste characterization, obtain and analyze tank waste samples, and analyze tank waste samples in situ.	A methodology for obtaining tank waste characterization information was evaluated during the fourth amendment to the Hanford Federal Facility Agreement and Consent Order (Ecology 1994). The alternative selected for obtaining tank waste characterization information is where appropriate to utilize historical information, obtain and analyze samples of tank waste, and analyze tank waste in situ to obtain necessary information.	Timely availability of tank waste characterization information is necessary to determine the disposition of tank waste (decision 4.2), resolve safety issues with storage of tank waste, obtain NRC concurrence on the disposition of single-shell tank waste (decision 4.2.3.c), and select strategies / processes for waste mobilization (decision 4.2.1.3) and waste processing (decisions 4.2.2, 4.2.2.a, and 4.2.2.2.a). The DOE, Richland Field Office, has developed a plan for obtaining the necessary tank waste physical and chemical properties information in a timely manner (DOE 1994). The availability of tank waste characterization information is highly important to conducting interfacing decision. Through successful execution of the tank waste characterization plan, the availability of tank waste characterization information to support decisions can be managed at a low level of risk.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.1.3 DETERMINE WASTE RETRIEVAL STRATEGY A strategy is selected for developing, testing and deploying waste mobilizing systems for waste contained in single-shell, double-shell and miscellaneous underground waste tanks. A methods is selected for retrieval of cesium and strontium capsules from the interim storage facility.	a. Use Existing Waste Retrieval Technologies. High velocity jets or streams of fluid would be used to hydraulically mobilize waste within SSTs, DSTs and MUSTs. Subsurface barriers would be evaluated to determine effectiveness and could be deployed in combination with retrieval of wastes from tanks of questionable structural integrity. A manual manipulator would be used to grasp the capsules and remove them from the storage racks. b. Use Existing Waste Retrieval Technologies, Transition to Enhanced Technologies or Alternatives. Subsurface barriers would be evaluated to determine effectiveness and could be deployed in combination with retrieval of wastes from tanks of questionable structural integrity. Initially, existing waste retrieval technologies (e.g., sluicers and mixer pumps) would be developed and demonstrated for retrieval of tank wastes. Enhancements and alternative technologies to these previously demonstrated retrieval technologies would be developed and tested as back up systems and would be deployed if economically, environmentally, or otherwise superior. c. Use Alternative Technologies Only. Alternative technologies would be evaluated, tested, and demonstrated prior to selecting a technology for deployment.	A combination of mechanical (i.e. long reach arm) and hydraulic (i.e. sluicing) waste retrieval processes has been adopted for retrieval of high heat waste from tank 241-C-106. These processes will be demonstrated in 1997 and 2003, respectively. A hydraulic process (i.e. mixer pumps) has been adopted for retrieval of waste in tanks 241-AZ-101, 241-SY-101, and 241-SY-103. This process will be demonstrated in 1997 for tank 241-AZ-101 and in 1998 for tanks 241-SY-101 and 241-SY-103. It is assumed mechanical and hydraulic processes or enhancements to these technologies will be used for retrieval of waste from other single-shell tanks, double-shell tanks, and miscellaneous underground storage tanks. Subsurface barriers will be evaluated for effectiveness, but it is assumed that these will not be deployed. Retrieval of capsules from the interim storage facility is assumed to be conducted using the manual manipulator technique.	The availability of tank waste characterization information will impact the selection of tank waste retrieval systems. Complete characterization of tank wastes is scheduled to be completed by 1999. However, the U.S. Department of Energy is striving to complete tank waste characterization of watch list tanks by October 1995 (DOE/RL 94-0001), and all tanks by February 1997 per Secretary of Energy's safety initiative. Given this, tank waste characterization information should be available in a timely manner to support the selection of a waste retrieval strategy and this risk is considered low. The major program impacts from proceeding with the waste retrieval strategy is derived from the uncertainty whether these concepts will achieve the closure requirements and achieve the schedule goals negotiated in the Hanford Federal Facility Agreement and Consent Order (Ecology 1994). Full scale demonstration of the sluicing waste retrieval process is planned approximately six years prior to initiating the large scale retrieval of single-shell tank wastes in 2003. Through early demonstration of sluicing, the viability of this technology can be assessed and corrections to the retrieval strategy made if necessary. Initial follow-on SST waste retrieval will need to be based upon sluicing or enhancements, since an arm based system will not be demonstrated until 2003. However, development and regulatory approval of a closure plan for SSTs is not planned until 2006 (milestone M-45-06-T02). This schedule does not allow for revision of the retrieval strategy without adversely impacting program cost and schedule. The risk to the program schedule and cost baseline is high. This risk is being managed through development of a SST closure work plan, describing the work integration process for closure and status of work. This work plan serves as road map for the regulatory process.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.1.4 DETERMINE WASTE TRANSFER MECHANISM Mechanisms for transfer of tank wastes and encapsulated cesium and strontium for storage, treatment and disposal need to be selected to establish system requirements.	a. Transfer lines. b. Tanker vehicle. c. Shielded cask. d. Solid waste container. e. Pneumatic transfer. f. Multiple modes of transfer.	Consistent with the current design of the waste storage tanks and the planning assumption to use hydraulic methods for retrieval of tank wastes, pipelines are planned to be used for the transfer of retrieved single-shell and double-shell tank wastes to processing facilities. Waste transfer facilities supporting pipeline transport of waste will be needed. A method for transfer of wastes retrieved from MUSTs has not been established. Receipt of new waste into the tank system is planned to continue using current methods; pipelines and tanker vehicle. Capsules are planned to be transported using a shielded cask.	Failure to integrate the design of the waste retrieval, transfer, storage, and processing systems could lead to a high risk to successful completion of the tank waste remediation mission. The existing tank waste storage system is designed to receive and store liquid slurries of wastes. Given that the tank waste storage system will continue to be used, the waste transfer and retrieve mechanisms will need to condition wastes for storage in the existing tanks. Integration between the waste retrieval and transfer functions is necessary to establish interface conditions and ensure waste is properly conditioned for receipt into the storage and process facilities. Design of capsules and miscellaneous tank materials transportation systems will need to be coordinated with the design of the process facilities, which will disposition these materials. Through using systems engineering principles, integration of these functions can be successfully achieved. Therefore, the risk to achieving the program goals is considered low.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.1.5 DETERMINE WASTE CONCENTRATION MECHANISM A process needs to be selected for reducing the volume of radioactive liquid wastes requiring storage in the Hanford Site underground radioactive liquid waste tank system. (Volume reduction is planned only for dilute wastes and would not be conducted if a safety issue would arise with storage of the resultant concentrated waste.)	a. Manage tank system without concentration of tank waste. b. Evaporation. c. Selective precipitation. d. Reverse osmosis. e. Ion exchange. f. Crystallization.	Evaporation of tank waste using the existing 242-A evaporator was selected as the method for concentration of tank wastes. The 242-A evaporator meets regulatory requirements and was recently upgraded (project B-534) resulting a planned life extension of ~10 years.	Concentration of tank wastes is necessary to manage the available waste storage capacity to achieve mitigation of tank safety issues (e.g., dilution of tank 241-SY-101 waste), terminal clean out of excess facilities, and stabilization of single-shell tanks. These tasks result in the reduction of environmental and safety risks. Failure to successfully manage the inventory of tanks wastes will result in the increase of environmental and safety risks. The existing 242-A evaporator has been designed to operate in conjunction with the existing double-shell tanks for management of the waste storage system. This evaporator can be operated to reduce the volume of wastes requiring storage, while maintaining the conditions for safe storage of tank wastes. Continued use of this evaporator is critical to provide the waste storage space necessary for mitigation of tank safety issues, terminal clean out of excess facilities, and stabilization of single-shell tanks. The evaporator represents a means to reduce the environmental and safety risks associated with these items.
4.2.2 DETERMINE WASTE PROCESSING STRATEGY A strategy must be selected for processing the Hanford tank waste for disposal. The decision to select a waste processing strategy is predicated upon selecting retrieval of "all waste" from all Hanford radioactive tanks (or the majority of waste) as the preferred alternative for the decision Determine Disposition of Hanford Tank Waste.	a. Immobilize all of the tank waste for offsite disposal. b. Separate tank waste into fractions for onsite and offsite disposal. c. Treat tank waste to an intermediate waste form.	Separation of Hanford tank waste into a low-activity and a high-activity fractions has been adopted as the planning basis for the TWRS based upon concurrence of stakeholders as reflected in the fourth amendment of the Hanford Federal Facility Agreement and Consent Order.	The TWRS program is developing and evaluating alternative technologies for separating tank waste into fractions for immobilization and disposal. The TWRS program is not scheduled to engaged in the detailed design of any major facility needed for tank waste separations until after the completion of the TWRS environmental impact statement. Therefore, the financial exposure is low. Schedule risks arise if the environmental impact statement record of decision is delayed past September 1996 or it is different than the planning basis. These risks can be mitigated by continued involvement of the public and stakeholder groups throughout the preparation of the TWRS environmental impact statement.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.2.a DETERMINE DISPOSITION OF TRANSURANIC TANK WASTE A reference approach for disposition of Hanford tank waste that may be designated as transuranic waste (instead of high-level waste) is selected, defining the waste form criteria that will be imposed.	a. Dispose in HLW Repository. b. Dispose in the Waste Isolation Pilot Plant (WIPP). c. Disposition Unacceptable in either the WIPP or HLW Repositories.	For planning purposes, any TRU tank waste which may exist at Hanford is assumed to be disposed in the HLW repository. This assumption reflects an interpretation of the decisions for geologic disposal of DST waste documented in the HDW-EIS (DOE 1988).	Planning documents for the DOE complex indicate Hanford PFP and NCRW tank wastes are considered TRU and are not currently included in estimates of defense materials expected to be disposed of in the HLW repository (DOE 1992b). Other tank wastes may also actually be classified as TRU waste. A review of processing history, waste storage practices, and chemical composition of suspected tank wastes needs to be conducted to establish whether or not these wastes are TRU. If the TRU tank waste disposition is different than that for HLW, the immobilized TRU tank waste must be manufactured in a campaign or process system which is separate from the HLW tank waste. The segregation of TRU tank waste could potentially lengthen tank waste processing duration and increase total program costs. Fortunately, the conceptual design of the tank waste immobilization facility is not scheduled to be completed until March 1998. This decision can be resolved in the intervening three years to reduce the program risk to an acceptably low level.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.2.b DETERMINE ACCEPTABILITY OF ALTERNATIVE CONTAINERS FOR HLW REPOSITORY A reference waste package container must be selected for disposal of Hanford waste in the HLW repository.	a. DWPF Standard Canister. b. Spent Nuclear Fuel Canister. c. Large Canister/Cask.	Current program planning cost estimates are based on using the spent nuclear fuel canister for containing the immobilized HLW.	The HLW container size selection impacts: design of components in the HLW/TRU immobilization and container interim storage facilities. The repository disposal fee is directly related to the container design and quantity produced. The time required to establish an alternative to the standard HLW package may result in this decision being on the critical path for initiating facility conceptual design. The DOE-OCRWM is presently conducting an evaluation of an alternative waste package, the multi-purpose canister (MPC). The MPC would provide a larger container volume for spent nuclear fuel elements or defense wastes. The decision to proceed with the procurement of MPCs is scheduled to be made in mid-1997 by the DOE-OCRWM (DOE-OCRWM 1994b). This is one year prior to completing the conceptual design for the HLW/TRU immobilization facility, thereby providing sufficient time to resolve this issue. Timely resolution of this issue will reduce the program risk to an acceptably low level.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.2.c DETERMINE DISPOSITION OF Cs/Sr CAPSULES The disposition of the encapsulated cesium chloride and strontium fluoride salts needs to be established.	a. Overpack/ship capsules to HLW repository. b. Reprocess capsules and blend with tank wastes for immobilization. c. Embed Capsules in Glass, then ship to the HLW repository.	The record of decision for the HDW-EIS directs that cesium and strontium capsules be disposed of in a geologic repository (DOE 1988). For the purposes of impact evaluation at the Hanford Site in the HDW-EIS, it was assumed that capsules could be overpacked in canisters such that repository waste acceptance criteria could be met.	Uncertainty exists as to whether the current cesium and strontium chemical form can comply with repository criteria when overpacked. Independent of the waste form acceptance, the potential exists for alternatives to the overpacking alternative to be more economically attractive. If the capsules are not transferred to the repository, design of alternative disposition processes is needed. The alternative capsule disposition designs need to be completed before March 1998 to avoid impacting the conceptual design schedules for HLW pretreatment and vitrification facilities. Re-evaluation of capsule disposition alternatives is planned to be conducted by the TWRS HLW program. This study will be completed by August 1995 and will determine whether or not the HLW repository can accept the capsules. The schedule risks are considered low, since re-evaluation of the capsule disposition alternatives will be completed two years prior to completion of conceptual design for the HLW pretreatment and vitrification facilities.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.2.1 DETERMINE WASTE SEPARATIONS PROCESS A reference processing approach is selected for separating Hanford tank waste into a low-activity and high-activity fractions for disposal.	a. Minimum separations. b. Minimize immobilized high-level / transuranic (HLW/ TRU) waste volume.	Separation of Hanford tank waste into a low-activity and a high-activity fractions using the minimum separations approach has been adopted as the planning basis for the TWRS. The fourth amendment of the Hanford Federal Facility Agreement and Consent Order (Ecology 1994) incorporates this approach and directs validation of the minimum separation process alternative (milestone M-50-03). The proposed minimum separations reference flowsheet includes separation of sludges/solids from supernatants, leaching of Al Cr, and PO_4 from sludges/solids, washing of sludges/solids, and separation of cesium from the supernatants and wash solutions. Supernatant solutions which contain TRU and Sr in excess of the LLW immobilization process specification would be treated by a heat digestion process to precipitate TRU and Sr (WHC 1994b).	HLW geological repository volume limitations have not been established, thus uncertainty exists as to the acceptability of either alternative process for separation of tank waste. The minimum separations approach represents the lowest life-cycle cost, but could produce an unacceptable quantity of immobilized HLW (WHC 1993d). The minimize immobilized waste volume approach has the potential to produce a much smaller volume of immobilized waste, but this technology requires extensive development. The DOE-OCRWM is preparing an advanced conceptual design (ACD) for the geological repository. The ACD will lead to improved definition of the technical impacts and repository disposal fee associated with these alternative waste separation processes. Additionally, DOE-OCRWM is evaluating use of a MPC would could result in significant reduction of disposal fee, which in turn could lessening the impacts of proceeding with the minimum separation process (DOE 1994b). Limits for acceptable radionuclides concentrations and volume of immobilized low-level waste have not been established. Therefore, uncertainty exists as to the acceptability of either alternative process for separation of tank waste. The limits for acceptable radionuclides in the low-activity solution can be understood by conducting a parametric evaluation of radionuclide separations versus low-level waste system performance. Once the inter-relationship between the pretreatment process and the low-level waste disposal system environmental performance is understood, management of this uncertainty can be achieved.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.2.1.1 DETERMINE HLW AND LLW SEPARATIONS FACILITIES CONCEPTS a. The facility concept for pretreatment of Hanford tank waste supernatants (i.e., LLW Pretreatment) is selected. b. The facility concept for pretreatment of Hanford tank waste sludges/solids (i.e. HLW pretreatment) is selected.	a. LLW Pretreatment i. Stand alone supernate pretreatment facility concept consisting of either dispersed modules, a centralized pretreatment facility, or modules in a centralized configuration. ii. Supernate pretreatment function combined with low-level waste vitrification. iii. Supernate pretreatment function combined with high-level waste vitrification. iv. Supernate pretreatment function combined with both LLW & HLW vitrification. b. HLW Pretreatment i. In-tank pretreatment of sludges/solids. ii. Out-of-tank (i.e. in a facility) pretreatment of sludges/solids.	a. LLW Pretreatment A stand alone supernate pretreatment facility concept with centralized pretreatment components has been reflected in the TWRS planning basis. WHC has recommended design and construction of a common, centralized facility for supernate pretreatment and low-level waste vitrification. The HLW vitrification function will be located near the other functions and will be serviced by the same support utilities (WHC 1994d). b. HLW Pretreatment In-tank pretreatment of sludges/solids has been reflected in the TWRS planning basis.	a. LLW Pretreatment Additional radionuclides (e.g. technetium or strontium) may need to be separated from the Hanford tank wastes to achieve a lightly shielded low-level waste vitrification facility or achieve the desired environmental performance of the low-level waste disposal system. Production scale deployment of technetium and strontium separatjon processes may not be achievable in all candidate facility concepts (e.g. dispersed supernate pretreatment modules). The WHC recommended facility concept mitigates these concerns by incorporating design features to reserve the capability to add additional cesium and/or strontium removal processes for operational reasons, or technetium removal to meet the low-level waste form performance requirements. b. HLW Pretreatment The design of the existing double-shell tanks may not be suitable for the pretreatment of sludges/solids. The required separations of waste components to produce a reasonable quantity of immobilized HLW/TRU waste may not be achievable in double-shell tanks. A review is being conducted of in-tank sludge washing conducted at the West Valley Demonstration Process, Savannah River Site, and at BNFL facilities in the United Kingdom. This technical review will be completed by March 1995 and a report issued. BNFL and WHC will review this report and recommended to the DOE/RL whether or not sludge washing should be conducted in existing double-shell tanks or specially designed facilities. This technical evaluation of in-tank sludge washing will be completed in a timely manner, thus allowing sufficient time to incorporate recommendations into the program baseline, without significant schedule impacts.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.2.2.a DETERMINE HLW/TRU WASTE IMMOBILIZATION PROCESS A reference waste form and immobilization process for producing the waste form proposed for offsite disposal in a geologic repository is selected.	a. Ceramic Manufacture. b. Waste Calcination. c. Vitrification.	Vitrification to produce a glass HLW product has been selected for program development (DOE 1990). A process decision for TRU waste product is pending. For planning purposes, vitrification is also assumed for TRU tank waste.	Program activities are based on the process selection issue for HLW being closed, with a vitrification process representing the selected alternative. Therefore, the primary uncertainty remains within the disposition process selected for TRU tank waste. The waste acceptance criteria for the WIPP repository and the HLW repository are based upon fundamentally similar federal regulations. A cursory review of the waste acceptance criteria for both repositories indicates a TRU tank waste glass formulation could be demonstrated to meet either criteria. Dialogue with the DOE-AL and DOE-OCRWM needs to be established to determine if the a vitrified waste form is acceptable for TRU tank waste.
4.2.2.2.b DETERMINE WHETHER TRU & HLW CAN BE PROCESSED IN THE SAME PLANT An implementation strategy is selected for the HLW and TRU tank waste that determines whether a single plant will be developed to immobilize both waste types.	a. Separate Facilities. b. Combined TRU/HLW Facility.	For planning purposes, the TWRS HLW Program has assumed that both HLW and TRU tank waste can be processed in the same facility without segregating the TRU tank waste from HLW.	If a single facility is not used to treat both HLW and TRU waste there is risk to achieving the estimated cost profile and schedule. The risk of significant program cost increases could be mitigated to a large extent if any segregated processing requirements for TRU tank waste were addressed by an equipment change out implementation strategy rather than using separate facilities. Uncertainty with this issue could be reduced by establishing the classification of suspected TRU tank wastes.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.2.2.c DETERMINE HLW VITRIFICATION FACILITY CONCEPT Alternatives exist for developing the TWRS disposal system as individual facilities supporting pretreatment, LLW immobilization, and HLW vitrification, or combining these systems in groups. A concept for the HLW facility grouping is selected by this decision.	a. Stand alone HLW immobilization facility. b. HLW vitrification function combined with supernate pretreatment. c. HLW vitrification function combined with low-level waste vitrification. d. HLW vitrification function combined with both LLW & supernate pretreatment.	The TWRS HLW Program is based on a stand alone HLW Vitrification facility. WHC has recommended design and construction of a common, centralized facility for supernate pretreatment and low-level waste vitrification. The HLW vitrification function will be located near the other functions and will be serviced by the same support utilities (WHC 1994d).	Each alternative facility concept was evaluated and determined to uphold stakeholders' values. Reduced construction and operating costs which may be achieved by combination of the HLW vitrification with other functions were evaluated to verify that the resultant construction cost profile does not exceed projected available funding during the construction period. The funding profile for combined pretreatment and LLW vitrification facility with a separate HLW facility was found to be the most favorable and does not exceed the projected available funding. Additional cost reductions may be achievable after further evaluation of concepts for combining LLW and HLW vitrification facility, or conversion near the end of LLW processing one of the LLW lines to serve as the HLW vitrification process.
4.2.2.3 DETERMINE CAPSULE OVERPACK FACILITY CONCEPT A reference facility concept for implementing the capsule overpack capabilities needs to be selected.	a. Combine with HLW Vitrification. b. Combine with Pretreatment Facility. c. Separate Capsule Facility. d. Combine with IHLW/ITRU Interim Storage Facility.	Current planning assumptions are based on combining the cesium and strontium overpack systems into the HLW Vitrification facility.	Optimization of facility costs may be achievable by combining the capsule overpack function with a facility other than HLW vitrification. An evaluation of each alternative facility concept will be completed by December 1996, before design is initiated on the pretreatment, HLW, or immobilized HLW/TRU waste interim storage facilities. Therefore, an opportunity exists to optimize the program costs.
4.2.2.4 DETERMINE IHLW/ITRU CONTAINER FACILITY CONCEPT A reference facility concept for temporary onsite storage of immobilized HLW and TRU waste in containers is selected.	a. Enclosed Facility. b. Open Facility (Casks on Pad).	No decision has been made on the storage facility configuration.	The selected immobilized HLW / TRU waste container size may impact the viability of enclosed facility concepts for waste container storage. One method of mitigating the uncertainty in the container storage configuration is to base planning on the open facility configuration, assuming the canister produced from HLW immobilization can be overpacked within the DOE-OCRWM proposed multipurpose canister. This approach would reduce the impact of canister size on storage facility concept selection. However, the overall program costs for storage could be increased if the multipurpose canister was not ultimately selected for use.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.2.6 DETERMINE OVERPACKED Cs/Sr CAPSULE INTERIM STORAGE FACILITY CONCEPT A reference facility concept for temporary onsite storage of overpacked cesium and strontium capsules is selected.	a. Combine with capsule interim storage facility. b. Combine with capsule overpack facility. c. Combine with IHLW/ITRU waste interim storage facility. d. A separate overpacked capsules interim storage facility.	The program baseline schedule and cost estimates are based upon the inclusion of the interim storage facility into the IHLW/ITRU waste interim storage facility.	Optimization of facility costs may be achievable by combining the overpacked capsule interim storage function with a facility other than IHLW/ITRU waste interim storage facility. An evaluation of each alternative facility concept will be completed March 1997, before design is initiated on facilities. Therefore, an opportunity exists to optimize the program costs.
4.2.3 DETERMINE SYSTEM GENERATED WASTE DISPOSAL STRATEGY A decision is needed whether the treatment and disposition of system generated waste (e.g., low-activity fraction of tank waste, gaseous effluents, liquid effluents, and solid waste) & excess facilities is part of the TWRS scope. If treatment and disposition of system generated waste & excess facilities is not part of the TWRS scope, then this scope needs to be assigned to other Hanford Site program.	a. Treatment of TWRS system generated waste conducted by TWRS program. b. Treatment of TWRS system generated waste conducted by other Hanford Site programs.	Programmatic responsibility for treatment of system generated waste & excess facilities has been assumed to be assigned to TWRS. Programmatic responsibility for the final disposition of immobilized low-level waste is assigned to the TWRS. Final disposition of other system generated wastes and excess facilities is assigned to Hanford Site functions Manage Aqueous Waste (liquid effluents), Remedy Solid Waste (solid waste), Deactivate Facilities (excess facilities), and Remedy/Restore Sites, Facilities, and Ground Water (SSTs, DSTs and MUSTs).	The TWRS program technical scope, cost estimate and schedule have been defined assuming programmatic responsibility for treatment of system generated waste & excess facilities. Closure of the immobilized low-level waste sites has also been included in the scope of the TWRS program. If a decision is reached to assign programmatic responsibility to another Hanford Site program, the TWRS program can be readily modified to remove scope and cost associated with these activities. Regardless of the organization assigned programmatic responsibility for treatment and disposition of these wastes, interface acceptance requirements need to be established to determine the extent of treatment required prior to transfer of these wastes to these other Hanford Site functions. If interface acceptance requirements are established prior to completing conceptual design efforts for treatment and disposal facilities (fiscal year 1997), then the schedule and financial risks can be minimized.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.3.b DETERMINE WHETHER IMMOBILIZED LLW CAN BE DISPOSED IN 200 AREAS LLW generated during remediation of Hanford Site tank waste must be disposed of either onsite or offsite. If onsite disposal is acceptable, then the specific site location must be decided.	a. Disposal of all LLW offsite. b. Disposal of all LLW within the 200 Area plateau.	A Record of Decision has not been formalized. It has been assumed that LLW disposal will be allowed within the 200 Area plateau. Stakeholders group have expressed disposal of safe LLW in the 200 Area is acceptable (DOE 1992a and DOE 1993).	This decision could have a significant impact on the TWRS program. Current plans do not include offsite disposal of LLW. If the decision is made to dispose LLW offsite, then the scope of the TWRS program will have to be expanded to include such actions. This will significantly increase costs and extend the Hanford site cleanup schedule. Additionally, public acceptance may not be forthcoming for the disposal of Hanford Site low-level waste at a location other than Hanford. Transportation and radiological hazards may exist with shipment of LLW from the Hanford Site to another location for disposal.
4.2.3.c NRC DETERMINES CLASSIFICATION OF SST WASTE The NRC determines the classification of pretreated SST waste fraction intended for immobilization and onsite disposal.	a. SST LLW fraction incidental. b. All SST waste is HLW.	The TWRS program assumes the selected pretreatment processes will adequately treat the SST waste such that after vitrification, the waste will meet the NRC's criteria for incidental waste.	If the NRC decides that all of the SST waste must be treated as HLW, either additional and/or alternate pretreatment separation technologies will have to be utilized, or the pretreatment and LLW vitrification facilities must be eliminated in favor of a much larger HLW vitrification facility. In either case, this may significantly increase the volume of HLW, the TWRS program cost and schedule duration.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.3.1.a DETERMINE LLW FORM A material form is selected for immobilization and disposal of the low-level waste fraction derived from pretreatment of Hanford Site tank wastes.	a. Grout (ie. mineral, ceramic, salt). b. Glass. c. Polyethylene.	The vitrification of LLW to produce a glass waste form has been selected as the planning basis for the TWRS. The fourth amendment of the Hanford Federal Facility Agreement and Consent Order incorporates this approach. Performance assessment studies will be completed to evaluate the performance of glass and the disposal system to meet environmental standards.	DOE Order 5820.2A, Chapter III, policy states that DOE LLW shall be managed on a systematic basis. The results of the performance assessment may impact the selection of a LLW form. If these PA results are unfavorable, then: (1) the LLW formula may need to be modified, (2) the use of a matrix material may need to be incorporated in the disposal configuration, (3) an alternate disposal form may need to be evaluated and selected, or (4) pretreatment to remove additional radionuclides and/or hazardous materials may need to be conducted. Development of an acceptable LLW formula and the evaluation of matrix materials are currently being conducted as part of the LLW Program. Similarly, the development of pretreatment technologies for the removal of radionuclides which could effect the environmental performance of the LLW form (i.e. technetium and transuranic elements) is being conducted as part of the Pretreatment Program. A preliminary assessment of a low-level glass waste form in the disposal system will be completed by September 1994. This assessment will identify the relative performance of the vitrified waste form, waste inventory, barriers, matrix materials and disposal site for meeting environmental standards. Cost and schedule impacts may occur depending on the outcome of this preliminary assessment of low-level glass waste.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.3.1.b DETERMINE IMMOBILIZED LLW DISPOSAL CONFIGURATION It has been suggested by stakeholder groups the immobilized LLW generated from treatment and disposal of Hanford Site tank waste be configured to allow near term retrieval in the event future requirement or conditions dictate this action. The retrieval period for repackaging of the immobilized LLW has been assumed to be 50 years after start of disposal actions. A decision regarding LLW retrievability is needed to establish the LLW disposal configuration.	a. Onsite permanent disposal. b. Retrievable for repackaging and onsite disposal.	The TWRS program has decided for planning purposes that the vitrified LLW will be placed in an onsite near-surface disposal system in a manner that will allow retrieval for repackaging (for up to 50 years from the time of emplacement), should that become necessary.	The TWRS program has assumed as a planning basis disposal of LLW in the 200 Area is acceptable and the LLW form will be retrievable for future repackaging if necessary. Stakeholder groups expressed a desire to have the LLW form retrievable when potential hazards from the waste may require future retrieval and when retrievability does not cause inordinate delays in getting on with cleanup. Since the TWRS Program has assumed that a retrievable LLW form will be necessary, the impact from determining a retrievable LLW form is not necessary would probably be a reduction in the estimated cost of disposing LLW at Hanford. No schedule impact is anticipated. An engineering evaluation of the LLW disposal facility configurations will be completed prior to initiating definitive design of the LLW immobilization (December 1996) so that resources are properly directed toward the outcome of this evaluation.
4.2.3.2 DETERMINE GASEOUS EFFLUENT TREATMENT CONCEPT A strategy for gaseous effluent treatment needs to be selected to establish functions and interface requirements.	a. Local treatment by generator. b. Centralized treatment. c. Combination of local and centralized treatment.	A combination of both local and centralized treatment has been adopted for planning. Functions which are dispersed (e.g., 242-A waste evaporator) have local treatment systems for gaseous effluents. Functions which are (or proposed to be) located centrally (e.g., Aging Waste tanks, supernate pretreatment and LLW vitrification) have centralized treatment systems for gaseous effluents. In general, local treatment by generators reduces safety/environmental concerns. Some economic benefits may result from collection of those wastes in close proximity with treatment at a central facility.	All gaseous effluents presently generated from TWRS activities are treated and discharged to the atmosphere in accordance with applicable federal, state and local regulations. This decision will effect the designs of future facilities for remediation of tank waste. If this decision is made prior to finalizing facility designs, no programmatic impacts are anticipated.
4.2.3.3 DETERMINE LIQUID EFFLUENT TREATMENT CONCEPT A strategy for liquid effluent treatment needs to be selected to establish necessary functions and interface requirements.	a. Local treatment by generator. b. Centralized treatment. c. Combination of local and centralized treatment.	A combination of both local and centralized treatment has been adopted for planning. In general, local treatment by generators reduces safety/environmental concerns. Some economic benefits may result from collection of those wastes in close proximity with treatment at a central facility.	All liquid effluents presently generated from TWRS activities are treated and discharged to the environment in accordance with federal, state and local permits. This decision will effect the designs of future facilities for remediation of tank waste. If this decision is made prior to finalizing facility designs, no programmatic impacts are anticipated.

