Meeting Minutes Transmittal/Approval
Tri-Party Agreement Milestone Review Meeting
EPA Conference Room
Richland, Washington
May 20, 1993

From/
Appvl.: _____ Date: 6/16/93
Steven H. Wisness, RL (A5-19)
Hanford Project Manager

Appvl.: _____ Date: 6/17/93
George Hofer, EPA (B5-01)
Hanford Project Manager

Appvl.: _____ Date: 6/14/93
Roger F. Stanley, Ecology
Hanford Project Manager

Prepared by
Appvl.: Frank T. Calapristi Date: 6/21/93
Frank T. Calapristi
Westinghouse Hanford Company

DISTRIBUTION

Anderson, BN	WHC	G6-02	Peschong, JC	RL	A5-16
Barker, SA	WHC	S4-55	Sampson, AE	WHC	R2-18
Calapristi, FT	WHC	B2-35	Sanders, GH	RL	A5-16
Day, PT	EPA	B5-01	Senat, EJ	RL	R2-62
Dev, M	RL	A5-16	Sherwood, DR	EPA	B5-01
Edwards, WF	WHC	R3-73	Soler, L	MACTC	A4-35
Forehand, GD	WHC	B2-35	Stanley, R	ECO	Olympia
Fort, LA	WHC	S4-55	Stevenson MW	WHC	B2-35
Harris, JP	WHC	S4-55	Subrahmanyan, U	MACTC	G1-01
Jansen DB	ECO	Olympia	Tebb, GT	ECO	Kenn.
Mahaffey, MK	WHC	L4-73	Wisness, SH	RL	A5-15
Moore, S	ECO	Kenn.	Wrzesinski WR	RL	A5-16
Murkowski, RJ	WHC	R2-04	Yerxa, JK	RL	A5-15
Nylander, D	ECO	Kenn.	EDMC	WHC	H6-08
Pabst, DB	WHC	B2-35			

1. Opening Statement

Steve Wisness of RL opened the meeting by noting today's presentations are intended to respond to Roger Stanley's (Ecology) letter requesting a status of the current TWRS milestones M-01 through M-10.

2. M-01-00, Grout

The presentation was made by George Sanders (Attachment 1).

Under "Milestone Assessment", it was reported that all milestones are being renegotiated in the TWRS rebaseline meetings. It was also noted, the milestones are behind schedule and may be non-recoverable at this time.

There were no action items or issues identified.

3. M-02-00, Pretreatment

The presentation was made by Jon Peschong (Attachment 2).

There were no action items or issues identified.

4. M-03, HWVP

The presentation was made by Nick Anderson of WHC (Attachment 3).

Under "Special Topics", RL noted the proposed six month slip in schedule in HWVP construction was acknowledged by Ecology but no response has been received from EPA, as of this date. EPA replied that their response is being processed.

A change Request will be presented at the May 25 Spokane meeting for possible approval and sign off by the three parties.

5. M-04, Annual Treatability Studies

The presentation was made by M. Dev (Attachment 4).

There were no action items or issues identified.

6. **M-31-00, Additional DST's**

The presentation was made by Ben Harp (Attachment 5).

Under "Special Topics", it was explained that under the MWTF project, there is a potential acceleration of two years in schedule and possibly up to six tanks may be constructed under the current budget. Final guidance is required from DOE-HQ.

7. **M-05-00, SST Stabilization**

The information was presented by Tom Rainey of WHC (Attachment 6A).

Under "Planned Actions", RL reported they are revising the C-106 Emergency Plan to incorporate comments received from Ecology and DOE-HQ. The revision is planned to be completed in 60 days.

Under "Technical Scope", the 26 Watch List Tanks were discussed. Ecology asked about DOE's response to the Roger Stanley letter of May 12, regarding the SST BX-111. A discussion followed and focused on the assignment of a milestone to address all leaking tanks, not just tank BX-111. There was extensive dialogue on how to handle the multitude of problems identified in the tank farms, i.e., TWRS negotiations or by the compliance process.

DOE noted the TWRS upcoming negotiations will deal with all known problems, not just leaking tanks. DOE stressed this holistic approach, rather than work the problems with two approaches such as the compliance process in addition to the TWRS negotiations. However, Ecology stated they must rely on the compliance process rather than wait for the completion of negotiations.

There was no agreement reached by DOE and Ecology on this question.

A special presentation followed on the potential leaker Tank SX-102 and the reported level decrease (Attachment 6B). The current status and actions taken were reviewed. DOE stated a decision is expected today on whether to declare this tank an "assumed leaker".

In the discussion that followed, Ecology recommended an aggressive DOE approach to resolve the measurement uncertainties with some tanks. DOE replied they are working in this direction. The following action item was assigned:

Action: **At the next Unit Managers Meeting, T. Rainey will present information on tank liquid levels where it is difficult to obtain an accurate measurement.**

Resp.: **T. Rainey** **Due:** **June 9, 1993**

8. **M-06-00, SST Retrieval Technology Development**

The presentation was made by Wendell Wrzesinski (Attachment 7).

There were no issues or action items identified.

9. **M-07-00, Demonstrate SST Retrieval**
M-08-00, Full Scale Farm Closure Demonstration

The presentation was made by W. Wrzesinski (Attachment 8) supplemented by photographs.

There were no issues or action items identified.

10. **SST core sample analysis**

The presentation was made by Al Sampson of WHC (Attachment 10).

Under "Accomplishments", EPA asked if the "Tank Characterization Reports" were released to the regulators. RL did not know but will follow up.

Under "Special Topics", the Core Sampling Test Strategy was discussed and it was noted the retrieved cores will be applied towards milestone M-10-07. However, if the test is unsuccessful, the milestone will be in jeopardy.

11. **M-09-00, Closure of 149 SST's**

There was no presentation. Copies of the handouts will be obtained and forwarded to Ecology and EPA.

0028694

Department of Energy
Richland Field Office
P.O. Box 550
Richland, Washington 99352

JUN 04 1993

93-TPA-086

Mr. Roger F. Stanley, Director
Tri-Party Agreement Implementation
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Mr. Stanley:

TANK WASTE REMEDIATION SYSTEM (TWRS) MILESTONE STATUS BRIEFING

The purpose of this letter is to inform you that the action referred to in your April 19, 1993, letter to provide a TWRS milestone status briefing was completed at the May 20, 1993, Hanford Federal Facilities Agreement and Consent Order milestone review meeting. The State of Washington Department of Ecology was represented in this meeting by Mr. Dave Nylander. Meeting notes and presentation material are expected to be issued following the June 1993, milestone review meeting.

Please let me know if you have any further questions.

Sincerely,

Steven H. Wisness
Hanford Project Manager

cc: G. C. Hofer, EPA
D. B. Pabst, WHC
F. T. Calaprisit, WHC

AGENDA

TRI-PARTY AGREEMENT MAJOR MILESTONE MANAGEMENT REVIEW

Tuesday, May 18, 1993.....HAPO/Room 319 (Dry Run)
Thursday, May 20, 1993....EPA Conference Room (Regulator Meeting)

TIME	MILESTONE	TITLE	RL DIVISION DIRECTOR	LEVEL 2/3 MANAGER	PRESENTER
12:30 pm	M-01-00	Complete 14 Grout Campaigns	G. H. Sanders	R. J. Murkowski	G. H. Sanders
12:45 pm	M-02-00	Pretreatment	Lief Erickson	W. C. Miller	J. C. Peschong
1:15 pm	M-03-00	Initiate HWVP Operations	R. W. Brown	R. A. Smith	B. N. Anderson
1:45 pm	M-31-00	Additional DSTs	R. W. Brown	R. L. Fritz	B. J. Harp
	M-04-00	Annual Treatability Studies	Lief Erickson	W. C. Miller	M. Dev
2:00 pm		BREAK			
2:15 pm	M-05-00	SST Stabilization	R. E. Gerton	R. E. Raymond	G. E. Bishop
2:45 pm	M-06-00	Develop SST Retrieval Tech.	Lief Erickson	W. C. Miller	W. R. Wrzesinski
	M-07-00	Demonstrate SST Retrieval	Lief Erickson	W. C. Miller	W. R. Wrzesinski
	M-08-00	Full-Scale Farm Closure Demo.	Lief Erickson	W. C. Miller	W. R. Wrzesinski
3:15 pm	M-09-00	Closure of 149 SSTs	R. D. Freeberg	T. M. Wintczak	D. H. Alexander
3:30 pm	M-10-00	SST Core Sample Analysis	R. E. Gerton	J. G. Propson	P. R. Hernandez
4:15 pm		ADJOURN			