Table F-1. Tank Waste Remediation System Program Decisions.

Decision	Alternatives	Planning Basis	Uncertainties & Consequences
4.2.3.4 DETERMINE SOLID WASTE TREATMENT CONCEPT A strategy for solid waste treatment needs to be selected to establish functions and interface requirements.	a. Local treatment by generator. b. Centralized treatment. c. Combination of local and centralized treatment.	A combination of both local and centralized treatment has been adopted for planning. In general, local treatment by generators reduces safety/environmental concerns. Some economic benefits may result from collection of those wastes in close proximity with treatment at a central facility.	All solid waste presently generated from TWRS activities is locally collected, sorted, characterized, and packaged for acceptance by the Hanford Site Remedy Solid Waste function for disposition. This decision would effect future generation of solid waste from facilities designed for remediating tank waste. If this decision is made prior to finalizing facility design, no programmatic impacts are anticipated.
4.2.3.5 DETERMINE EXCESS FACILITIES INTERFACE REQUIREMENT Acceptance criteria for transfer of excess facilities to the Hanford site-level Deactivate Facilities function (4.1) Environmental Restoration contractor for decommissioning need to be established. The interface requirements will determine scope for each program.	a. Deactivate, then transfer excess facility to Environmental Restoration contractors for decommissioning. b. Following cessation of operations, transfer excess facilities to the Environmental Restoration contractor for deactivation and decommissioning.	The TWRS program has adopted a strategy of deactivating the facilities before transfer.	The establishment of requirements for transfer of excess facilities from the TWRS to the Environmental Restoration contractor will effect the scope of each program and the design of facilities for remediation of tank wastes. Since interface requirements will be established in August 1995 prior to finalizing facility designs, no programmatic impacts are anticipated.
4.2.3.6 DETERMINE RECYCLE/REUSE CONCEPT A strategy needs to be selected for effectively recycling reusable materials to minimize cost and waste generation.	a. Local recycle and reuse. b. Centralizing recycling. c. Combination of centralized and local recycling.	The TWRS program has adopted the concept of a combination of centralized recycling and local recycling of reusable materials.	Utilization of centralized reusable material collection and treatment facility may not be practical if facilities are not located within a reasonable distance from one another. Whatever the final decision, the strategy chosen will need to reflect stakeholder values and be cost effective.

Figure F-1.

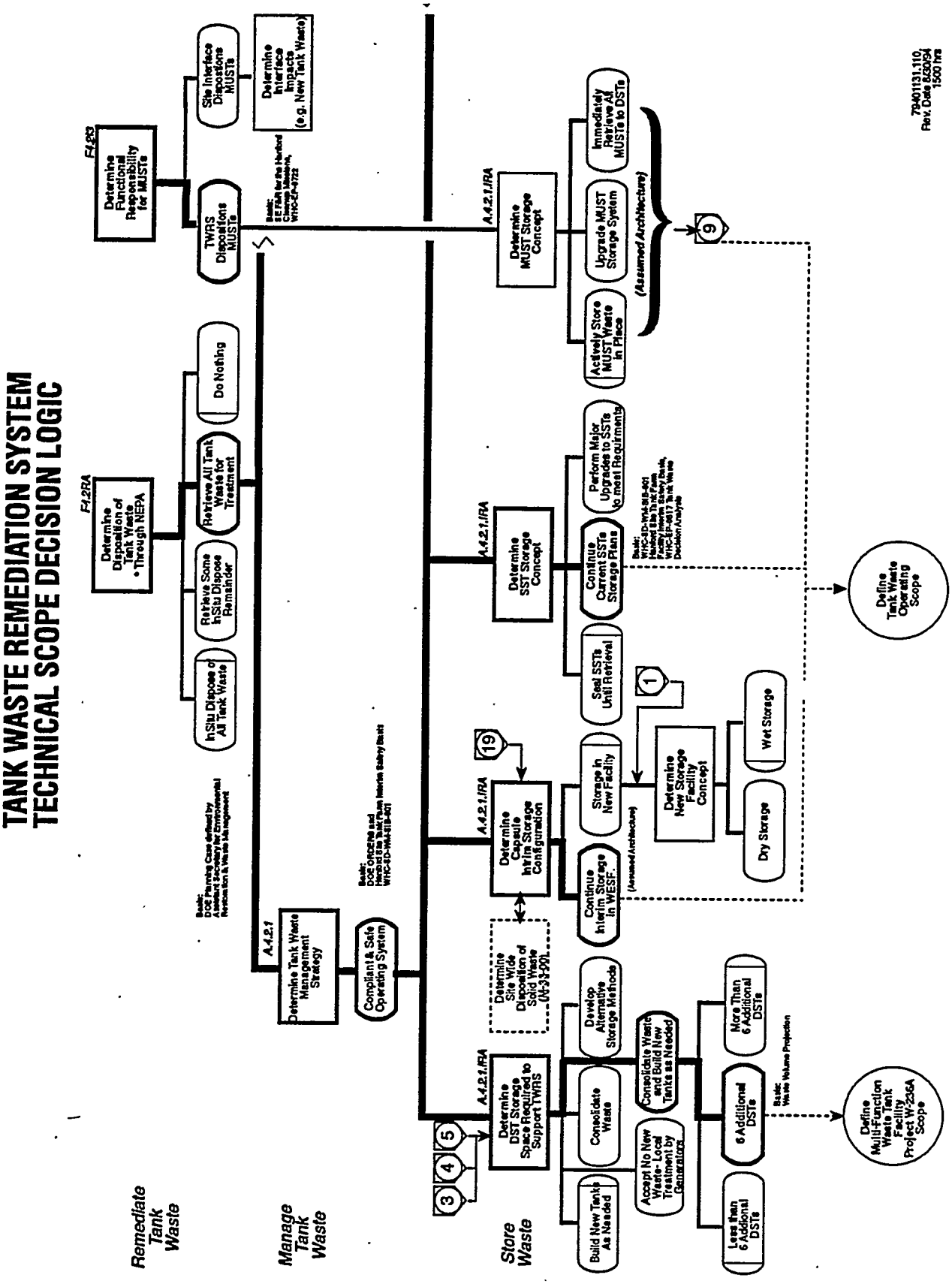

TANK WASTE REMEDIATION SYSTEM
TECHNICAL SCOPE DECISION LOGIC
Remediate Tank Waste
Manage Tank Waste
Store Waste
F4.2RA
Determine Disposition of Tank Waste Through NEPA
In Situ Dispose of All Tank Waste
Retrieve Some In Situ Dispose Remainder
Retrieve All Tank Waste for Treatment
Do Nothing
F4.2S3
Determine Functional Responsibility for MUSTs
TWRS Disposations MUSTs
Site Interface Dispositions MUSTs
Determine Interface Impacts (e.g. New Tank Waste)
A.4.2.1
Determine Tank Waste Management Strategy
Compliant & Safe Operating System
A.4.2.1/RA
Determine DST Storage Space Required to Support TWRS
Determine Site Wide Disposition of Solid Waste (W-339)
Develop Alternative Storage Methods
Consolidate Waste
Consolidate Waste and Build New Tanks as Needed
Build New Tanks As Needed
Accept No New Waste - Local Treatment by Generators
Less than 6 Additional DSTs
6 Additional DSTs
More Than 6 Additional DSTs
Define Multi-Function Waste Tank Facility Project W-236A Scope
A.4.2.1/RA
Determine Capsule Interim Storage Configuration
Continue Interim Storage in WESF
Storage in New Facility
Determine New Storage Facility Concept
Dry Storage
Wet Storage
A.4.2.1/RA
Determine SST Storage Concept
Continue Current SSTs Storage Plans
Perform Major Upgrades to SSTs to meet Requirements
Seal SSTs Until Retrieval
A.4.2.1/RA
Determine MUST Storage Concept
Actively Store MUST Waste in Place
Upgrade MUST Storage System
Immediately Retrieve All MUSTs to DSTs
(Assumed Architecture)
Define Tank Waste Operating Scope
79401131.110
Rev. Date 8/30/94
1500 hrs

Figure F-1.

TANK WASTE REMEDIATION SYSTEM TECHNICAL SCOPE DECISION LOGIC

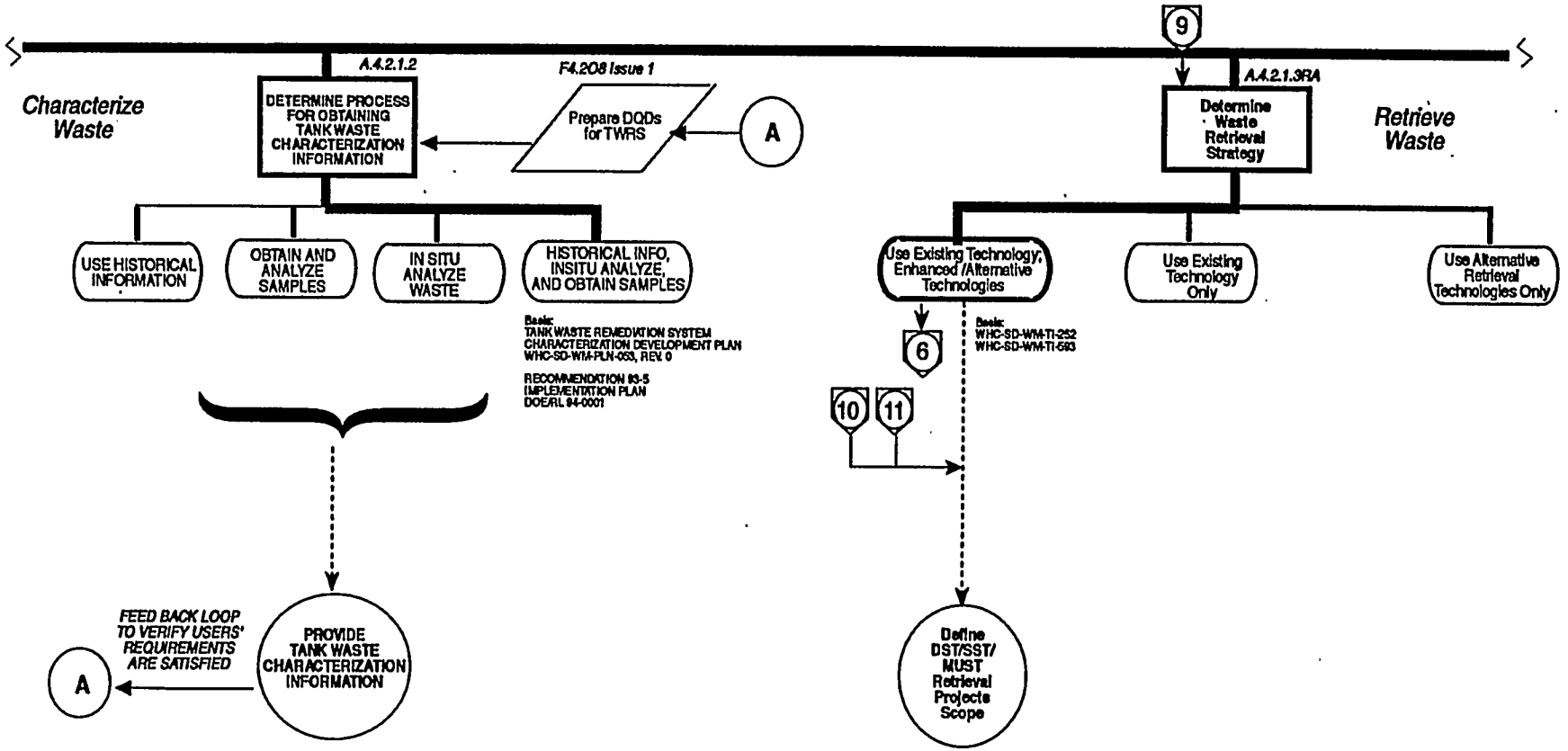


Figure F-1.

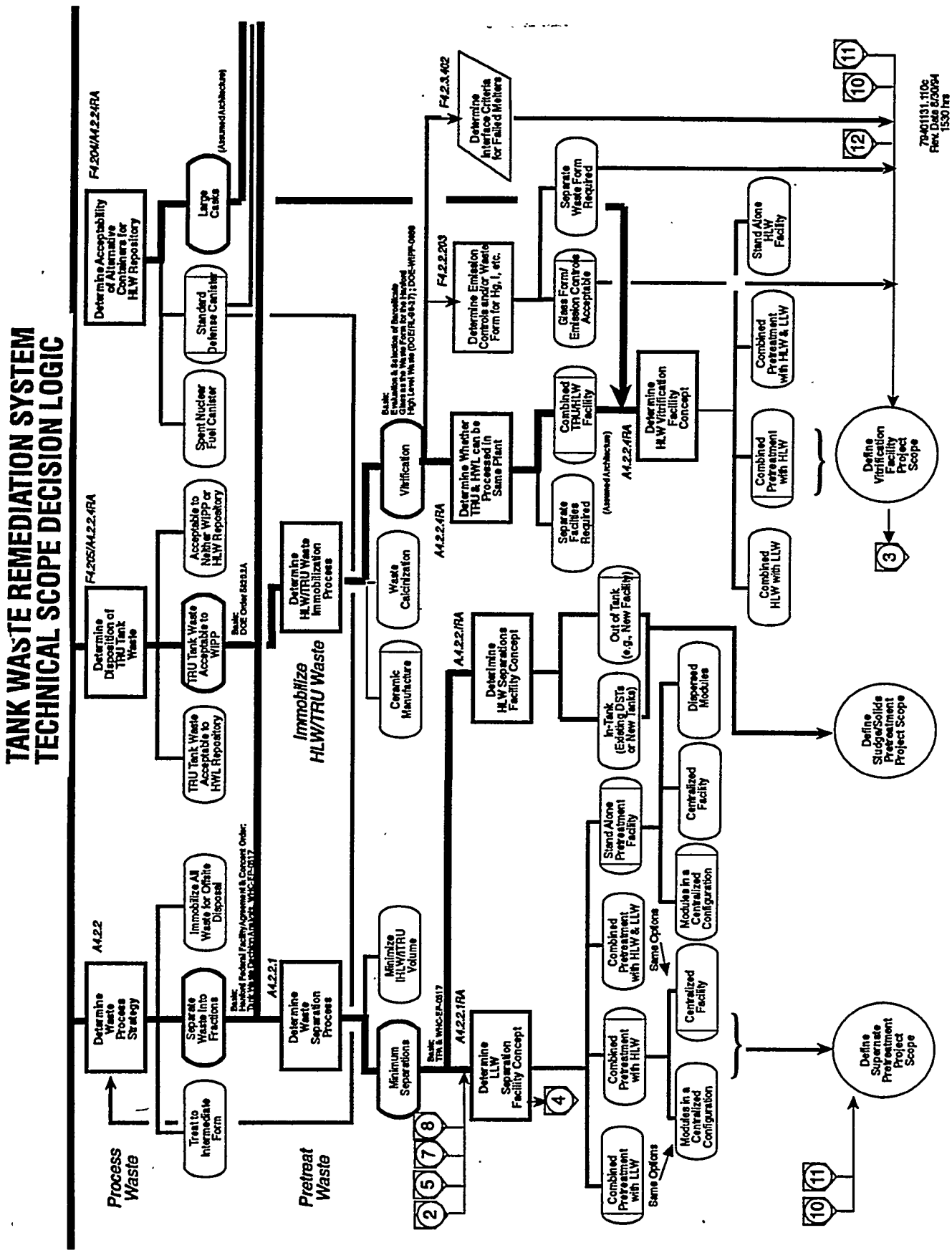

TANK WASTE REMEDIATION SYSTEM
TECHNICAL SCOPE DECISION LOGIC
Process Waste
Pretreat Waste
Immobilize HLW/TRU Waste
A4.2
A4.2.1
A4.2.1/RA
A4.2.2/RA
A4.2.2.1/RA
A4.2.2.4/RA
F4.2.2.203
F4.2.3.402
F4.2.04/A4.2.4/RA
F4.2.05/A4.2.4/RA
Determine Waste Process Strategy
Separate Waste Into Fractions
Treat to Intermediate Form
Immobilize All Waste for Offsite Disposal
Determine Waste Separation Process
Minimize HLW/TRU Volume
Minimum Separations
Determine LLW Separation Facility Concept
Determine HLW Separations Facility Concept
Determine Disposition of TRU Tank Waste
TRU Tank Waste Acceptable to HWL Repository
TRU Tank Waste Acceptable to WIPP
Acceptable to Neither WIPP or HLW Repository
Determine HLW/TRU Waste Immobilization Process
Ceramic Manufacture
Waste Calcinization
Vitrification
Determine Acceptability of Alternative Containers for HLW Repository
Spent Nuclear Fuel Canister
Standard Defense Canister
Large Casks
Determine Whether TRU & HWL can be Processed in Same Plant
Separate Facilities Required
Combined TRU/HLW Facility
Determine Emission Controls and/or Waste Form for Hg, I, etc.
Glass Form/ Emission Controls Acceptable
Separate Waste Form Required
Determine Interface Criteria for Failed Melters
Determine HLW Vitrification Facility Concept
Combined HLW with LLW
Combined Pretreatment with HLW
Combined Pretreatment with HLW & LLW
Stand Alone HLW Facility
Define Vitrification Facility Project Scope
In-Tank (Existing DSTs or New Tanks)
Out of Tank (e.g., New Facility)
Stand Alone Pretreatment Facility
Centralized Facility
Modules in a Centralized Configuration
Dispersed Modules
Combined Pretreatment with LLW
Same Options
Define Sludge/Solids Pretreatment Project Scope
Define Supernate Pretreatment Project Scope
Basic
Hanford Federal Facility Agreement & Consent Order; Tri-Party Agreement, WHC-EP-0317
Basic
DOE Order 5820.2A
Basic
Evaluation & Selection of Candidate Glass or Waste Form for the Hanford High Level Waste (DOE/RL-91-57); DOE-WIPP-0068
(Assumed Architecture)
79401131.110c
Rev. Date 8/30/94
1530 hrs

Figure F-1.

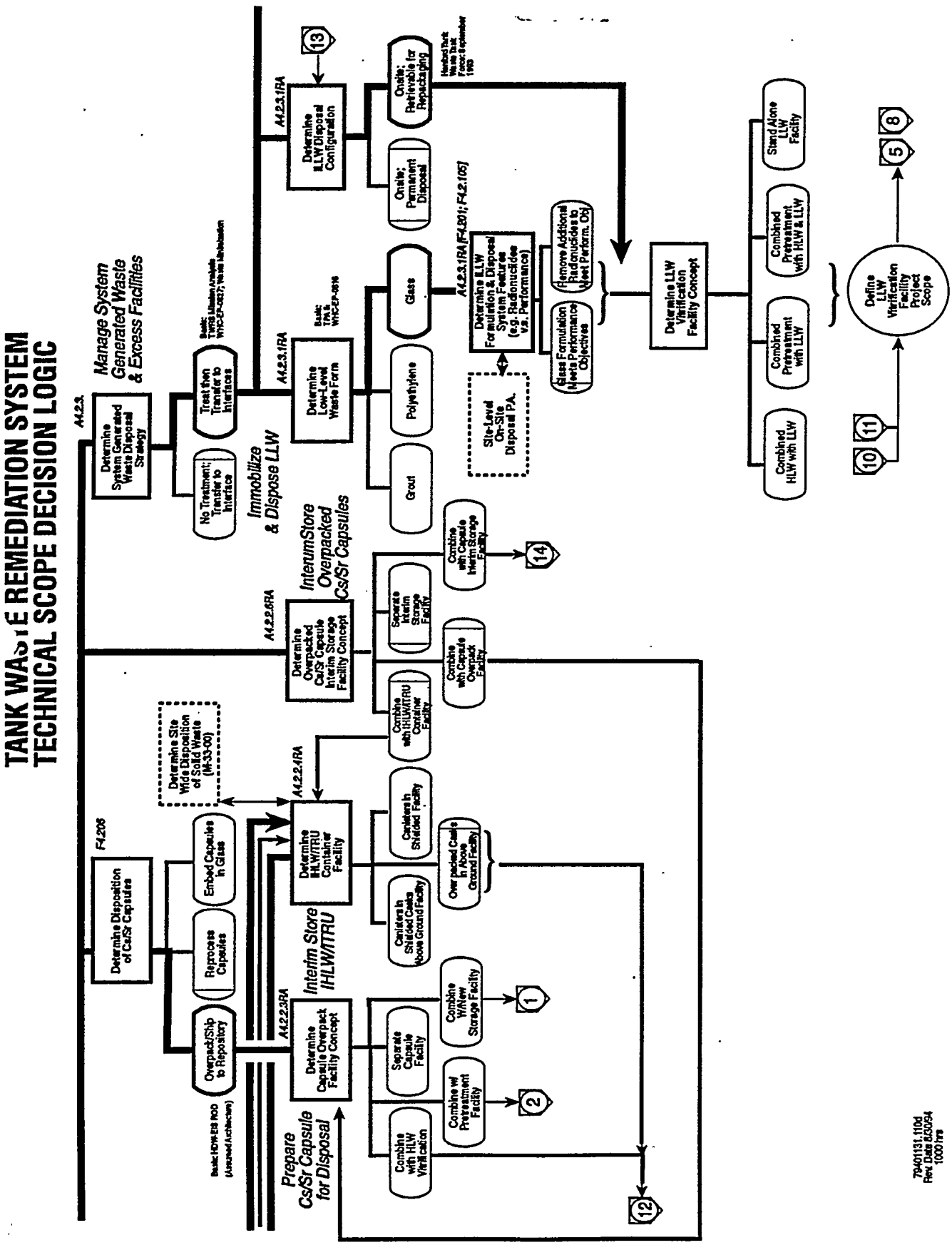
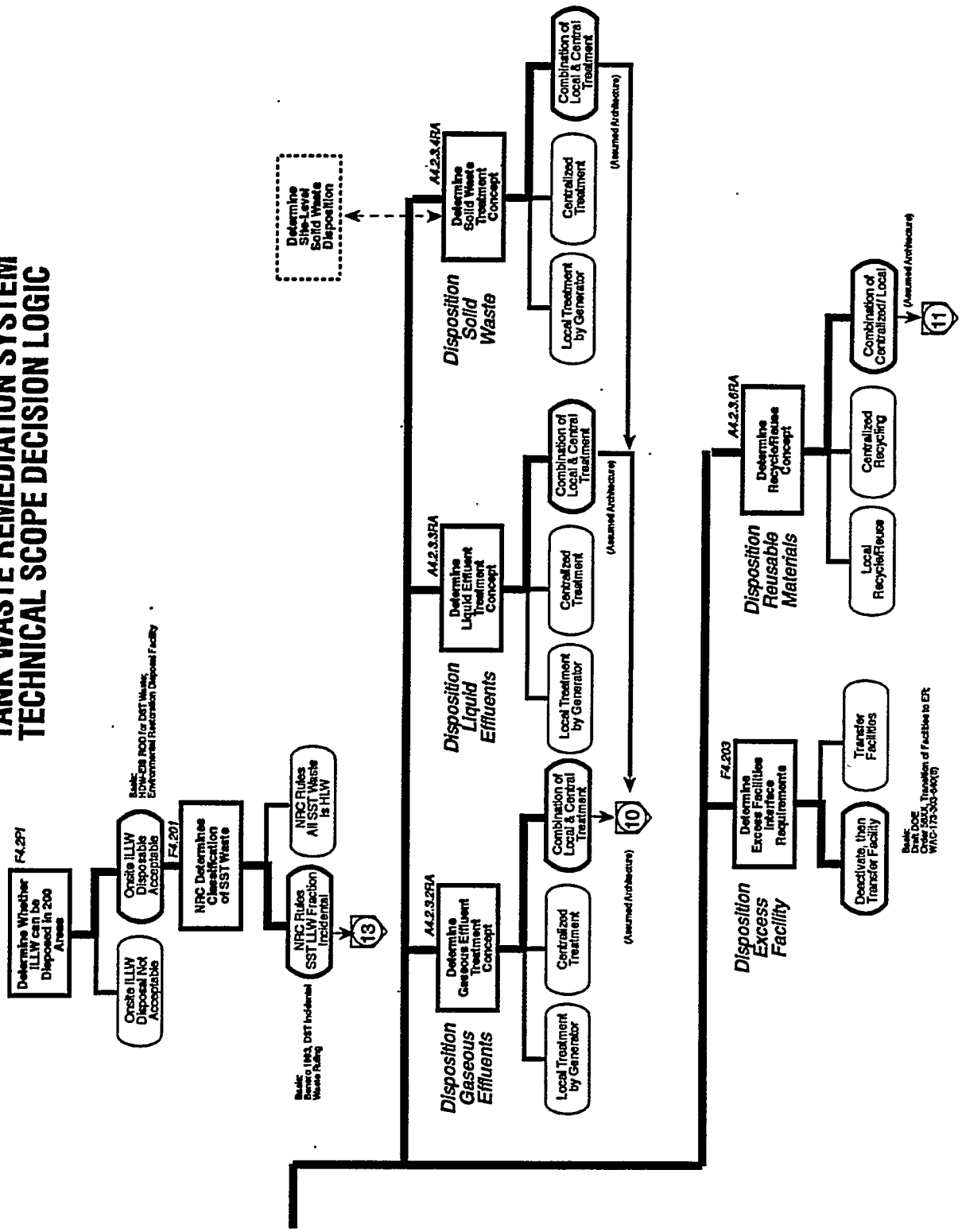
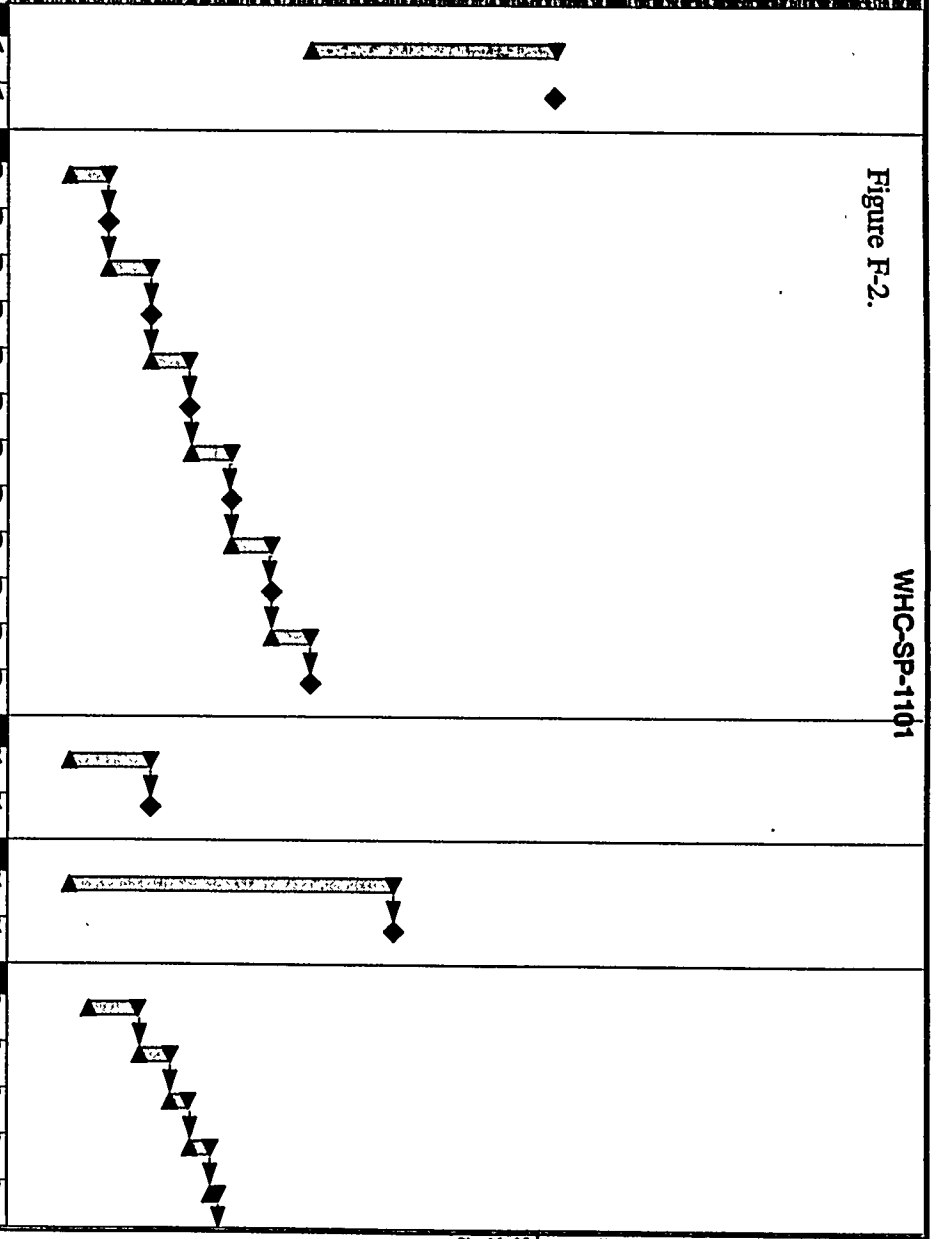

TANK WASTE REMEDIATION SYSTEM
TECHNICAL SCOPE DECISION LOGIC
A4.2.3.
Manage System Generated Waste & Excess Facilities
Determine System Generated Waste Disposal Strategy
Treat then Transfer to Interface
No Treatment; Transfer to Interface
Immobilize & Dispose LLW
A4.2.3.1RA
Determine Low-Level Waste Form
Glass
Polyethylene
Grout
A4.2.3.1RA (F4.201; F4.2.105)
Determine ILLW Formulation & Disposal System Features (e.g. Radionuclide v.s. Performance)
Site-Level On-Site Disposal PA.
Glass Formulation Meets Performance Objectives
Remove Additional Radionuclides to Meet Perform. Obj
A4.2.3.1RA
Determine ILLW Disposal Configuration
Onsite; Retrievable for Repackaging
Onsite; Permanent Disposal
Determine LLW Verification Facility Concept
Stand Alone LLW Facility
Combined Pretreatment with HLW & LLW
Combined Pretreatment with LLW
Combined HLW with LLW
Define LLW Verification Facility Project Scope
InterimStore Overpacked Cs/Sr Capsules
A4.2.2.6RA
Determine Overpacked Cs/Sr Capsule Interim Storage Facility Concept
Separate Interim Storage Facility
Combine with Capsule Interim Storage Facility
Combine with Capsule Overpack Facility
Combine with HLW/TRU Container Facility
Interim Store HLW/TRU
A4.2.2.4RA
Determine HLW/TRU Container Facility
Canisterin Shielded Facility
Overpacked Casks in Above Ground Facility
Canisterin Shielded Casks Above Ground Facility
Determine Site Wide Disposition of Solid Waste (M-33-00)
F4.205
Determine Disposition of Cs/Sr Capsules
Embed Capsules in Glass
Reprocess Capsules
Overpack/Ship to Repository
Basic HDW-EIS ROD (Assumed Architecture)
Prepare Cs/Sr Capsule for Disposal
A4.2.2.3RA
Determine Capsule Overpack Facility Concept
Separate Capsule Facility
Combine w/New Storage Facility
Combine w/ Pretreatment Facility
Combine with HLW Vitrification
1
2
5
8
10
11
12
13
14
7940131.110d
Rev. Date 8/30/94
1000 hrs

Figure F-1.