ATTENDEES

TPA MILESTONE MANAGEMENT REVIEW

MAY 20, 1993

EPA CONFERENCE ROOM
MEDICAL DENTAL CENTER

NAME	ORGANIZATION	MAILSTOP
FRANK CALAPRISTI	WHC/TPA	B2-35
David Forehand	WHC/TPA	B2-35
JON C. RESCHKE	DOE/RL	A5-16
George Sanders	DOE/RL	A5-16
RJ MURKOWSKI	WHC	R2-04
S.H. Wisness	DOE	A5-15
	EPA	B5-01
Paul Day	EPA	B5-01
STEVEN BARKER	WHC	S4-55
NICK ANDERSON	WHC	G6-02
Bill Edwards	DOE-RL	R3-73
Usha Subrahmanyan	~~Director~~ Dames & Moore	G1-01
Luis Soler	Dames & Moore	A4-35

ATTENDEES

TPA MILESTONE MANAGEMENT REVIEW

MAY 20, 1993

EPA CONFERENCE ROOM
MEDICAL DENTAL CENTER

NAME	ORGANIZATION	MAILSTOP
MADAN DEV	DOE-RL	A5-16
[illegible]	[illegible]	[illegible]
[illegible]	DOE-RL	
[illegible]	WHC	[illegible]
Gene Semmt	DOE	R2-62
Steve Moore	Ecology	
M K Chaffee	WHC	[illegible]
John Harris	WHC	54-55
[illegible]	[illegible]	[illegible]

 (ATTACHMENT 1)

Grout Facilities Milestone M-01-00
Complete 14 Double-Shell Tank Grout Campaigns

presented to

State of Washington Department of Ecology and
U.S. Environmental Protection Agency

George Sanders, RL Low-Level Waste Branch
Lori Huffman, Grout Program Manager
Russ Murkowski, WHC Level 3 Manager

May 20, 1993

Milestone Description

M-01-00

Complete 14 grout campaigns of double-shell tank (DST) waste by December 1996 and maintain currency with feed thereafter.

Baseline Schedule

Complete 14 campaigns by December 1996.

Note: TPA change request was denied by Ecology and EPA on October 30, 1992. RL responded with letter to Ecology and EPA on November 6, 1992, invoking dispute resolution under the TPA.

Planned Activities for FY 1993

• Continue development of procedures and facility upgrades	
• Complete the Requirements Identification Document (RID), Conduct of Operations Integrated Test Plan procedures, and ORR plan defining the GTF ORR process	September 1993
• Develop responses to WDOE Notice of Deficiencies	July 1993
• Submit Performance Assessment to DOE	July 1993
• Complete 102-AP characterization	September 1993
• Complete preliminary campaign plan (vault 102)	August 1993
• Complete FSAR comment resolution	September 1993
• Complete installation of vault 102-103 exhauster and Portable Instrument House	June 1993

Accomplishments

• Completed sampling of feed tank 102-AP - 106-AN waste	April 1993
• Completed sampling of 105-AP and 106-AP, vault 103 campaign	April 1993
• Completed DST Grout Vault Closure Plan study	March 1993
• Completed 90 percent of the Grout PA	April 1993
• Completed input to TWRS Rebaselining	March 1993
• NRC denied states of Washington and Oregon Petition	March 1993

Milestone Assessment

		Schedule	TPA Baseline	Status
•	M-01-01A	Complete and verify 2 campaigns (101, 102).	9/93	2
•	M-01-01B	Complete 1 additional campaign (103).	12/93	2
•	M-01-02	Complete 3 additional DST campaigns in 1994 (104, 105, 106).	12/94	2
•	M-01-02A	Initiate construction of vaults 106-109.	11/92	Complete [1]
•	M-01-03	Complete 4 additional DST campaigns in 1995 (107-110).	12/95	2
•	M-01-03A	Initiate construction of vaults 110-113.	11/93	2
•	M-01-04/00	Complete 4 additional campaigns in 1996 (111-114).	12/96	2
•	M-01-04A	Initiate construction of vault 114.	11/94	2

Achievement of these milestones is not considered possible. Furthermore, we anticipate a several month delay in the 10/93 targeted facility restart due to facility preparation delays.