TANK WASTE REMEDIATION SYSTEM
TECHNICAL SCOPE DECISION LOGIC
Determine Whether ILLW can be Disposed in 200 Areas
F4.2F1
Onsite ILLW Disposal Not Acceptable
Onsite ILLW Disposable Acceptable
F4.201
Basis: HDW-EIS ROD for DST Waste; Environmental Restoration Disposal Facility
NRC Determines Classification of SST Waste
NRC Rules All SST Waste Is HLW
NRC Rules SST LLW Fraction Incidental
13
Basis: Ramey I 1983, DST Incidental Waste Ruling
Determine Site-Level Solid Waste Disposition
Disposition Gaseous Effluents
A4.2.3.2RA
Determine Gaseous Effluent Treatment Concept
Local Treatment by Generator
Centralized Treatment
Combination of Local & Central Treatment
10
(Assumed Architecture)
Disposition Liquid Effluents
A4.2.3.3RA
Determine Liquid Effluent Treatment Concept
Local Treatment by Generator
Centralized Treatment
Combination of Local & Central Treatment
(Assumed Architecture)
Disposition Solid Waste
A4.2.3.4RA
Determine Solid Waste Treatment Concept
Local Treatment by Generator
Centralized Treatment
Combination of Local & Central Treatment
(Assumed Architecture)
Disposition Excess Facility
F4.203
Determine Excess Facilities Interface Requirements
Deactivate, then Transfer Facility
Transfer Facilities
Basis: Draft DOE Order 5820.X, Transition of Facilities to ER; WHC-179-303-94(R)
Disposition Reusable Materials
A4.2.3.6RA
Determine Recycle/Reuse Concept
Local Recycle/Reuse
Centralized Recycling
Combination of Centralized/ Local
(Assumed Architecture)
11
7240T131.110a
Rev. Date 8/30/94
1000 hrs

Activity ID	Activity Description	Early Start	Early Finish	E
ES960401	REVIEW/RESOLVE ISSUES FOR TWRS EIS	02OCT95	30SEP96	A
ES96M01	ISSUANCE OF TWRS-EIS ROD		27SEP96	A
N1F660H02	PREPARE 1 SPECIAL WVP (DP4211A)	03OCT94*	30NOV94	0
N1F660H04	1 SPECIAL WVP COMPLETE (DP4211A)		30NOV94	0
N1F660H06	PREPARE 1 SPECIAL WVP (DP4211A)	01DEC94	31JAN95	0
N1F660H08	1 SPECIAL WVP COMPLETE (DP4211A)		31JAN95	0
N1F660H10	PREPARE 1 SPECIAL WVP (DP4211A)	01FEB95	31MAR95	0
N1F660H12	1 SPECIAL WVP COMPLETE (DP4211A)		31MAR95	0
N1F660H14	PREPARE 1 SPECIAL WVP (DP4211A)	03APR95	31MAY95	0
N1F660H16	1 SPECIAL WVP COMPLETE (DP4211A)		31MAY95	0
N1F660H18	PREPARE 1 SPECIAL WVP (DP4211A)	01JUN95	31JUL95	0
N1F660H20	1 SPECIAL WVP COMPLETE (DP4211A)		31JUL95	0
N1F660H22	PREPARE 1 SPECIAL WVP (DP4211A)	01AUG95	29SEP95	0
N1F660H24	1 SPECIAL WVP COMPLETE (DP4211A)		29SEP95	0
R0A100-5A	Issue Det. of Tank Waste Ret. Strategy (DP4213)	03OCT94	31JAN95	R
R0A100-5AM	Det. of Tank Waste Ret. Stragety Issued (DP4213)		31JAN95	R
R0A100-5B	Iss Det of Waste Trtr Mech. Trade Study (DP4214)	03OCT94	31JAN96	R
R0A100-5BM	Det of Waste Trtr Mech Trade Study Iss (DP4214)		31JAN96	R
PSW00000	Information Gathering - Det Waste Conc Mech	01NOV94*	13JAN95	P
PSW00010	Prepare Draft Document - Det Waste Conc Mech	16JAN95	01MAR95	P
PSW00020	Review Coordination - Det Waste Conc Mech	02MAR95	31MAR95	P
PSW00030	Comment Resolution - Det Waste Conc Mech	03APR95	01MAY95	P
PSW00040	Final Document Prep - Det Waste Conc Mech	02MAY95	15MAY95	P



Project Start 01OCT93
Project Finish
Data Date 01OCT93
Plot Date 06SEP94
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Early Bar
Progress Bar

M934

TWRS
DECISION STUDIES
9/8/94 DRAFT SCHEDULE

Sheet 1 of 5

WESTINGHOUSE HANFORD COMPANY			
Date	Revision	Checked	Approved

Figure F-2.

Activity ID	Activity Description	Early Start	Early Finish	E
PSW00050	Approve Document - Det Waste Conc Mech	16MAY95	01JUN95	P
PSW00050A	Issue Det Waste Concentration Mech Rpt (4.2.1.5)		01JUN95	P
[illegible]				
PSW00060	Information Gathering - Det Waste Proc Strat	17OCT94	13JAN95	P
PSW00070	Prepare Draft Document - Det Waste Proc Strat	16JAN95	01MAR95	P
PSW00080	Review Coordination - Det Waste Proc Strat	02MAR95	31MAR95	P
PSW00090	Comment Resolution - Det Waste Proc Strat	03APR95	01MAY95	P
PSW00100	Final Document Prep - Det Waste Proc Strat	02MAY95	15MAY95	P
PSW00110	Approve Document - Det Waste Proc Strat	16MAY95	01JUN95	P
PSW00110A	Iss Det Waste Proc Strategy Rpt (4.2.2/4.2.2.1)		01JUN95	P
[illegible]				
SDW5000	IDENTIFY TRU WASTE TANKS	03OCT94	20DEC94	H
SDW5050	OBTAIN DOE CONCURRENCE OF TRU WASTE CLASS.	21DEC94	28MAR95	H
SDW5100	EVAL WIPP AS ALTERNATIVE TO HLW REPOSITORY	31MAY95	28NOV95	H
SDW5150	OBTAIN DOE REVIEW/CONCURRENCE WHC RECOMMEND. TRU	29NOV95	05MAR96	H
SDW5200	REVIEW WITH WIPP	06MAR96	09JUL96	H
SDW5250	PERFORM DECISION ANALYSIS PROCESS	10JUL96	07OCT96	H
SDW5300	DEVLOP SEGREGATED TRU TANK WASTE PROCESSING STR	08OCT96	08JUL97	H
[illegible]				
SDW7450	DET: ACCEPT ALT CONTAINERS FOR HLW REPOS. DP422b	03OCT94	13MAR95	H
[illegible]				
SDW4000	EM/RW AGREEMENT:DECISION PROCESS ON ACCEPTIBLITY	03OCT94	30SEP94	H
SDW4010	EM REQUEST: RW ACCEPTABILITY DECISION (DATA PKG)	03OCT94	30SEP94	H
SDW4025	RW DISPOSAL ACCEPTABLILITY DECISIONS: Cs/Sr	03OCT94	12APR95	H
SDW4035	RW DISPOSAL DECISION: Cs & Sr WASTE FORMS	18AUG95	17AUG95	H
SDW4050	DESIGN STRATEGY OPTIONS & CONCEPTS FOR OVERPACK	03OCT94	17AUG95	H
SDW4100	KEY DECISISON ON NEED/REF FOR OVERPACKING Cs/Sr	18AUG95	17AUG95	H
SDW4150	RW REPOSITORY DISPOSAL COST ESTIMATES FOR Cs/Sr	18AUG95	22DEC95	H
SDW4156	TWRS/DOE-EM DEC ANALYSIS/REF DISP. OPTION SELECT	27DEC95	18JUL96	H
SDW4200	IDENTIFY WHC PROCESSING NEED FOR EACH DISP. OPT.	03OCT94	10APR95	H

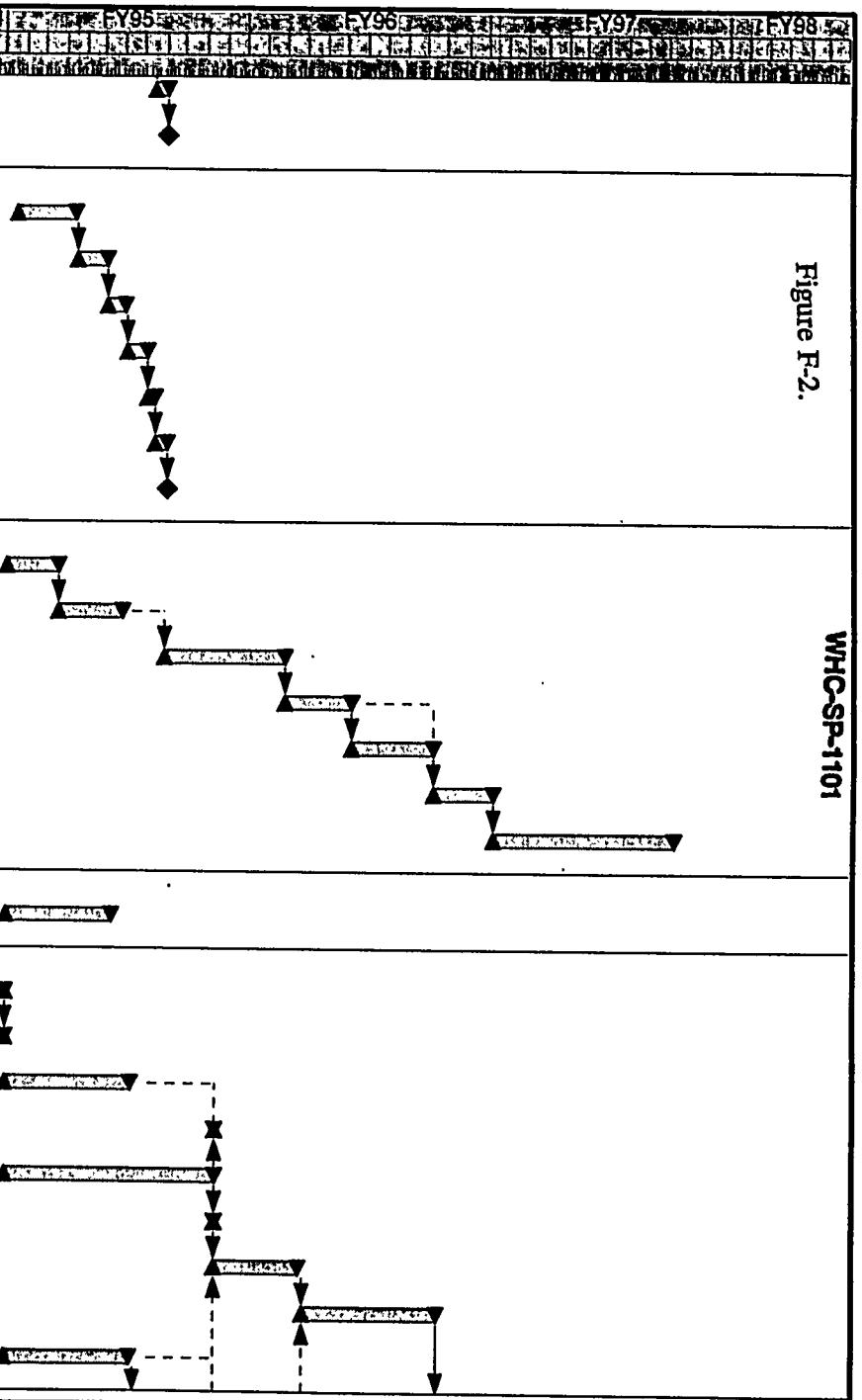

Figure F-2.

Activity ID	Activity Description	Early Start	Early Finish	E
SDW4250	Cs/Sr CAPSULE DISPOSITION TASK SUPPORT	03OCT94	18JUL95	H
SDW4300	STRATEGY AND PLAN FOR RESOLVING REF Cs/Sr CAPS	15FEB95*	18APR95	H
SDW4350	TECH EVAL & COST EST FOR PROCESS WORK FOR Cs/Sr	19APR95	28NOV95	H
SDW4400	REV BASELINE PER Cs/Sr CAPS TSK RESULTS	19JUL96	11DEC96	H
[illegible]				
PSW04410	Develop Decision Analysis 1995 Report M-50-03	03OCT94	31MAR95	P
PSW04411	Prepare Decision Analysis 1995 Report M-50-03	03APR95	29SEP95	P
PSW04412	Stakeholders Input to Decision Basis 1995 Report	30DEC94	17AUG95	P
PSW04413	RL and Stakeholders Review 1995 Report	18AUG95	15SEP95	P
PSW04413A	RL Transmits 1995 Report to WDOE		29SEP95	P
PSW04415	Develop Decision Analysis 1996 Report M-50-03	02OCT95	29MAR96	P
PSW04416	Prepare Decision Analysis 1996 Report M-50-03	01APR96	30SEP96	P
PSW04417	Stakeholders Input to Decision Basis 1996 Report	29DEC95	15AUG96	P
PSW04418	RL and Stakeholders Review 1996 Report	16AUG96	16SEP96	P
PSW04418A	Iss Prelim Rec on Reqmt for Adv Sldg Sep Process		30SEP96	P
PSW04420	Develop Draft 1997 Recommendations	01OCT96	31MAR97	P
PSW04421	Prepare Draft 1997 Recommendations	01APR97	29SEP97	P
PSW04422	Stakeholders Input to Decision Basis 1997 Report	30DEC96	15AUG97	P
PSW04423	RL and Stakeholders Review 1997 Report	18AUG97	30SEP97	P
PSW04423A	Iss Draft Rec on Reqmts for Adv Sldg Sep Process		30SEP97	P
PSW04425	Prepare Final TPA M-50-03 Report	01OCT97	11NOV97	P
PSW04427	RL and Stakeholders Review Final Report	29OCT97	25NOV97	P
PSW04428	Incorporate Changes from DOE and Stakeholders	26NOV97	11DEC97	P
PSW04429	RL Transmits Final Report to WDOE	12DEC97	31DEC97	P
[illegible]				
PSW00120	Info Gathering - Sel Supernate Pretreat Fac	03OCT94*	01NOV94	P
PSW00130	Prep Draft Document - Sel Supernate Pretreat Fac	02NOV94	15DEC94	P
PSW00140	Review Coordination - Sel Supernate Pretreat Fac	16DEC94	16JAN95	P
PSW00150	Comment Resolution - Sel Supernate Pretreat Fac	17JAN95	01FEB95	P

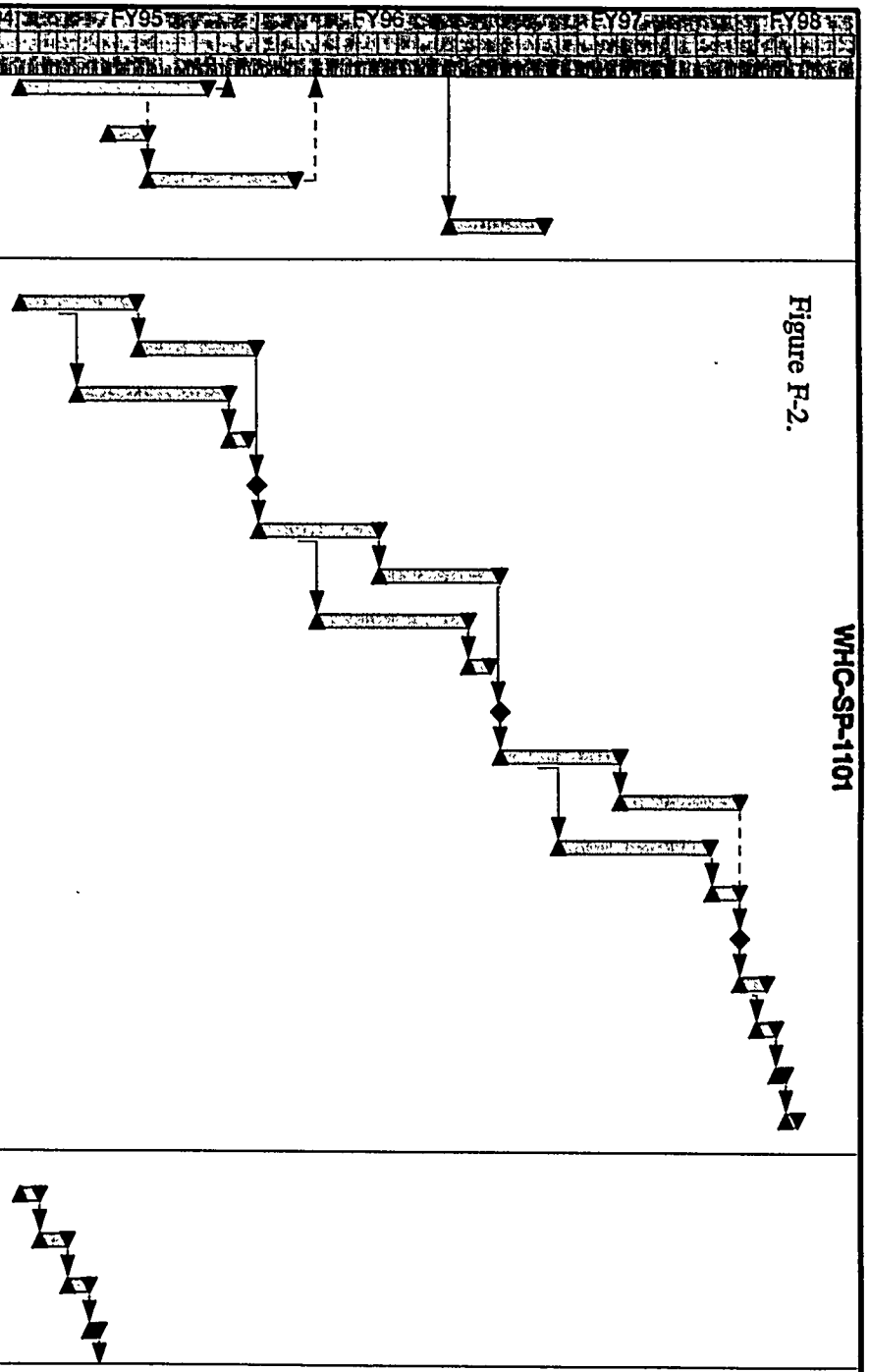

Figure F-2.

Activity ID	Activity Description	Early Start	Early Finish	E
PSW00160	Final Document Prep - Sel Supernate Pretreat Fac	02FEB95	15FEB95	P
PSW00170	Approve Document - Sel Supernate Pretreat Fac	16FEB95	01MAR95	P
PSW00170A	Iss Sel Supernate Pretreat Fac Rpt (4.2.2.1.1)		01MAR95	P
SDW3070	ALTERNATIVE GLASS TYPES	06JUL95	05JAN96	H
SDW7473	A/E TRADE STUDY CLOSE OUT	06OCT94	12JAN95	H
SDW7550	IDENTIFY TECH DEV TO RESOLVE EQ DES UNCERTIANTY	20SEP95	16NOV95	H
SDW7750	UPDATE FACILITY CONCEPTS	01MAY96	14OCT96	H
SDW7460	DET: IHLW/ITRU CONTAINER STRG FACI CONCPT DP4224	07NOV96	18MAR97	H
PSW04850	Prepare White Paper Doc Trade Study Dec 4.2.3	03OCT94	03MAR95	P
PSW04850A	Issue White Paper Doc Trade Study Dec 4.2.3		03MAR95	P
L4010501	DETERMINE NRC CLASSIFICATION OF SST LLW FRACTION	03APR95*	22JUL96	L
L4010301	4231A - PRODUCT CONFIGURATION TRADE STUDY	03OCT94*	03JAN95	L
L4010302	4231B - DETERMINE ILLW DISPOSAL/RETRIEVABILITY	04JAN95*	05SEP95	L
L4010404	4231B - LLW DISPOSAL OPTIONS CONFIGURATION STUDY	03OCT94*	02MAR95	L
L4010409	4231B - PRELIMINARY DISPOSAL FACILITY CONCEPT	04JAN95*	05OCT95	L
SDW7470	OFFGAS TREATMENT EVALUATION TRADE STUDY	03OCT94	18JUL95	H
PSW00415	Prep Trade Stdy to Det Liq Eff Treatment Concept	03OCT94	31JAN95	P
PSW00415A	Iss Det Liq Eff Treatment Concept Rpt (4.2.3.3)		31JAN95	P
SDW7457	SOLID WASTE HANDLING ALT IN HLW FAC TRADE STUDYS	02OCT96	11APR97	H
R0A100-5C	Iss Det. of Exces Facilities Int. Req. (DP4235)	24FEB95	30AUG95	R

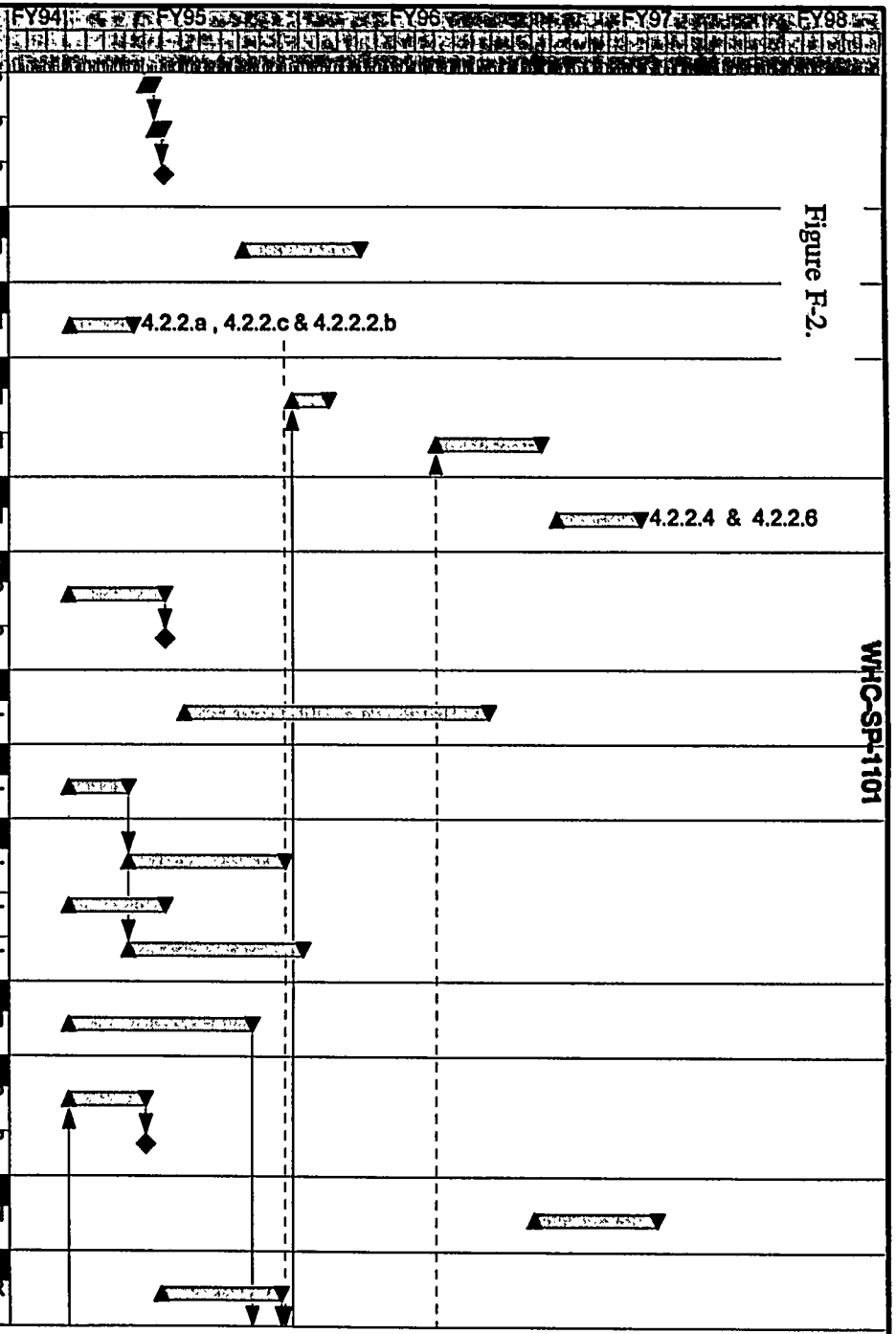

Figure F-2.

WHC-SP-1101

Figure F-2.

Activity ID	Activity Description	Early Start	Early Finish	E	FY94	FY95	FY96	FY97	FY98
R0A100-5CM	Del. of Exces Facilities Int. Req. Iss (DP4235)		30AUG95	R					
PSW00360	Information Gathering - Water Reuse/Imp Strat	03OCT94*	15DEC94	P					
PSW00370	Prepare Draft Doc - Water Reuse/Imp Strat	16DEC94	01FEB95	P					
PSW00380	Review Coordination - Water Reuse/Imp Strat	02FEB95	01MAR95	P					
PSW00390	Comment Resolution - Water Reuse/Imp Strat	02MAR95	31MAR95	P					
PSW00400	Final Document Prep - Water Reuse/Imp Strat	03APR95	14APR95	P					
PSW00410	Approve Document - Water Reuse/Imp Strat	17APR95	28APR95	P					
PSW00410A	Issue Document - Water Reuse/Imp Strat		28APR95	P					
R0A100-5D	Iss Det of TWRS Recycle/Reuse Concept(s)(DP4236)	31MAR95	30AUG95	R					
R0A100-5DM	Det of TWRS Recycle/Reuse Concept(s) Iss(DP4236)		30AUG95	R					
MSW1110	PREFORM FINAL DECISION ANALYSIS PROCESS	08SEP95	05JAN96	H					
SDW7700	DOCUMENT TRADE STUDIES DECISIONS	19JUL95	19SEP95	H					

APPENDIX G

INTEGRATED OPERATIONS SCHEDULE

This schedule is not available for this submittal.

APPENDIX H

WASTE TYPE DATA

PROGRAM MANAGEMENT AND ADMINISTRATION

WASTE TYPE DATA

Waste type data criteria do not apply.

TANK FARM OPERATIONS AND MAINTENANCE

WASTE TYPE DATA

Program Element: Tank Farm Operations and Maintenance
WBS Number: 1.1.1.2.01

Program: Tank Farm Operations and Maintenance

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1995 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1995

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	Tank Farms/360 Kgal 107-AN Caustic Addition/50 Kgal	PUREX/100 Kgal PFP/12 Kgal UO3 Facility/0 Kgal B Plant/276 Kgal T Plant/130 Kgal S Plant/216 Kgal 100 Area (N reactor)/70 Kgal 300 Area/60 Kgal 400 Area/12 Kgal Waste Sampling & Charct Facility/9 Kgal Solid Waste Trench 31/0 Kgal	Salt well liquid pumping (SSTs to DSTs)/324 Kgal 242-A Evaporator Waste Volume Reduction/(5,640 Kgal)	DSTs/25 Mgal SSTs/39 Mgal
LLW (SOLID)	9,590 cuft			
LLW (LIQUID)				
LLMW (SOLID)	6,000 cuft			
LLMW (LIQUID)				
LLW (GTC3)				
TRU				
TRUM				
HAZARDOUS	1,212 cuft			
SANITARY (LANDFILL)				
SANITARY (LANDFILL - ASBESTOS)				

Program Element: Tank Farm Operations and Maintenance
WBS Number: 1.1.1.2.01

FOR THE EXECUTION YEAR - FY 1995 PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

- Approximately 35,000 cu ft of low level waste will be generated by Tank Farms. Off-site super-compaction will reduce the volume to less than 10,000 cu ft for shipment to the central waste complex/burial grounds.
- Manage new and existing tank waste in a safe, compliant, and cost effective manner.
- Flushes are generated during the receipt of waste transfers from railroad tank cars, tanker trucks, or after tank to tank transfers.
- Run two 242-A Evaporator campaigns in FY 1995, achieve a waste volume reduction goal.
- Continue interim stabilization (SST pumpable liquid removal) of single-shell tanks, pumping of 10 single-shell tanks will be ongoing in FY 1995.
- 107-AN Caustic Addition of 50,000 gallons.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

- Continue supporting Purex Terminal Cleanout Operations (TCO) began in FY 1994.
- Support 100 area TCO which begin in FY 1995.
- Dilute non-complexed waste resulting from 222-S lab operations, T Plant decontamination and treatment services, and 100/300/400 activities. Transport to 204-AR unloading facility via tanker truck for transfer of double shell tanks.
- Combine washed 101-AZ solids, use 102-AZ as the diluted receiver.

SUMMARY WASTE TYPE ISSUES:

Operation of the 242-A Evaporator typical produces double-shell slurry feed (DSSF) with a specific gravity of 1.50-1.55 g/ml. However, it has been noted that all of the DSTs currently on the Flammable Gas (FG) watchlist have specific gravities greater than 1.5 g/ml. To avoid production of future FG watch list tanks, it has been proposed that all future waste concentrations should be limited to a specific gravity of 1.4 g/ml unless additional technical evaluation shows FG will not build up. Reducing the DSSF wastes to a specific gravity of 1.4 g/ml could increase waste storage volumes by approximately 25-37 percent.

Program Element: Tank Farm Operations and Maintenance
WBS Number: 1.1.1.2.01

Program: Tank Farm Operations and Maintenance

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1996 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1996

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	Tank Farms/360 Kgal	PUREX/100 Kgal PFP/12 Kgal UO3 Facility/0 Kgal B Plant/276 Kgal T Plant/180 Kgal S Plant/216 Kgal 100 Area (N reactor)/70 Kgal 300 Area/60 Kgal 400 Area/12 Kgal Waste Sampling & Charct Facility/9 Kgal Solid Waste Trench 31/0 Kgal	Salt well liquid pumping (SSTs to DSTs)/1,393 Kgal 105-F & 105-H Basins Cleanout/225 Kgal 242-A Evaporator Waste Volume Reduction/(4,020 Kgal)	DSTs/26 Mgal SSTs/35 Mgal
LLW (SOLID)	10,000 cuft			
LLW (LIQUID)				
LLMW (SOLID)	6,000 cuft			
LLMW (LIQUID)				
LLW (GTC3)				
TRU				
TRUM				
HAZARDOUS	1,250 cuft			
SANITARY (LANDFILL)				
SANITARY (LANDFILL - ASBESTOS)				

Program Element: Tank Farm Operations and Maintenance
WBS Number: 1.1.1.2.01

FOR THE FY 1996, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

- Manage new and existing tank waste in a safe, compliant, and cost effective manner.
- Flushes are generated during the receipt of waste transfers from railroad tank cars, tanker trucks, or after tank to tank transfers.
- Run two 242-A Evaporator campaigns in FY 1996, achieve a waste volume reduction goal.
- Continue interim stabilization (SST pumpable liquid removal) of single-shell tanks, pumping of 16 single-shell tanks will be ongoing in FY 1996.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

- Continue supporting Hanford facilities terminal cleanout operations.

SUMMARY WASTE TYPE ISSUES:

Program Element: Tank Farm Operations and Maintenance
WBS Number: 1.1.1.2.01

Program: Tank Farm Operation and Maintenance

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1997 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1997

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	Tank Farms/360 Kgal	PUREX/ 100 Kgal PFP/12 Kgal UO3 Facility/0 gal B Plant/350 Kgal T Plant/180 Kgal S Plant/216 K gal 100 Area (N reactor)/70 Kgal 300 Area/60 Kgal 400 Area/12 Kgal Waste Sampling & Char Facility/9 Kgal Solid Waste Trench 31/0 gal	Salt well liquid pumping (SSTs to DSTs)/1,309 Kgal 242-A Evaporator Waste Volume Reduction/(2,190 Kgal)	DSTs/28 Mgal SSTs/34 Mgal
LLW (SOLID)	10,000 cuft			
LLW (LIQUID)				
LLMW (SOLID)	6,000 cuft			
LLMW (LIQUID)				
LLW (GTC3)				
TRU				
TRUM				
HAZARDOUS	1,250 cuft			
SANITARY (LANDFILL)				
SANITARY (LANDFILL - ASBESTOS)				

FOR THE FY 1997, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

- Manage new and existing tank waste in a safe, compliant, and cost effective manner.
- Flushes are generated during the receipt of waste transfers from railroad tank cars, tanker trucks, or after tank to tank transfers.
- Run two 242-A Evaporator campaigns in FY 1997, achieve a waste volume reduction goal.
- Continue interim stabilization (SST pumpable liquid removal) of single-shell tanks, pumping of 21 single-shell tanks will be ongoing in FY 1997.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

- Continue supporting Hanford facilities terminal cleanout operations.
- Tank 106-C retrieval initiated.

SUMMARY WASTE TYPE ISSUES:

WASTE TANK SAFETY

WASTE TYPE DATA

Waste type data criteria do not apply.

TANK FARM UPGRADES

WASTE TYPE DATA

PROJECTED SOLID WASTE EXTE[illegible] VOLUMES (FT3)

TABLE 1 pa of 5

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WBS: 1.1.1.2.03.07 - W-314 MSA

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)				8500	14,500	36,850	41,100	26,600	26,600	4,250					
	MIN. %				10	10	10	10	10	10	10					
	MAX. %				100	100	100	100	100	100	100					
CH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

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PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

TABLE 1

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WBS: 1.1.1.2.03.12.01 W-028

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH-LLW-I	EST.(CuFt)		130	130												
	MIN. %		100	100												
	MAX. %		800	700												
CH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

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WBS [illegible] W-060

Container Type and Volume %

TABLE 2 [illegible] 1 of 4

STEP1: CIRC[illegible]ONE WASTE CLASS

(CH-LLW-I)
CH-LLW-III
CH-LLW-GTC-III
RH-LLW-I
RH-LLW-III
RH-LLW-GTC-III

STEP 2: ↓

COMPLETE A SEPARATE TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt																															
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt																															
4 X 4 X 8 Box W/O Skids 128 CuFt		2	2																												
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)		100	100																												

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* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal)._____

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria). "OTHER" containers may be accepted.

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STEP 1 CONTAINER TYPE 4x4x8 Box w/o SKIDS

STEP 2 YEARS 1996 TO 1997 (INCLUDE HELD IF APPLICABLE)

Physical Waste Form: W & TRU

TABLE 3 page 1 of 1

A separate Table 3 must be completed for each container identified in Table 2

STEP 3 Indicate Volume % of each Waste Form present for each Waste Class

WASTE FORMS	CH LLWI	CH LLWIII	CH LLW GTCIII	RH LLWI	RH LLWIII	RH LLW GTCIII	CH TRU	RH TRU	STEP 4 Are Waste Forms Segregated? Y/N
SHIELDING									
STEEL									
LEAD									
CONCRETE									
SOLID PROCESS RESIDUES									
INORGANIC PARTICULATES									
INORGANIC ABSORBED LIQ/SLUDGE									
ORGANIC PARTICULATES									
ORGANIC ABSORBED LIQ/SLUDGE									
SOILS									
CONTAMINATED SOILS	80								N
DEBRIS CONTAMINATED SOILS									
DEBRIS WASTE									
METAL	20								N
INORGANIC NON-METAL									
COMBUSTIBLE									
HETEROGENEOUS									
SPECIAL WASTE									
LAB PACKS/CONTAINERIZED LIQUIDS									
UNKNOWN									
OTHER •									
TOTAL[1] (0 OR 100%)	100								N

[1] Total for Each Waste Class MUST Equal 0 or 100%

• OTHER WASTE DESCRIPTION : _____

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VASTE CL/ CH-LLW I WBS: 1.1 2.03.12.01 W-028

CONTAINER TYPE: 4X 4X8 Box W/O SKIDS

Radiation Type

TABLE 5 1 of 2

YEARS 1996 TO 1997 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (^{14}C,^{3}H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT. (CURIES)	CONC. Ci/m3	TOTAL ACT. (CURIES)	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT. (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES												
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE												
SOILS												
CONTAMINATED SOILS	57	835										
DEBRIS CONTAMINATED SOILS												

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WASTE C' 3: _____ WBS: 1.1.2.03.12 W-028 TABLE 5 e 2 of 2

CONTAINER TYPE: _____

Radiation Type

YEAR _____ TO _____ (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (^{14}C,^{3}H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL	57	84										
INORGANIC NON-METAL												
COMBUSTIBLE												
HETEROGENEOUS												
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: _____

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PROJECTED SOLID WASTE EXT[illegible] VOLUMES (FT3)

TABLE 1 1 of 5

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WBS: 1.1.1.2.03.11 W-058

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH-LLW-I	EST.(CuFt)	1250	6500	5250												
	MIN. %	75	75	75												
	MAX. %	125	125	125												
CH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

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STEP1: CIF ONE WASTE CLASS

(CH-LLW-I)
CH-LLW-III
CH-LLW-GTC-III
RH-LLW-I
RH-LLW-III
STEP 2: RH-LLW-GTC-III

Container Typ and Volume %

TABLE 2

WBS: 1.1.1.2.03.11 W058

COMPLETE A SEPARATE TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 3: Indicate Volume % of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt																															
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt																															
4 X 4 X 8 Box W/O Skids 128 CuFt	10	51	41																												
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)	100	100	100																												

* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal)._____

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria). "OTHER" containers may be accepted.

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STEP 1 CONTAINER TYPE 4x4x8 Box w/o skids

STEP 2 YEARS 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

Physical Waste For LLW & TRU

TABLE 3 page 1 of

A separate Table 3 must be completed for each container identified in Table 2

STEP 3 Indicate Volume % of each Waste Form present for each Waste Class

WASTE FORMS	CH LLWI	CH LLWIII	CH LLW GTCIII	RH LLWI	RH LLWIII	RH LLW GTCIII	CH TRU	RH TRU	STEP 4 Are Waste Forms Segregated? Y/N
SHIELDING									
STEEL									
LEAD									
CONCRETE									
SOLID PROCESS RESIDUES									
INORGANIC PARTICULATES									
INORGANIC ABSORBED LIQ/SLUDGE									
ORGANIC PARTICULATES									
ORGANIC ABSORBED LIQ/SLUDGE									
SOILS									
CONTAMINATED SOILS	99								N
DEBRIS CONTAMINATED SOILS									
DEBRIS WASTE									
METAL	1								N
INORGANIC NON-METAL									
COMBUSTIBLE									
HETEROGENEOUS									
SPECIAL WASTE									
LAB PACKS/CONTAINERIZED LIQUIDS									
UNKNOWN									
OTHER •									
TOTAL[1] (0 OR 100%)	100								N

[1] Total for Each Waste Class MUST Equal 0 or 100%

• OTHER WASTE DESCRIPTION : _____

WASTE CLASS: CH-LLW-I

WBS 1.1.1.2.03.11 W058

CONTAINER TYPE: 4x4x8 Box w/o SKIDS

Radiation Type

YEARS 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (^{14}C,^{3}H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES												
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE												
SOILS												
CONTAMINATED SOILS	80	29450										
DEBRIS CONTAMINATED SOILS												

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COVER SHEET

1994 SOLID WASTE FORECAST REQUEST FORM

Generator (Project/Facility) WHC_TWP_W028 Transfer Lines

Waste Class	Contact	Phone
LLW	D.V.(Doug) Vo	6-5784
LLMW	N/A	
HAZ	N/A	
TRU	N/A	
TRUM	N/A	
LEVEL III APPROVAL	M.A.(Mike) Cahill	2-0474

(Fill out and/or correct above and keep this sheet with forecast)

RECEIVED
JUL 18 1994

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COORDINATOR SHEET

Department: TWR Tank Projects

1994 Coordinator: Fran Leavell/Ankit Thakkar 2-1653/6-8321

Project/Facility Number	1994 Contact	1994 Level III Approval
WHC_TWP_W028 Aging Waste Transfer Lines	D.V. Vo	M.A. Cahill
WHC_TWP_W030 Ventilation Upgrade	K.A. Colosi	M.A. Cahill
WHC_TWP_W058 Cross-Site Transfer Lines	D.V. Vo	M.A. Cahill
WHC_TWP_W062 Tnk AP-104 Upgrade	D.B. Cole	M.A. Cahill
WHC_TWP_W151 101-AZ Retrieval Syst.	E.M. Nordquist	M.A. Cahill
WHC_TWP_W211 DST Retrieval Systems	C.A. Rieck	M.A. Cahill
WHC_TWP_W314 Tank Farm Restoration	M.J. Ramos	M.A. Cahill

(Fill out and/or correct above and keep this sheet with forecast)

PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH-LLW-I	EST.(CuFt)		130	130												
	MIN. %		100	100												
	MAX. %		800	700												
CH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

PROJECTED SOLID WASTE EXTER. .L VOLUMES (FT3)

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

PROJECTED SOLID WASTE EXTER . VOLUMES (FT3)

TABLE 1 pag of 5

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
HAZ.	EST.(CuFt)															
	MIN. %															
	MAX. %															

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PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
RH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
HAZ.	EST.(CuFt)															
	MIN. %															
	MAX. %															

PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

N/A

WASTE CLASS	1994 ESTIMATE (CuFt)
CH-LLW-I	
CH-LLW-III	
CH-LLW-GTCIII	
RH-LLW-I	
RH-LLW-III	
RH-LLW-GTCIII	
CH-LLMW-I	
CH-LLMW-III	
CH-LLMW-GTCIII	
RH-LLMW-I	
RH-LLMW-III	
RH-LLMW-GTCIII	
CH-TRU	
RH-TRU	
CH-TRUM	
RH-TRUM	
HAZARDOUS	

NOTE: Report on this page any currently stored waste volumes that do not have a shipping schedule. Do not include volumes that are reported from 1995 through 2024.

Container Type d Volume %

TABLE 2 Pa[illegible] of 4

STEP1: CIRCLE ONE WASTE CLASS

(CH-LLW-I)
CH-LLW-III
CH-LLW-GTC-III
RH-LLW-I
RH-LLW-III
STEP 2: RH-LLW-GTC-III

COMPLETE A **SEPARATE** TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 3: Indicate **Volume %** of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt																															
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt																															
4 X 4 X 8 Box W/O Skids 128 CuFt		~~2~~ 100%	~~2~~ 100%																												
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)		100	100																												

8-2-94 verified per telephone with Dusty Vo Container volume % OJV

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* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume [illegible]: _____

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria). "OTHER" containers may be accepted.