1 Suspension of further excavation/construction work on vault 106-109 has been deferred with Ecology concurrence.

2 Being evaluated as part of TWRS Rebaselining.

Milestone Assessment (cont.)

- Cost versus Budget

(Dollars in Millions)

Cumulative	Oct-Mar	Apr	May	Jun	Jul	Aug	Sept
FYTD Budget	17.8	20.3	24.3	27.5	30.3	33.8	37.2
FYTD Cost	14.7	17.9					
Spending Variance	3.1	2.4					

Variance Explanation: Spending underrun due to general staffing of the Grout Disposal Program below the budgeted level. A combination of starting late in September 1992 and a headcount ceiling in early months of FY 1993. These staffing underruns are in the area of readiness activities. Since the lifting of the headcount ceilings, actions have been taken to hire additional engineers, planner/scheduler, records specialist, operators and these direct WHC personnel are being augmented by job shoppers and tasks specific contracts.

Special Topics

Key Issues

- Critical path schedule compared to current TPA milestones and pending dispute resolution.
  - Additional schedule impacts occurring: PA, procedure development, facility upgrades, and facility readiness activities, vault 103 feed, feed tank characterization
- Ecology's concerns on hydrogen generation.
  - ECN to revise the FSAR will be issued, this ECN will be provided to Ecology.

Special Topics (cont.)

- DST 241-AW-101, planned DST waste to fill vault 103, has been added to the hydrogen watch list.

  WHC has identified the change in waste feed for vault 103.

Change Notice Activity

- Change request M-01-92-01A has been denied by Regulators.
- Dispute resolution invoked by RL.
- Addition delays to M-01-92-01A are being encountered.

 (ATTACHMENT 2)

INITIATE PRETREATMENT OF DOUBLE-SHELL TANK WASTES

Milestone M-02-00

J. C. Peschong

Waste Pretreatment

May 20, 1993

Milestone Description

- M-02-00 — Initiate pretreatment of double-shell tank waste

  Double-shell tank waste pretreatment is required prior to disposal of high-activity tank wastes. The pretreatment supports the removal, treatment, and final disposal of wastes subject to land disposal restriction which are stored in double-shell tanks. Removal of the wastes from double-shell tanks and disposal in grout or glass will allow double-shell tank space to be made available for single-shell tank waste

- DELIVERABLE(S)
  - Program documents which define plans to develop, demonstrate, and implement pretreatment processes for tank wastes (M-02-03).
  - Start DST NCAW retrieval system process test (M-02-04)
  - Incorporate additional interim milestones to support pretreatment of double-shell tank waste (M-02-05)

Milestone Description (Cont)

- BASELINE SCHEDULE (Interim)
  - Submit tank waste remediation system baseline scope, cost, and schedule by August 1993 (M-02-03)
  - Start DST retrieval process test by December 1996 (M-02-04)
  - Incorporate additional milestones for pretreatment by August 1993 (M-02-05)

Accomplishments (Last three months)

- Issued report on NCRW TRUEX Laboratory Development (M-02-00-T3) (Document PNL-8558)
- Issued Engineering Study of Cesium Ion Exchange (M-02-00-T4) (WHC Correspondance 9352584D)
- Issued Blending Study for First 20 Tanks (M-02-00-T5) (Document PNL-8589)
- Issued Pretreatment Technology Plan which includes Technology Plan for Selection of Actinide Separation Process (M-02-00-T6) (Document WHC-EP-0629)

Planned Actions (Next six months)