STEP 1 CONTAINER TYPE 4x4x8 Box w/o SKIDS

STEP 2 YEARS 1996 TO 1997 (INCLUDE HELD IF APPLICABLE)

Physical Waste Forms/LLW & TRU

TABLE 3 page 1 of 1

A separate Table 3 must be completed for each container identified in Table 2

STEP 3 Indicate **Volume %** of each Waste Form present for each Waste Class

WASTE FORMS	CH LLWI	CH LLWIII	CH LLW GTCIII	RH LLWI	RH LLWIII	RH LLW GTCIII	CH TRU	RH TRU	Are Waste Forms Segregated? Y/N
SHIELDING									
STEEL									
LEAD									
CONCRETE									
SOLID PROCESS RESIDUES									
INORGANIC PARTICULATES									
INORGANIC ABSORBED LIQ/SLUDGE									
ORGANIC PARTICULATES									
ORGANIC ABSORBED LIQ/SLUDGE									
SOILS									
CONTAMINATED SOILS	80								N
DEBRIS CONTAMINATED SOILS									
DEBRIS WASTE									
METAL	20								N
INORGANIC NON-METAL									
COMBUSTIBLE									
HETEROGENEOUS									
SPECIAL WASTE									
LAB PACKS/CONTAINERIZED LIQUIDS									
UNKNOWN									
OTHER *									
TOTAL[1] (0 OR 100%)	100								N

[1] Total for Each Waste Class MUST Equal 0 or 100%

* OTHER WASTE DESCRIPTION : _____

VASTE CLAS CH-LLW I

CONTAINER TYPE: 4x4x8 Box w/o skids

TABLE 5 pag of 2

Radiation Type

YEARS 1996 TO 1997 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (^{14}C,^{3}H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES												
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE												
SOILS												
CONTAMINATED SOILS	57	335										
DEBRIS CONTAMINATED SOILS												

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WASTE CLA[illegible] _____

CONTAINER TYPE: _____

YEAR _____ TO _____ (INCLUDE HELD IF APPLICABLE)

Radiation Type

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (^{14}C,^{3}H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL	57	84										
INORGANIC NON-METAL												
COMBUSTIBLE												
HETEROGENEOUS												
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: _____

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1994 SOLID WASTE FORECAST QUESTIONNAIRE

A. Please answer all questions. This information will help determine Hanford's treatment, storage, and disposal requirements.

Question 4 (for all waste classes) and Question 5 (for mixed and hazardous waste only) provide a basis for determining how your waste will be grouped. Be sure to answer these questions or your forms will be returned.

B. Ensure that the contact name, Level 3 Manager, and budget personnel are identified in the sign-off area of the questionnaire. Names must be typed (or printed) as well as written.

1. Please circle the waste classes that will be generated.

(CH_LLW_I)	CH_LLW_III	CH_LLW_GTCIII
RH_LLW_I	RH_LLW_III	RH_LLW_GTC_III
CH_LLMW_I	CH_LLMW_III	CH_LLMW_GTCIII
RH_LLMW_I	RH_LLMW_III	RH_LLMW_GTCIII
CH_TRU	CH_TRUM	HAZ
RH_TRU	RH_TRUM	

2. Generally describe these wastes and how they will be generated.

CONTAMINATED SOIL - GENERATED DURING EXCAVATION OF THE AGING WASTE TRANSFER LINES. THE AGING WASTE TRANSFER SYSTEM WILL BE CONNECTED FROM B-PLANT TO A NEW DIVERSION BOX (W-028B31) THEN TO 151-AR VALVE PIT. CONTAMINATED PIPES AND EQUIPMENT GENERATED DURING TIE-IN AT B-PLANT AND 151-AR VALVE PIT.

3. Have your waste volumes changed from your previous forecast? (Yes) No

Explain: THE ESTIMATED VOLUME (260 FT^3) WAS BASED ON PROJECT W058 COST ESTIMATE (FILE NO. W028AA3, DATE: 12/29/92). THE VOLUME WAS DECREASE FROM 202 FT^3 TO 260 FT^3. HOWEVER, THE DIFFERNT IN VOLUME WAS INCLUDED IN THIS ESTIMATE BY HIGHER MAXIMUM PERCENT (700%). THIS WILL ACCOMMODATE FOR THE UNCERTAINTIES ASSOCIATED WITH OUR BEST ESTIMATE.

1994 SOLID WASTE FORECAST QUESTIONNAIRE

4.) Will waste be separated into like waste forms prior to shipping? (If you generate contaminated soils, inorganic particulates and metal debris, will you ship these waste in separate containers or will the waste be combined and placed into one container?)

Please explain for each waste class:

EXCAVATION IN CONTAMINATED AREAS AND TIE-IN WITH THE EXISTING LIQUID WASTE TRANSFER PIPING ARE THE ONLY TWO ACTIVITIES THAT GENERATE SOLID WASTE. BOTH ACTIVITIES WILL BE DONE SEPARATELY. THEREFORE, THERE WILL NOT BE WASTE SEGREGATION.

5. If you generate hazardous or mixed waste please answer the following question.

Will you place several hazardous constituents in one container or will you segregate the constituents prior to shipping? (If you generate toxic metals and ignitables will you ship these constituents in separate containers or will they be combined and placed into one container?)

If the hazardous constituents are segregated, make sure each waste class by waste form (reference Table 4) has been explained using the method in Attachment B. Please provide further explanation if needed.

N/A

6. Describe your quarterly expected shipping schedule for each applicable waste class during FY-1995 (e.g., 40% of waste shipped during the first quarter, 20% in the second quarter, etc.).

25% EACH QUARTER

1994 SOLID WASTE FORECAST QUESTIONNAIRE

7. Discuss the assumptions that were used to prepare this forecast. (Identify known dates for facility closure, decontamination and decommissioning [D&D], or any new programs that drive the forecast data provided in this request.)

THE SOLID WASTE WASTE VOLUME WAS BASED ON THE PROJECT WORK LATEST ESTIMATE. THE RADIATION TYPE (BETA-GAMMA) CONCENTRATION AND TOTAL ACTIVITY WERE BASED ON HEALTH PHYSICS SURVEY OF THE PROPOSED ROUTING AND HISTORICAL DATA

8. What assumptions were used in estimating the minimum and maximum waste volumes identified in Table 1? (Minimum waste percentage is based upon the majority of the waste being sent to a commercial disposal site. Maximum waste percentage is based upon additional projects being initiated that will generate waste not accounted for in the best estimate volume.)

Minimum: THE MINIMUM PERCENT WAS SET AT 100%, BECAUSE THE ESTIMATE WAS DONE 2 YEAR AGO. THE PROJECT CONSIDERING THE ESTIMATE WAS LOW.

Maximum: THE MAXIMUM PERCENT WAS SET 700%, BECAUSE IT WILL ACCOMMODATE FOR THE UNCERTAINTIES ASSOCIATED WITH OUR BEST ESTIMATE. THE ESTIMATE VOLUME WILL ALSO BE BROUGHT WITH IN THE LAST YEAR ESTIMATED VOLUME.

9. Indicate confidence level for the following waste characterization data: (The physical waste forms are based upon historical characterization information.)

Physical Waste Forms (Table 3): (High) Low Medium

Explain: THE PROJECT IS ANTICIPATED TO GENERATE LLW CONTAMINATED SOIL.

Hazardous Constituents (Table 4): High Low Medium

Explain: NOT APPLICABLE

Radiation Type (Table 5) High Low (Medium)

Explain: BASED ON RADIOLOGICAL SURVEY INFORMATION

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1994 SOLID WASTE FORECAST QUESTIONNAIRE

10. What percentage of the waste forecasted is existing waste? 100%
Of your existing waste, how confident are you in the current shipping schedule? (HIGH) LOW MEDIUM

Explain: THE PROJECT W028 EXCAVATES IN THE EXISTING CONTAMINATED SOIL AREAS FOR TIES.

What percentage of waste forecasted is future generated waste? 0%

Of your future generated waste, how confident are you in the volumes and shipping schedule? HIGH LOW MEDIUM

Explain: THE PROJECT W028 IS A CONSTRUCTION PROJECT, THUS, IT WILL NOT GENERATE RADIOACTIVE, OR HAZARDOUS, OR MIXSOLID WASTE.

10a. Please indicate whether your forecasts include only operational waste, or if transitional waste, environmental restoration (ER) and/or D&D activities have also been included. If transitional waste, ER and D&D have been included, indicate when each of these activities will take place.

THE FORECAST VOLUME IS ONLY DURING THE CONSTRUCTION ACTIVITIES. THE PROJECT IS ONLY RESPONSIBLE FROM CONCEPTUAL DESIGN TO START UP ACTIVITIES. THUS, OPERATIONAL, ER, AND/OR D&D ACTIVITIES ARE OUTSIDE OF THE PROJECT SCOPE.

10b. If you have not included transitional waste, ER, or D&D waste, will this waste potentially be managed at Hanford? Please provide an estimate of the expected volumes and years that the waste would be shipped.

THE PROJECT DO NOT HAVE ENOUGH INFORMATION AT THIS TIME TO HAVE THE ESTIMATED WASTE GENERATION FOR DURING OPERATION, ER, D&D PHASES.

11. Please supply contact personnel information for data verification. Names must be typed (or printed) as well as written:

LLW: D.V. Vo Douglas Vo Phone: 376-5784

LLMW: _____ Phone: _____

TRU: _____ Phone: _____

TRUM: _____ Phone: _____

HAZ: _____ Phone: _____

(Waste Contact)

Approved by: _____ For MAC Date: 7/18/94
(Level 3 Manager Signature)

Approved by: L. Thompson Date: 7/18/94
(Budget Concurrence)

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COVER SHEET

1994 SOLID WASTE FORECAST REQUEST FORM

Generator (Project/Facility) WHC_TWP_W030 Ventilation Upgrades

Waste Class	Contact	Phone
LLW	K.A.(Kris) Colosi	2-2803
LLMW	N/A	
HAZ	N/A	
TRU	N/A	
TRUM	N/A	
LEVEL III APPROVAL	M.A.(Mike) Cahill	2-0474

(Fill out and/or correct above and keep this sheet with forecast)

RECEIVED
JUL 18 1994
K. L. HLADEK

PROJECTED SOLID WASTE EXTEI _ VOLUMES (FT3)

TABLE 1 p. . of 5

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH-LLW-I	EST.(CuFt)	1500	700	300												
	MIN. %100	1000	700	300												
	MAX. %200	2000	1400	600												
CH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

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Container Type ıd Volume %

TABLE 2 Pr 1 of 4

STEP1: CIRC ıE WASTE CLASS

(CH-LLW-I)
CH-LLW-III
CH-LLW-GTC-III
RH-LLW-I
RH-LLW-III
RH-LLW-GTC-III

STEP 2: ↓

COMPLETE A **SEPARATE** TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 3: Indicate **Volume %** of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt	30	40	60																												
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt	70	60	40																												
4 X 4 X 8 Box W/O Skids 128 CuFt																															
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)	100%	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal)._____

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria). "OTHER" containers may be accepted.

STEP 1 CONTAINER TYP. 55 gal Drum

STEP 2 YEARS 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

Physical Waste Forms/ W & TRU

A separate Table 3 must be completed for each container identified in Table 2

STEP 3 Indicate Volume % of each Waste Form present for each Waste Class

WASTE FORMS	CH LLWI	CH LLWIII	CH LLW GTCIII	RH LLWI	RH LLWIII	RH LLW GTCIII	CH TRU	RH TRU	Waste Forms Segregated? Y/N
SHIELDING									
STEEL									
LEAD									
CONCRETE									
SOLID PROCESS RESIDUES									
INORGANIC PARTICULATES									
INORGANIC ABSORBED LIQ/SLUDGE									
ORGANIC PARTICULATES									
ORGANIC ABSORBED LIQ/SLUDGE									
SOILS									
CONTAMINATED SOILS	30%								
DEBRIS CONTAMINATED SOILS									
DEBRIS WASTE									
METAL									
INORGANIC NON-METAL	10%								
COMBUSTIBLE	20%								
HETEROGENEOUS	10%								
SPECIAL WASTE									
LAB PACKS/CONTAINERIZED LIQUIDS									
UNKNOWN									
OTHER *									
TOTAL[1] (0 OR 100%)	100%								

[1] Total for Each Waste Class MUST Equal 0 or 100%

* OTHER WASTE DESCRIPTION: _____

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STEP 1 CONTAINER TYPE 4x4x8 Box

STEP 2 YEARS 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

Physical Waste Forms/ LLW & TRU

TABLE 3 page 1 of 1

A separate Table 3 must be completed for each container identified in Table 2

STEP 3 Indicate Volume % of each Waste Form present for each Waste Class

WASTE FORMS	CH LLWI	CH LLWIII	CH LLW GTCIII	RH LLWI	RH LLWIII	RH LLW GTCIII	CH TRU	RH TRU	Are Waste Forms Segregated? Y/N
SHIELDING									
STEEL									
LEAD									
CONCRETE									
SOLID PROCESS RESIDUES									
INORGANIC PARTICULATES									
INORGANIC ABSORBED LIQ/SLUDGE									
ORGANIC PARTICULATES									
ORGANIC ABSORBED LIQ/SLUDGE									
SOILS									
CONTAMINATED SOILS	10%								
DEBRIS CONTAMINATED SOILS									
DEBRIS WASTE									
METAL	40%								
INORGANIC NON-METAL	50%								
COMBUSTIBLE									
HETEROGENEOUS									
SPECIAL WASTE									
LAB PACKS/CONTAINERIZED LIQUIDS									
UNKNOWN									
OTHER *									
TOTAL[1] (0 OR 100%)	100%								

[1] Total for Each Waste Class MUST Equal 0 or 100%

* OTHER WASTE DESCRIPTION : _____

WHC-SP-1101-91

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WASTE CLAS CH LLW.T

CONTAINER TYPE: 55gal drum

Ra ..ation Type

YEARS 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please Indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Cs137 & Sr90 Fission Product BETA-GAMMA		Uranium/ Neptunium		(Pu/Am) Pu239 & Pu240		Volatile Radionuclide (^{14}C, ^{99}Tc, ^{129}I) Rn,Kr,Xe		Selenium		Technetium 99	
	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES												
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE												
SOILS												
CONTAMINATED SOILS	8.19xE-15 76.15xE-18	8.19E-17			90.6E-21 90.6E-21	1.812E-18	11.53 TIA 6E15	.53				
DEBRIS CONTAMINATED SOILS												

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WASTE CLA CHLLWI

CONTAINER TYPE: 55 gal drum

YEAR 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

Radiation Type

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please Indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Cs137 & Sr90 Fission Product BETA-GAMMA		Uranium/ Neptunium		(Pu/Am, Pu239 & Pu241)		Volatile Radionuclide (14C, 3H, 129I Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT (CURIES)	CONC. Ci/m3	TOTAL ACT. (CURIES)	CONC. Ci/m3	TOTAL ACT. (CURIES)	CONC. Ci/m3	TOTAL ACT. (CURIES)	CONC. Ci/m3	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL												
INORGANIC NON-METAL	8.19E-18 7.45E-08	8.49E-17			90.61E-21 90.61E-21	1.81ZE-18	H3 · 53 I129 6E-19	.53				
COMBUSTIBLE												
HETEROGENEOUS												
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: _____

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VASTE CLAS CH-LLW-I

CONTAINER TYPE: 4x4x8 Box

Radiation Type

YEARS 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA (Cs_{137} & Sr_{90})		Uranium/ Neptunium		Pu/Am (Pu_{239} & Pu_{240})		Volatile Radionuclide (^{14}C, ^{3}H, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m³	TOTAL ACT (CURIES)	CONC. Ci/m³	TOTAL ACT (CURIES)	CONC. Ci/m³	TOTAL ACT (CURIES)	CONC. Ci/m³	TOTAL ACT (CURIES)	CONC. Ci/m³	TOTAL ACT (CURIES)	CONC. Ci/m³	TOTAL ACT. (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES												
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE												
SOILS												
CONTAMINATED SOILS	8.49×10^{-4} 76.45×10^{-5}	$8.49E17$			90.61×10^{-21} 90.61×10^{-21}	1.812×10^{-19}	H_3 .53 T_{129} 6.7×10^{-15}	.53				
DEBRIS CONTAMINATED SOILS												

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WASTE CL: CHLLWI

CONTAINER TYPE: 4X4X8 BOX

YEAR 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

Radiation Type

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please Indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA (Cs^{137} Sr^{90})		Uranium/ Neptunium		Pu/Am (Pu^{239} & Pu^{240})		Volatile Radionuclide (^{14}C ^{3}H ^{129}I Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m³	TOTAL ACT (CURIES)	CONC. Ci/m³	TOTAL ACT (CURIES)	CONC. Ci/m³	TOTAL ACT (CURIES)	CONC. Ci/m³	TOTAL ACT. (CURIES)	CONC. Ci/m³	TOTAL ACT. (CURIES)	CONC. Ci/m³	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL	8.19E-18 76.45E-18	8.19E-17			90.61E-21 90.61E-21	1.812E-19	H_3 .53 I_{129} 6E-6	.53				
INORGANIC NON-METAL	8.19E-18 76.45E-18	8.19E-17			90.61E-21 90.61E-21	1.812E-19	H_3 .53 I_{129} 6E-6	.53				
COMBUSTIBLE												
HETEROGENEOUS												
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: _____

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1994 SOLID WASTE FORECAST QUESTIONNAIRE

A. Please answer all questions. This information will help determine Hanford's treatment, storage, and disposal requirements.

Question 4 (for all waste classes) and Question 5 (for mixed and hazardous waste only) provide a basis for determining how your waste will be grouped. Be sure to answer these questions or your forms will be returned.

B. Ensure that the contact name, Level 3 Manager, and budget personnel are identified in the sign-off area of the questionnaire. Names must be typed (or printed) as well as written.

1. Please circle the waste classes that will be generated.

(CH_LLW_I)	CH_LLW_III	CH_LLW_GTCIII
RH_LLW_I	RH_LLW_III	RH_LLW_GTC_III
CH_LLMW_I	CH_LLMW_III	CH_LLMW_GTCIII
RH_LLMW_I	RH_LLMW_III	RH_LLMW_GTCIII
CH_TRU	CH_TRUM	HAZ
RH_TRU	RH_TRUM	

2. Generally describe these wastes and how they will be generated.

WASTE WAS PREVIOUSLY GENERATED DURING PRODUCTION AND STORED IN AN/AZ TANK FARMS. THE WASTE DISPOSAL WILL BE GENERATED DURING CONSTRUCTION ACTIVITIES FOR REPLACEMENT OF THE 4 TANKS PRIMARY VENTILATION/COOLING SYS

3. Have your waste volumes changed from your previous forecast? (Yes) No

Explain: BETTER DESIGN DEFINITION

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1994 SOLID WASTE FORECAST QUESTIONNAIRE

4.) Will waste be separated into like waste forms prior to shipping? (If you generate contaminated soils, inorganic particulates and metal debris, will you ship these waste in separate containers or will the waste be combined and placed into one container?)

Please explain for each waste class:

THIS CHLLWI WASTE WILL MORE THAN LIKELY BE NON SEGREGATED

5. If you generate hazardous or mixed waste please answer the following question.

Will you place several hazardous constituents in one container or will you segregate the constituents prior to shipping? (If you generate toxic metals and ignitables will you ship these constituents in separate containers or will they be combined and placed into one container?)

If the hazardous constituents are segregated, make sure each waste class by waste form (reference Table 4) has been explained using the method in Attachment B. Please provide further explanation if needed.

N/A

6. Describe your quarterly expected shipping schedule for each applicable waste class during FY-1995 (e.g., 40% of waste shipped during the first quarter, 20% in the second quarter, etc.).

1ST - 30% 2ND - 20% 3rd - 40% 4th - 10%

1994 SOLID WASTE FORECAST QUESTIONNAIRE

7. Discuss the assumptions that were used to prepare this forecast. (Identify known dates for facility closure, decontamination and decommissioning [D&D], or any new programs that drive the forecast data provided in this request.)

① Replacement of AY/AZ vent system during FY 1995-FY 1997

② Pipeless flow diagrams used for type & concentration (based on 1992 data)

8. What assumptions were used in estimating the minimum and maximum waste volumes identified in Table 1? (Minimum waste percentage is based upon the majority of the waste being sent to a commercial disposal site. Maximum waste percentage is based upon additional projects being initiated that will generate waste not accounted for in the best estimate volume.)

Minimum: Based on final estimate from definitive design

Maximum: Unknown factor during construction i.e., reroutes of lines.

9. Indicate confidence level for the following waste characterization data: (The physical waste forms are based upon historical characterization information.)

Physical Waste Forms (Table 3): High Low (Medium)

Explain: _____

Hazardous Constituents (Table 4): High Low Medium

Explain: _____

Radiation Type (Table 5) (High) Low Medium

Explain: Based on process flow data from samples and known transfers to tanks

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1994 SOLID WASTE FORECAST QUESTIONNAIRE

10. What percentage of the waste forecasted is existing waste? 60%
Of your existing waste, how confident are you in the current shipping schedule? HIGH LOW (MEDIUM)

Explain: Time frame will be 1995-1997, but quarterly figures may be altered
What percentage of waste forecasted is future generated waste? 40%

Of your future generated waste, how confident are you in the volumes and shipping schedule? HIGH LOW (MEDIUM)

Explain: See ABOVE

10a. Please indicate whether your forecasts include only operational waste, or if transitional waste, environmental restoration (ER) and/or D&D activities have also been included. If transitional waste, ER and D&D have been included, indicate when each of these activities will take place.

TRANSITIONAL / OPERATIONAL AND CONSTRUCTION debris.

10b. If you have not included transitional waste, ER, or D&D waste, will this waste potentially be managed at Hanford? Please provide an estimate of the expected volumes and years that the waste would be shipped.

YES, ≈ 2000 M3 / FY 1995-1997

11. Please supply contact personnel information for data verification. Names must be typed (or printed) as well as written:

LLW: Kris Colosi Phone: 372-2303

LLMW: _____ Phone: _____

TRU: _____ Phone: _____

TRUM: _____ Phone: _____

HAZ: _____ Phone: _____

(Waste Contact)

Approved by: _____ FOR MA Date: 7/18/94
(Level 3 Manager Signature)

Approved by: _____ Date: 7/18/94
(Budget Concurrence)

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DON'T SAY IT --- *Write It!*

DATE: June 1, 1994

SUBJECT: SOLID WASTE VOLUME FORECAST

Alex Stephan (372-1653) will coordinate completion of the FY-94 Solid Waste Volume Forecast for TWP. Please let Alex know when you have forwarded your completed input to O. J. Valero (H5-33). Note, input is due July 14, 1994.

Any questions regarding waste types or completion of the forms should be directed to the individuals identified in the last paragraph of the attached memo.

Kris Colosi

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COVER SHEET

1994 SOLID WASTE FORECAST REQUEST FORM

Generator (Project/Facility) WHC_TWP_W058 Cross-Site Transfer

Waste Class	Contact	Phone
LLW	D.V.(Doug) Vo	6-5784
LLMW	N/A	
HAZ	N/A	
TRU	N/A	
TRUM	N/A	
LEVEL III APPROVAL	M.A.(Mike) Cahill	2-0474

(Fill out and/or correct above and keep this sheet with forecast)

RECEIVED
JUL 18 1994

PROJECTED SOLID WASTE EXTE[illegible]AL VOLUMES (FT3)

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH-LLW-I	EST.(CuFt)	1250	6500	5250												
	MIN. %	75	75	75												
	MAX. %	125	125	125												
CH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

TABLE 1

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLW-GTC III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-I	EST.(CuFt)															
	MIN. %															
	MAX. %															

PROJECTED SOLID WASTE EXTE' .L VOLUMES (FT3)

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-. LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
HAZ.	EST.(CuFt)															
	MIN. %															
	MAX. %															

PROJECTED SOLID WASTE EXTE. .AL VOLUMES (FT3)

TABLE 1

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	ESTIMATE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
RH-LLMW-III	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-LLMW-GTCIII	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRU	EST.(CuFt)															
	MIN. %															
	MAX. %															
CH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
RH-TRUM	EST.(CuFt)															
	MIN. %															
	MAX. %															
HAZ.	EST.(CuFt)															
	MIN. %															
	MAX. %															

PROJECTED SOLID WASTE EXTERNAL VOLUMES (FT3)

N/A

REPORT SHIELDED RH WASTE AS RH WASTE NOT CH WASTE

WASTE CLASS	1994 ESTIMATE (CuFt)
CH-LLW-I	ϕ
CH-LLW-III	
CH-LLW-GTCIII	
RH-LLW-I	
RH-LLW-III	
RH-LLW-GTCIII	
CH-LLMW-I	
CH-LLMW-III	
CH-LLMW-GTCIII	
RH-LLMW-I	
RH-LLMW-III	
RH-LLMW-GTCIII	
CH-TRU	
RH-TRU	
CH-TRUM	
RH-TRUM	
HAZARDOUS	

NOTE: Report on this page any currently stored waste volumes that do not have a shipping schedule. Do not include volumes that are reported from 1995 through 2024.

Container Typ(nd Volume %

TABLE 2 F 1 of 4

STEP1: CIRC.. ONE WASTE CLASS

(CH-LLW-I)
CH-LLW-III
CH-LLW-GTC-III
RH-LLW-I
RH-LLW-III
RH-LLW-GTC-III

STEP 2: ↓

COMPLETE A **SEPARATE** TABLE 2 FOR EACH WASTE CLASS IDENTIFIED IN TABLE 1

STEP 3: Indicate **Volume %** of Waste Class Packaged in Identified Containers

CONTAINERS	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	HELD
55 Gal Drum 9.2 CuFt																															
85 GAL DRUM 12.1 CuFt																															
4 X 4 X 8 Box W/Skids 143 CuFt																															
4 X 4 X 8 Box W/O Skids 128 CuFt	100% 10	100% 51	100% 41																												
4 X 4 X 8 Metal 128 CuFt																															
B-25 103.2 CuFt																															
OTHER																															
* TOTAL (0 or 100%)	100	100	100																												

PER Doug JO Verified changes 8-2-94 DSJ

WHC-SP-1101

* Total for each year MUST equal 0 or 100%

Other - Indicate container type, external dimensions, and external volume (cuft, gal)._____

The containers listed above conform to the acceptance criteria in WHC-EP-0063-4 (Hanford Site Solid Waste Acceptance Criteria). "OTHER" containers may be accepted.

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STEP 1 CONTAINER TYPE 4x4x8 Box w/o skids

STEP 2 YEARS 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

Physical Waste Form LLW & TRU

TABLE 3 page 1 of

A separate Table 3 must be completed for each container identified in Table 2

STEP 3 Indicate **Volume %** of each Waste Form present for each Waste Class

WASTE FORMS	CH LLWI	CH LLWIII	CH LLW GTCIII	RH LLWI	RH LLWIII	RH LLW GTCIII	CH TRU	RH TRU	STEP 4 Are Waste Forms Segregated? Y/N
SHIELDING									
STEEL									
LEAD									
CONCRETE									
SOLID PROCESS RESIDUES									
INORGANIC PARTICULATES									
INORGANIC ABSORBED LIQ/SLUDGE									
ORGANIC PARTICULATES									
ORGANIC ABSORBED LIQ/SLUDGE									
SOILS									
CONTAMINATED SOILS	99								N
DEBRIS CONTAMINATED SOILS									
DEBRIS WASTE									
METAL	1								N
INORGANIC NON-METAL									
COMBUSTIBLE									
HETEROGENEOUS									
SPECIAL WASTE									
LAB PACKS/CONTAINERIZED LIQUIDS									
UNKNOWN									
OTHER *									
TOTAL[1] (0 OR 100%)	100								N

[1] Total for Each Waste Class **MUST** Equal 0 or 100%

* **OTHER WASTE DESCRIPTION :** _____

WHC-SP-1101

4-59

WASTE CLA. . CH-LLW-I

CONTAINER TYPE: 4x4x8 Box w/o SKIDS

Radiation Type

YEARS 1995 TO 1997 (INCLUDE HELD IF APPLICABLE)

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (^{14}C,^{3}H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)	CONC. Ci/m^3	TOTAL ACT (CURIES)
SHIELDING												
STEEL												
LEAD												
CONCRETE												
SOLID PROCESS RESIDUES												
INORGANIC PARTICULATES												
INORGANIC ABSORBED LIQUID/SLUDGES												
SALT WASTE												
ORGANIC PARTICULATES												
ORGANIC ABSORBED LIQ/SLUDGE												
SOILS												
CONTAMINATED SOILS	80	29450										
DEBRIS CONTAMINATED SOILS												

WASTE CLASS: _____

CONTAINER TYPE: _____

YEAR _____ TO _____ (INCLUDE HELD IF APPLICABLE)

Radiation Type

A SEPARATE TABLE 5 MUST BE COMPLETED FOR EACH APPLICABLE WASTE CLASS AND CONTAINER TYPE

RADIATION TYPE: Please indicate the Concentration and Total Activity for each Waste Form

WASTE FORMS	Fission Product BETA-GAMMA		Uranium/ Neptunium		Pu/Am		Volatile Radionuclide (^{14}C,^{3}H,I, Rn,Kr,Xe)		Selenium		Technetium 99	
	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)	CONC. Ci/m^3	TOTAL ACT. (CURIES)
DEBRIS WASTES												
METAL												
INORGANIC NON-METAL												
COMBUSTIBLE												
HETEROGENEOUS												
SPECIAL WASTES												
LABPACKS/CONTAINERIZED LIQ.												
REACTIVE METALS												
EXPLOSIVES/PROPELLENTS												
INHERENTLY HAZARDOUS WASTE												
ELEMENTAL MERCURY												
ELEMENTAL LEAD												
BERYLLIUM WASTE												
BATTERIES												
UNKNOWN												
OTHER												

OTHER WASTE DESCRIPTION: _____

H-60

H-62

1994 SOLID WASTE FORECAST QUESTIONNAIRE

A. Please answer all questions. This information will help determine Hanford's treatment, storage, and disposal requirements.

Question 4 (for all waste classes) and Question 5 (for mixed and hazardous waste only) provide a basis for determining how your waste will be grouped. Be sure to answer these questions or your forms will be returned.

B. Ensure that the contact name, Level 3 Manager, and budget personnel are identified in the sign-off area of the questionnaire. Names must be typed (or printed) as well as written.

1. Please circle the waste classes that will be generated.

(CH_LLW_I)	CH_LLW_III	CH_LLW_GTCIII
RH_LLW_I	RH_LLW_III	RH_LLW_GTC_III
CH_LLMW_I	CH_LLMW_III	CH_LLMW_GTCIII
RH_LLMW_I	RH_LLMW_III	RH_LLMW_GTCIII
CH_TRU	CH_TRUM	HAZ
RH_TRU	RH_TRUM	

2. Generally describe these wastes and how they will be generated.

CONTAMINATED SOIL - GENERATED DURING THE EXCAVATION OF THE NEW CROSS-SITE TRANSFER SYSTEM. THE NEW CROSS-SITE TRANSFER LINES WILL BE CONNECTED TO THE 241-SY TANK FARM AND 244-A LIFT STATION

CONTAMINATED PIPES AND EQUIPMENT - GENERATED DURING TIE-IN AT 241-SY AND 244A L STA

3. Have your waste volumes changed from your previous forecast? (Yes) No

Explain: THE ESTIMATED VOLUME (1500 FT^3) WAS BASED ON TITLE I DESIGN COST ESTIMATE (FILE NO. W058 PAAS). AS RADIOLOGICAL SURVEY DATA UPDATED, ADDITIONAL CONTAMINATED AREAS WERE IDENTIFIED AND OTHER UNCER THUS, THE VOLUME OF CONTAMINATED SOIL WAS INCREASE.

1994 SOLID WASTE FORECAST QUESTIONNAIRE

4.) Will waste be separated into like waste forms prior to shipping? (If you generate contaminated soils, inorganic particulates and metal debris, will you ship these waste in separate containers or will the waste be combined and placed into one container?)

Please explain for each waste class:

EXCAVATION IN CONTAMINATED AREAS AND TIE-IN WITH THE EXISTING LIQUID WASTE TRANSFER PIPING ARE THE ONLY TWO ACTIVITIES THAT GENERATE SOLID WASTE. BOTH ACTIVITIES WILL BE DONE SEPARATELY. THEREFORE, THERE WILL NOT BE WASTE SEGREGATION.

5. If you generate hazardous or mixed waste please answer the following question.

Will you place several hazardous constituents in one container or will you segregate the constituents prior to shipping? (If you generate toxic metals and ignitables will you ship these constituents in separate containers or will they be combined and placed into one container?)

If the hazardous constituents are segregated, make sure each waste class by waste form (reference Table 4) has been explained using the method in Attachment B. Please provide further explanation if needed.

N/A

6. Describe your quarterly expected shipping schedule for each applicable waste class during FY-1995 (e.g., 40% of waste shipped during the first quarter, 20% in the second quarter, etc.).

25% EACH QUARTER

H-64

1994 SOLID WASTE FORECAST QUESTIONNAIRE

7. Discuss the assumptions that were used to prepare this forecast. (Identify known dates for facility closure, decontamination and decommissioning [D&D], or any new programs that drive the forecast data provided in this request.)

THE SOLID WASTE VOLUME WAS BASED ON PROJECT TITLE II ESTIMATE. THE RADIATION TYPE (BETA-GAMMA) CONCENTRATION AND TOTAL ACTIVITY WERE BASED ON HEALTH PHYSICS SURVEY OF THE CROSS-SITE TRANSFER PROPOSED ROUTING AND HISTORICAL DATA

8. What assumptions were used in estimating the minimum and maximum waste volumes identified in Table 1? (Minimum waste percentage is based upon the majority of the waste being sent to a commercial disposal site. Maximum waste percentage is based upon additional projects being initiated that will generate waste not accounted for in the best estimate volume.)

Minimum: THE MINIMUM WAS SET 75%. TWENTY FIVE PERCENT IS NORMALLY USED AS THE LOWER BOUND CONTINGENCY.

Maximum: THE MAXIMUM WAS 125%. TWENTY FIVE PERCENT WAS USE IN THE ESTIMATE FOR COST CONTINGENCY

9. Indicate confidence level for the following waste characterization data: (The physical waste forms are based upon historical characterization information.)

Physical Waste Forms (Table 3): (High) Low Medium

Explain: THE PROJECT IS ANTICIPATED TO GENERATE LLW CONTAMINATED SOI

Hazardous Constituents (Table 4): High Low Medium

Explain: NOT APPLICABLE

Radiation Type (Table 5) High Low (Medium)

Explain: BASED ON RADIOLOGICAL SURVEY INFORMATION

H-65

1994 SOLID WASTE FORECAST QUESTIONNAIRE

10. What percentage of the waste forecasted is existing waste? 100%
Of your existing waste, how confident are you in the current shipping schedule? (HIGH) LOW MEDIUM

Explain: THE PROJECT W058 EXCAVATES IN THE EXISTING CONTAMINATED SOIL AREA FOR TIE-IN.

What percentage of waste forecasted is future generated waste? 0%

Of your future generated waste, how confident are you in the volumes and shipping schedule? HIGH LOW MEDIUM

Explain: THE PROJECT W-058 IS A CONSTRUCTION PROJECT. THUS, IT WILL NOT GENERATE RADIOACTIVE OR HAZARDOUS SOLID WASTE.

10a. Please indicate whether your forecasts include only operational waste, or if transitional waste, environmental restoration (ER) and/or D&D activities have also been included. If transitional waste, ER and D&D have been included, indicate when each of these activities will take place.

THE FORECAST VOLUME IS ONLY DURING THE CONSTRUCTION ACTIVITIES.

THE PROJECT IS RESPONSIBLE FROM CONCEPTUAL DESIGN TO STARTUP ACTIVITIES.

THUS, OPERATIONAL, ER, AND/OR D&D ACTIVITIES ARE OUTSIDE OF THE PROJ. SCOPE

10b. If you have not included transitional waste, ER, or D&D waste, will this waste potentially be managed at Hanford? Please provide an estimate of the expected volumes and years that the waste would be shipped.

THE PROJECT DO NOT HAVE ENOUGH INFORMATION AT THIS TIME TO MAKE THE ESTIMATE FOR DURING OPERATION, ER, D&D PHASES.

11. Please supply contact personnel information for data verification. Names must be typed (or printed) as well as written:

LLW: D.V. Vo Phone: 376-5784

LLMW: _____ Phone: _____

TRU: _____ Phone: _____

TRUM: _____ Phone: _____

HAZ: _____ Phone: _____

(Waste Contact)

Approved by: _____ for MAC Date: 7/18/94
(Level 3 Manager Signature)

Approved by: G. Thompson Date: 7/18/94
(Budget Concurrence)

CHARACTERIZATION

WASTE TYPE DATA

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1995 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1995

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred ~~from~~ to)	Waste Stored (waste unit)
HLW	NA	NA	NA	NA
LLW (SOLID)	71 m^3 *	NA	Solid Waste Program	NA
LLW (LIQUID)	NA	NA	NA	NA
LLHW (SOLID)	42 m^3 **	NA	Solid Waste Program	NA
LLHW (LIQUID)	20,400 l *	NA	TWRS Operations	NA
LLW (GTC3)	NA	NA	NA	NA
TRU	NA	NA	NA	NA
TRUM	NA	NA	NA	NA
HAZARDOUS	2 m^3	NA	Solid Waste Program	NA
SANITARY (LANDFILL)	NA	NA	NA	NA
SANITARY (LANDFILL - ASBESTOS)	NA	NA	NA	NA

*Includes 51 m^3 also reported in WHC-SP-1110.

**Includes 18 m^3 also reported in WHC-SP-1110.

***Includes 14,500 l also reported in WHC-SP-1110.

L-67-H

WHC-SP-1101

FOR THE EXECUTION YEAR - FY 1995 PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

NA

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Wastes generated by Characterization activities are collected and routinely transferred to the appropriate Solid Waste Program facilities in accordance with approved operating procedures.

89-H

SUMMARY WASTE TYPE ISSUES:

No Waste issues

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1996 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1996

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	NA	NA	NA	NA
LLW (SOLID)	59 m^3 *		Solid Waste Program	
LLW (LIQUID)	NA		NA	
LLMW (SOLID)	49 m^3 **		Solid Waste Program	
LLMW (LIQUID)	20,400 l ***		TWRS Operations	
LLW (GTC3)	NA		NA	
TRU	NA			
TRUM	NA			
HAZARDOUS	3 m^3		Solid Waste Program	
SANITARY (LANDFILL)	NA		NA	
SANITARY (LANDFILL - ASBESTOS)	NA		NA	

69-H

* Includes 42 m^3 also reported in WHC-SP-1110

** Includes 15 m^3 also reported in WHC-SP-1110

*** Includes 14,500 l also reported in WHC-SP-1110

WHC-SP-1101

FOR THE EXECUTION YEAR - FY 1998 6 PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

NA

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Wastes generated by Characterization activities are collected and routinely transferred to the appropriate Solid Waste Program facilities in accordance with approved operating procedures.

H-70

SUMMARY WASTE TYPE ISSUES:

No Waste issues

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1997 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1997

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	NA	NA	NA	NA
LLW (SOLID)	46 m^3 *		Solid Waste Program	
LLW (LIQUID)	NA		NA	
LLMW (SOLID)	36 m^3 **		Solid Waste Program	
LLMW (LIQUID)	29,400 l ***		TWRS Operations	
LLW (GTC3)	NA		NA	
TRU	NA		NA	
TRUM	NA		NA	
HAZARDOUS	2 m^3		Solid Waste Program	
SANITARY (LANDFILL)	NA		NA	
SANITARY (LANDFILL - ASBESTOS)	NA		NA	

IC-H

* Includes 33 m^3 also reported in WHC-SP-1110
** Includes 11 m^3 also reported in WHC-SP-1110
*** Includes 14,500 l also reported in WHC-SP-1110

WHC-SP-1101

FOR THE EXECUTION YEAR - FY 1997 PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

NA

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Wastes generated by Characterization activities are collected and routinely transferred to the appropriate Solid Waste Program facilities in accordance with approved operating procedures.

H-72

SUMMARY WASTE TYPE ISSUES:

No Waste issues

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the years FY 1998 - 2025 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1998 - 2025

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	NA	NA	NA	NA
LLW (SOLID)	1250 m^3 *		Solid Waste Program	
LLW (LIQUID)	NA		NA	
LLMW (SOLID)	698 m^3**		Solid Waste Program	
LLMW (LIQUID)	559,000 l***		TWRS Operations	
LLW (GTC3)			NA	
TRU				
TRUM				
HAZARDOUS	27 m^3		Solid Waste Program	
SANITARY (LANDFILL)	NA		NA	
SANITARY (LANDFILL - ASBESTOS)				

EW-4

* Includes 895 m^3 also reported in WHC-SP-1110

** Includes 306 m^3 also reported in WHC-SP-1110

*** Includes 393,000 l also reported in WHC-SP-1110

WHC-SP-1101

1998-2025.

FOR THE EXECUTION YEAR - FY ~~1995~~, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

NA

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Wastes generated by Characterization activities are collected and routinely transferred to the appropriate Solid Waste Program facilities in accordance with approved operating procedures.

SUMMARY WASTE TYPE ISSUES:

No Waste issues

H-24

WASTE RETRIEVAL

WASTE TYPE DATA

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1995 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1995

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	None	None	None	None
LLW (SOLID)	70 m^3	None	70 m^3 (to Solid Waste Disposal)	None
LLW (LIQUID)	None	None	None	None
LLMW (SOLID)	250 m^3	None	250 m^3 (to Solid Waste Disposal)	None
LLMW (LIQUID)	None	None	None	None
LLW (GTC3)	None	None	None	None
TRU	None	None	None	None
TRUM	None	None	None	None
HAZARDOUS	None	None	None	None
SANITARY (LANDFILL)	None	None	None	None
SANITARY (LANDFILL - ASBESTOS)	None	None	None	None

H-75, 1

WHC-SP-1101

TTT-43

FOR THE EXECUTION YEAR - FY 1995 PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

Waste storage other than by approved means is not anticipated.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Compliance with the Hanford Site Waste Acceptance Criteria.

SUMMARY WASTE TYPE ISSUES:

Large item storage and characterization.

HF15.2

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1996 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1996

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	None	None	None	None
LLW (SOLID)	50 m^3		50 m^3 (to Solid Waste Disposal)	
LLW (LIQUID)	None		None	
LLMW (SOLID)	100 m^3		100 m^3 (to Solid Waste Disposal)	
LLMW (LIQUID)	None		None	
LLW (GTC3)				
TRU				
TRUM				
HAZARDOUS				
SANITARY (LANDFILL)				
SANITARY (LANDFILL - ASBESTOS)				

H-75.3

WHC-SP-1101

FOR THE FY 1996, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

See FY 1995 response.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

SUMMARY WASTE TYPE ISSUES:

H-75.4

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1997 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1997

Waste Type	Waste Generated (Waste unit, e.g., gallons)	Waste Received (Waste unit, and name of program received from)	Waste Transferred (Waste unit and name of program transferred from)	Waste Stored (Waste unit)
HLW	None	None	None	None
LLW (SOLID)	50 m^3		50 m^3 (to Solid Waste Disposal)	
LLW (LIQUID)	None		None	
LLMW (SOLID)	300 m^3		300 m^3 to Solid Waste Disposal	
LLMW (LIQUID)	None		None	
LLW (GTC3)				
TRU				
TRUM				
HAZARDOUS				
SANITARY (LANDFILL)				
SANITARY (LANDFILL - ASBESTOS)				

H-75.5

FOR THE FY 1997, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

See FY95 Response.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

SUMMARY WASTE TYPE ISSUES:

H-75,6

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the years FY 1998 - 2025 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1998 - 2025

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	$1(10)^8$ kg	None	$1(10)^8$ (to Pretreatment	none
LLW (SOLID)	210,000 m^3		210,000 m^3 (to Solid Waste Disposal)	
LLW (LIQUID)	$1(10)^9$ kg		$1(10)^9$ kg (to Pretreatment)	
LLMW (SOLID)	210,000 m^3		210,000 m^3 (to Solid Waste Disposal)	
LLMW (LIQUID)	none		none	
LLW (GTC3)	none		none	
TRU	none		none	
TRUM	none		none	
HAZARDOUS	2400 m^3		(to Solid Waste Disposal) 2400 m^3	
SANITARY (LANDFILL)	none		none	
SANITARY (LANDFILL - ASBESTOS)	none		none	

H-15-7

FOR THE YEARS FY 1998 - 2025, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

See R495 Response.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

SUMMARY WASTE TYPE ISSUES:

8SL-H

WASTE PRETREATMENT

WASTE TYPE DATA

RProgram Element _Waste Pretreatment_
WBS Number _1.1.1.3.01_____

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1995 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1995

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	Less than 20 gallons	Core & bottle samples from Characterization Program Element	Some will be transferred to LANL	Core & bottle samples
LLW (SOLID)	N/A	N/A	N/A	N/A
LLW (LIQUID)	N/A	N/A	N/A	N/A
LLMW (SOLID)	N/A	N/A	N/A	N/A
LLMW (LIQUID)	N/A	N/A	N/A	N/A
LLW (GTC3)	N/A	N/A	N/A	N/A
TRU	N/A	N/A	N/A	N/A
TRUM	N/A	N/A	N/A	N/A
HAZARDOUS	N/A	N/A	N/A	N/A
SANITARY (LANDFILL)	N/A	N/A	N/A	N/A
SANITARY (LANDFILL - ASBESTOS)	N/A	N/A	N/A	N/A

N/A = Not Applicable

H-77

FOR THE EXECUTION YEAR - FY 1995 PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

Core samples and bottle samples will be used in 222-S, 324, 325, and PUREX laboratories for Pretreatment Process Development (sludge washing, sludge treatment, and ion exchange). A fraction of these samples will be archived in the laboratories for up to five (5) years to support further development tests, should the need arise.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Some of the high level waste (HLW) material will be transferred to LANL and possibly ORNL for further pretreatment process development (sludge and supernatant treatment). Most of the cesium will be removed from waste by ion exchange at Hanford before the remaining fraction is shipped by approved casks to the other national labs.

H-78

SUMMARY WASTE TYPE ISSUES:

No issues.

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1996 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1996

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	Less than 20 gallons	Core and bottle samples from Characterization Program Element	Some will be transferred to LANL	Core and bottle samples
LLW (SOLID)	N/A	N/A	N/A	N/A
LLW (LIQUID)	N/A	N/A	N/A	N/A
LLMW (SOLID)	N/A	N/A	N/A	N/A
LLMW (LIQUID)	N/A	N/A	N/A	N/A
LLW (GTC3)	N/A	N/A	N/A	N/A
TRU	N/A	N/A	N/A	N/A
TRUM	N/A	N/A	N/A	N/A
HAZARDOUS	N/A	N/A	N/A	N/A
SANITARY (LANDFILL)	N/A	N/A	N/A	N/A
SANITARY (LANDFILL - ASBESTOS)	N/A	N/A	N/A	N/A

N/A = Not applicable

6L-H1

FOR THE FY 1996, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

Core samples and bottle samples will be used in 222-S, 324, 325, and PUREX laboratories for Pretreatment Process Development (sludge washing, sludge treatment, and ion exchange). A fraction of these samples will be archived in the laboratories for up to five (5) years to support further development tests, should the need arise.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Some of the high level waste (HLW) material will be transferred to LANL and possibly ORNL for further pretreatment process development (sludge and supernatant treatment). Most of the cesium will be removed from waste by ion exchange at Hanford before the remaining fraction is shipped by approved casks to the other national labs.

08-H

SUMMARY WASTE TYPE ISSUES:

No issues.

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1997 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1997

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	Less than 20 gallons	Core and bottle samples from Characterization Program Element	Some will be transferred to LANL	Core and bottle samples
LLW (SOLID)	N/A	N/A	N/A	N/A
LLW (LIQUID)	N/A	N/A	N/A	N/A
LLMW (SOLID)	N/A	N/A	N/A	N/A
LLMW (LIQUID)	N/A	N/A	N/A	N/A
LLW (GTC3)	N/A	N/A	N/A	N/A
TRU	N/A/	N/A	N/A	N/A
TRUM	N/A	N/A	N/A	N/A
HAZARDOUS	N/A	N/A	N/A	N/A
SANITARY (LANDFILL)	N/A	N/A	N/A	N/A
SANITARY (LANDFILL - ASBESTOS)	N/A	N/A	N/A	N/A

N/A = Not Applicable

18-44

FOR THE FY 1997, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

Core samples and bottle samples will be used in 222-S, 324, 325, and PUREX laboratories for Pretreatment Process Development (sludge washing, sludge treatment, and ion exchange). A fraction of these samples will be archived in the laboratories for up to five (5) years to support further development tests, should the need arise.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Some of the high level waste (HLW) material will be transferred to LANL and possibly ORNL for further pretreatment process development (sludge and supernatant treatment). Most of the cesium will be removed from waste by ion exchange at Hanford before the remaining fraction is shipped by approved casks to the other national labs.

H-8-2

SUMMARY WASTE TYPE ISSUES:

No issues.

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the years FY 1998 - 2025 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1998 - 2025 Part I

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	Less than 200 gallons/year	25 liter samples from Retrieval Program Element	Returned to Tank Farms Operations or forwarded to LLW and HLW Vitrification Program Elements for hot testing of the vitrification process	Some in use in bench/pilot scale hot testing
LLW (SOLID)	N/A	N/A	N/A	N/A
LLW (LIQUID)	N/A	N/A	N/A	N/A
LLMW (SOLID)	N/A	N/A	N/A	N/A
LLMW (LIQUID)	N/A	N/A	N/A	N/A
LLW (GTC3)	N/A	N/A	N/A	N/A
TRU	N/A	N/A	N/A	N/A
TRUM	N/A	N/A	N/A	N/A
HAZARDOUS	N/A	N/A	N/A	N/A
SANITARY (LANDFILL)	N/A	N/A	N/A	N/A
SANITARY (LANDFILL - ASBESTOS)	N/A	N/A	N/A	N/A

N/A = Not Applicable

H-83

FOR THE YEARS FY 1998 - 2025, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

Some of the waste received from the Retrieval Program Element will be used in the hot tests (bench or pilot scale) in PNL labs or WHC labs. The facilities where these tests will be performed will be identified in FY 1995. As the pretreatment tests are completed, the wastes will be returned to the tank farms or the pretreated wastes will be made available to the LLW and HLW Disposal Programs for vitrification hot bench scale testing.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

The wastes will be transferred in approved casks or the LR56 Transporter ("the French Truck") from the tank farms to the test facilities and back to the tank farms. That waste made into glass by the LLW and HLW Disposal Facilities will be stored for disposition along with the production material.

SUMMARY WASTE TYPE ISSUES:

TBD

48-H

Program:

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the years FY 1998 - 2025 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1998 - 2025 Part II

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	•116,500 liters/day liquids (595M liters of 5 molar sodium liquids total •3,365 Kg/day (17.2M kg solids total	From Tank Farm Retrieval Operations	LLW Disposal Program/ HLW Disposal Program	None
LLW (SOLID)	None		None	None
LLMW (LIQUID)				
LLMW (SOLID)	Failed equipment- estimate not available at this time		Solid Waste Program	
LLMW (LIQUID)	Estimate not available at this time	Received from LLW Disposal and HLW Disposal Program Elements	After cleanup, 250,000 liter/day (1.24B liters of evaporator process condensate total sent to 200 Areas Liquid Effluent Treatment Facility	None
LLW (GTC3)	None			
TRU	None			
TRUM	None			
HAZARDOUS	Estimate not available at this time		Solid Waste Program	
SANITARY (LANDFILL)	Estimate not available at this time			
SANITARY (LANDFILL - ASBESTOS)	None			

N/A = Not Applicable

H-85

FOR THE YEARS FY 1998 - 2025, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

- No plans to store production waste
- Liquids will be transferred as noted in table
- Solids will be transferred as noted in table

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Reference for this information is "TWRS Process Flowsheet", WHC-SD-WM-TI-613, Rev 0, dated June 29, 1994. This will be updated in FY 1995 to reflect an operating scenario of which tanks will be retrieved in what sequence. The liquid effluent values are the totals for all disposal operations (waste retrieval, waste pretreatment, LLW vitrification, and HLW vitrification).

H-86

SUMMARY WASTE TYPE ISSUES:

TBD

LOW-LEVEL WASTE

WASTE TYPE DATA

Program Element Facility Operations
WBS Number 1.1.1.3.02.03

Program: Low Level Waste Program

Qualify waste by appropriate waste quantity (e.g., cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1995 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1995

Waste Type	Waste Generated	Waste Received	Waste Transferred	Waste Stored
HLW	none	none	none	none
LLW (Solid)	none	none	none	none
LLW (Liquid)	none	none	none	none
LLMW (Solid)	none	none	none	none
LLMW (Liquid)	none	none	none	none
LLW (GTC3)	none	none	none	none
TRU	none	none	none	none
TRUM	none	none	none	none
Hazardous	none	none	none	none
Sanitary (Landfill)	0.4 m^3	none	0.4 m^3 (to Landfill)	none
Sanitary (Asbestos)	none	none	none	none

88-H

FOR FY 1995, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

Plans for waste storage:

No waste will be stored.

Plans for Interprogram waste transfer and/or disposition:

Sanitary (landfill) waste from offices will be sent to landfill through janitorial services.

Summary Waste Type Issues:

None.

68-H

Program Element Facility Operations
WBS Number 1.1.1.3.02.03

Program: Low Level Waste Program

Qualify waste by appropriate waste quantity (e.g., cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1996 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1996

Waste Type	Waste Generated	Waste Received	Waste Transferred	Waste Stored
HLW	none	none	none	none
LLW (Solid)	none	none	none	none
LLW (Liquid)	none	none	none	none
LLMW (Solid)	none	none	none	none
LLMW (Liquid)	none	none	none	none
LLW (GTC3)	none	none	none	none
TRU	none	none	none	none
TRUM	none	none	none	none
Hazardous	none	none	none	none
Sanitary (Landfill)	0.4 m^3	none	0.4 m^3 (to Landfill)	none
Sanitary (Asbestos)	none	none	none	none

H-90

FOR FY 1996, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

Plans for waste storage:

No waste will be stored.

Plans for Interprogram waste transfer and/or disposition:

Sanitary (landfill) waste from offices will be sent to landfill through janitorial services.

Summary Waste Type Issues:

None.

16-H

Program Element Facility Operations
WBS Number 1.1.1.3.02.03

Program: Low Level Waste Program

Qualify waste by appropriate waste quantity (e.g., cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1997 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1997

Waste Type	Waste Generated	Waste Received	Waste Transferred	Waste Stored
HLW	none	none	none	none
LLW (Solid)	none	none	none	none
LLW (Liquid)	none	none	none	none
LLMW (Solid)	none	none	none	none
LLMW (Liquid)	none	none	none	none
LLW (GTC3)	none	none	none	none
TRU	none	none	none	none
TRUM	none	none	none	none
Hazardous	none	none	none	none
Sanitary (Landfill)	0.8 m^3	none	0.8 m^3 (to Landfill)	none
Sanitary (Asbestos)	none	none	none	none

H-92

FOR FY 1997, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

Plans for waste storage:

No waste will be stored.

Plans for Interprogram waste transfer and/or disposition:

Sanitary (landfill) waste from offices will be sent to landfill through janitorial services.

Summary Waste Type Issues:

None.

H-93

Program Element Facility Operations
WBS Number 1.1.1.3.02.03

Program: Low Level Waste Program

Qualify waste by appropriate waste quantity (e.g., cubic meters, gallons, kilograms, etc.) for the EXECUTION YEARS - FY 1998 - 2025 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1998 - 2025

Waste Type	Waste Generated	Waste Received	Waste Transferred	Waste Stored
HLW	none	none	none	none
LLW (Solid)	28,000 m^3	none	28,000 m^3 (to Solid Waste Disposal)	none
LLW (Liquid)	910,000,000 kg	1,100,000,000 kg (from Pretreatment)	none	569,000,000 kg
LLMW (Solid)	600 m^3	none	600 m^3 (to Solid Waste Disposal)	none
LLMW (Liquid)	none	none	none	none
LLW (GTC3)	none	none	none	none
TRU	none	none	none	none
TRUM	none	none	none	none
Hazardous	2400 m^3	none	2400 m^3 (to Solid Waste Disposal)	none
Sanitary (Landfill)	14,400 m^3	none	14,400 m^3 (to Landfill)	none
Sanitary (Asbestos)	none	none	none	none

H-94

FOR FY 1998 - 2025, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

Plans for waste storage:

Vitrified low level waste will be stored onsite in 43 large vaults (5300 m^3 each), total volume 228,000 m^3, total mass 569,000 metric tons. No other waste will be stored.

Plans for Interprogram waste transfer and/or disposition:

Solid LLW will be transferred to the onsite low level waste disposal site. Hazardous and LLMW waste will be transferred to the onsite hazardous treatment plant for disposal. Sanitary (landfill) waste from offices will be sent to landfill through janitorial services.

Summary Waste Type Issues:

Need assurance that adequate LLW storage space and LLMW and Hazardous waste processing capability will be available onsite in order to support the LLW program mission.

H-95

HIGH-LEVEL WASTE

WASTE TYPE DATA

Program Element Facilities Operations Page ___ of ___
WBS Number 1.1.1.3.03.03

Program: High Level Waste Program

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the EXECUTION YEAR - FY 1995 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1995

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	none	none	none	none
LLW (SOLID)	none	none	none	none
LLW (LIQUID)	none	none	none	none
LLMW (SOLID)	none	none	none	none
LLMW (LIQUID)	none	none	none	none
LLW (GTC3)	none	none	none	none
TRU	none	none	none	none
TRUM	none	none	none	none
HAZARDOUS	none	none	none	none
SANITARY (LANDFILL)	0.2 cu. meter	none	0.2 cu. meter to landfill	none
SANITARY (LANDFILL - ASBESTOS)	none	none	none	none

H-97

Program Element __Facility Operations_____ Page____of____
WBS Number ___1.1.1.3.03.03_____

FOR THE EXECUTION YEAR - FY 1995 PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

No waste will be stored.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Sanitary (landfill) waste from offices will be sent to landfill through janitoriial services.

SUMMARY WASTE TYPE ISSUES:

None.

H-98

Program Element Facility Operations Page ___ of ___
WBS Number 1.1.1.3.03.03

Program: High Level Waste Program

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1996 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1996

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	none	none	none	none
LLW (SOLID)	none	none	none	none
LLW (LIQUID)	none	none	none	none
LLMW (SOLID)	none	none	none	none
LLMW (LIQUID)	none	none	none	none
LLW (GTC3)	none	none	none	none
TRU	none	none	none	none
TRUM	none	none	none	none
HAZARDOUS	none	none	none	none
SANITARY (LANDFILL)	0.4 cu. meter	none	0.4 cu. meter to landfill	none
SANITARY (LANDFILL - ASBESTOS)	none	none	none	none

Program Element ___Facility Operations_____ Page____of____
WBS Number ____1.1.1.3.03.03_____

FOR THE FY 1996, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

No waste will be stored.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Sanitary (landfill) waste from offices will be sent to landfill through janitorial services.

SUMMARY WASTE TYPE ISSUES:

None.

H-100

Program Element Facility Operations Page ___ of ___
WBS Number 1.1.1.3.03.03

Program: High Level Waste Program

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the FY 1997 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1997

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	none	none	none	none
LLW (SOLID)	none	none	none	none
LLW (LIQUID)	none	none	none	none
LLMW (SOLID)	none	none	none	none
LLMW (LIQUID)	none	none	none	none
LLW (GTC3)	none	none	none	none
TRU	none	none	none	none
TRUM	none	none	none	none
HAZARDOUS	none	none	none	none
SANITARY (LANDFILL)	0.6 cu. meter	none	0.6 cu. meter to landfill	none
SANITARY (LANDFILL - ASBESTOS)	none	none	none	none

H-101

Program Element ___Facility Operations_____ Page____of____
WBS Number ____1.1.1.3.03.03_____

FOR THE FY 1997, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

No waste will be stored.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Sanitary (landfill) waste from offices will be sent to landfill through janitorial services.

SUMMARY WASTE TYPE ISSUES:

None.

H-102

Program Element ___Facility Operations_____ Page____of____
WBS Number ___1.1.1.3.03.03_____

Program: High Level Waste Program

Qualify waste by appropriate waste quantity (e.g. cubic meters, gallons, kilograms, etc.) for the years FY 1998 - 2025 for the following WASTE TYPES for expected waste generation, receipt, transfer, and storage:

Waste Type Projections - FY 1998 - 2025

Waste Type	Waste Generated (waste unit, e.g., gallons)	Waste Received (waste unit, and name of program received from)	Waste Transferred (waste unit and name of program transferred from)	Waste Stored (waste unit)
HLW	none	7000 cu. meter	none	28,000 cu. meter
LLW (SOLID)	28,000 cu. meter	none	28,000 cu. meter	none
LLW (LIQUID)	910,000,000 Kg.	none	910,000,000 Kg.	none
LLMW (SOLID)	600 cu. meter	none	600 cu. meter to Solid Waste Disposal	none
LLMW (LIQUID)	none	none	none	none
LLW (GTC3)	none	none	none	none
TRU	none	none	none	none
TRUM	none	none	none	none
HAZARDOUS	2400 cu. meter	none	2400 cu. meter to Solid Waste Disposal	none
SANITARY (LANDFILL)	14,400 cu. meter	none	14,400 cu. meter to landfill	none
SANITARY (LANDFILL - ASBESTOS)	none	none	none	none

H-103

Program Element __Facility Opeations_____ Page____of____
WBS Number ___1.1.1.3.03.03_____

FOR THE YEARS FY 1998 - 2025, PROVIDE A BRIEF NARRATIVE FOR EACH OF THE FOLLOWING:

PLANS FOR WASTE STORAGE:

Vitrified High Level Waste will be temporarily stored (interim storage) on site within this time frame prior to shipment to a federal repository. Total volume = 28,000 cu. meter

Vitrified TRU waste will be temporarily stored (interim storage) on site within this time frame prior to shipment to a federal TRU waste repository.

PLANS FOR INTERPROGRAM WASTE TRANSFER AND/OR DISPOSITION:

Solid LLW will be transferred to the onsite low level waste disposal site. Hazardous and LLMW waste will be transferred to the onsite hazardous treatment plant for disposal. Sanitary (landfill) waste from offices will be sent to landfill through janitorial services.

SUMMARY WASTE TYPE ISSUES:

Need assurance that adequate LLW storage space and LLMW and hazardous waste processing capability will be available onsite to support the HLW program.

H-104

APPENDIX I

PROGRAM MASTER BASELINE SCHEDULE

This schedule is not available for this submittal.