- Issue TWRS Baseline Documents, Final Drafts for External Review (M-02-03) (8/31/93)
  - TWRS Functions & Requirements Documents (DOE/RL-92-60 Draft)
  - TWRS Mission Analysis (EP-0627 Rev 0, Draft)
  - TWRS Integrated Technology Plan (DOE/RL-92-61, Draft)
  - TWRS Program Plan (DOE/RL-92-58 Draft)
  - TWRS Program Management Plan (DOE/RL-92-59 Draft)
  - TWRS Systems Engineering Management Plan (DOE/RL-92-59)
  - TWRS Tank Waste Technical Options Report (WHC-EP-0616 Rev 0)
  - TWRS Tank Waste Decision Analysis Report (WHC-EP-0617 Draft)
  - TWRS Strategy Plan for Management of Hanford Tank Wastes (WHC-EP-0501 Draft)

Milestone Assessment

- **Schedule**

MILESTONE	DESCRIPTION	DATE	STATUS
M-02-03	Submit TWRS baseline documents	8/93	On Schedule
M-02-04	Start DST NCAW retrieval system process test	12/96	On Schedule
M-02-05	Incorporate additional interim milestones to support pretreatment	8/93	Change request anticipated to synchronize with TPA revision for "New Technical Strategy" due September, 1993

Milestone Assessment (Cont)

- Schedule (Cont)

MILESTONE	DESCRIPTION	DATE	STATUS
M-02-00-T3	Publish summary of NCRW TRUEX laboratory development work	12/92	Completed 3/93, Doc PNL-8558
M-02-00-T4	Complete engineering study on Cs ion exchange	3/93	Completed 3/93
M-02-00-T5	Complete waste treatment feed optimization (blending) study	3/93	Completed 3/93, Doc PNL-8589
M-02-00-T6	Issue Technology Plan for selection of advanced (actinide) separation process	3/93	Completed 3/93, Doc WHC-EP-0629
M-02-00-T7	Initiate settling tests for NCAW in-tank solids washing	12/93	12 months schedule extension required

Tri-Party Agreement Budget Baseline Summary

- Budget vs. Cost ($ in Millions)

Cumulative	Oct - Mar	Apr	May	Jun	Jul	Aug	Sep
FYTD Budget	7.272	8.654	11.10	13.48	15.82	27.23	33.92
FYTD Cost	6.296	7.693					
Spending Variance	0.976	0.961					

Tri-Party Agreement Budget Baseline Summary (cont'd)

Variance Explanation:

- Due to schedule delays on project W-151 101-AZ Retrieval System, and W-211, DST Retrieval Systems, and selection of the Architect/Engineer on project W-236B, Initial Pretreatment Module, costs have not been incurred at the planned rate. The spending variance will be reduced by increased emphasis on acquiring staff, either contracted or in-house. However, the Architect/Engineer on Project W-236B has been selected and will begin work in June.

- W-153, TRUEX Pilot Plant, is placed on indefinite hold. This will impact $1.5M of budget over the remainder of FY93. New workscope will be determined.

Special Topics

- Change Request submitted informally to DOE for review to move date for M-02-00-T7.

(ATTACHMENT 3)

Milestone M-03-00

Initiate Hanford Waste Vitrification Plant Operations

B. N. Anderson

HWVP Project Office

May 20, 1993

Milestone Description/Deliverables

M-03-00 - Initiate HWVP operations* **Dec. 1999**

Deliverable: Initiation of operations will be considered complete when radioactive waste is fed into the HWVP melter

* See Special Topics

Accomplishments (last three months)

- Presented results of first phase of plant capacity upsizing study to senior WHC management, RL, and DOE-HQ*
- Completed excavation for Canister Storage Building (CSB)
- Awarded subcontract for Operations Annex Building (OAB)

* See Special Topics

Planned Activities (next six months)

- Complete Phase II of Plant capacity upsizing study
- Start concrete placement on the CSB foundation
- Initiate construction of the OAB
- Initiate construction of the Vitrification Building Foundation (M-03-05 - September 1993)*

* See Special Topics

M-03 Milestone Assessment

M-03 MILESTONE ASSESSMENT
Budget vs. Cost ($ in millions)
All Contracts

Cumulative	FYTD	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT
FYTD Budget	42.2	54.4	66.4	63.2	74.7	85.8	98.1	112.3	127.7*
FYTD Cost	32.0	39.5	48.4	56.9					
Spending Variance	10.2	14.9	18.0	6.3					

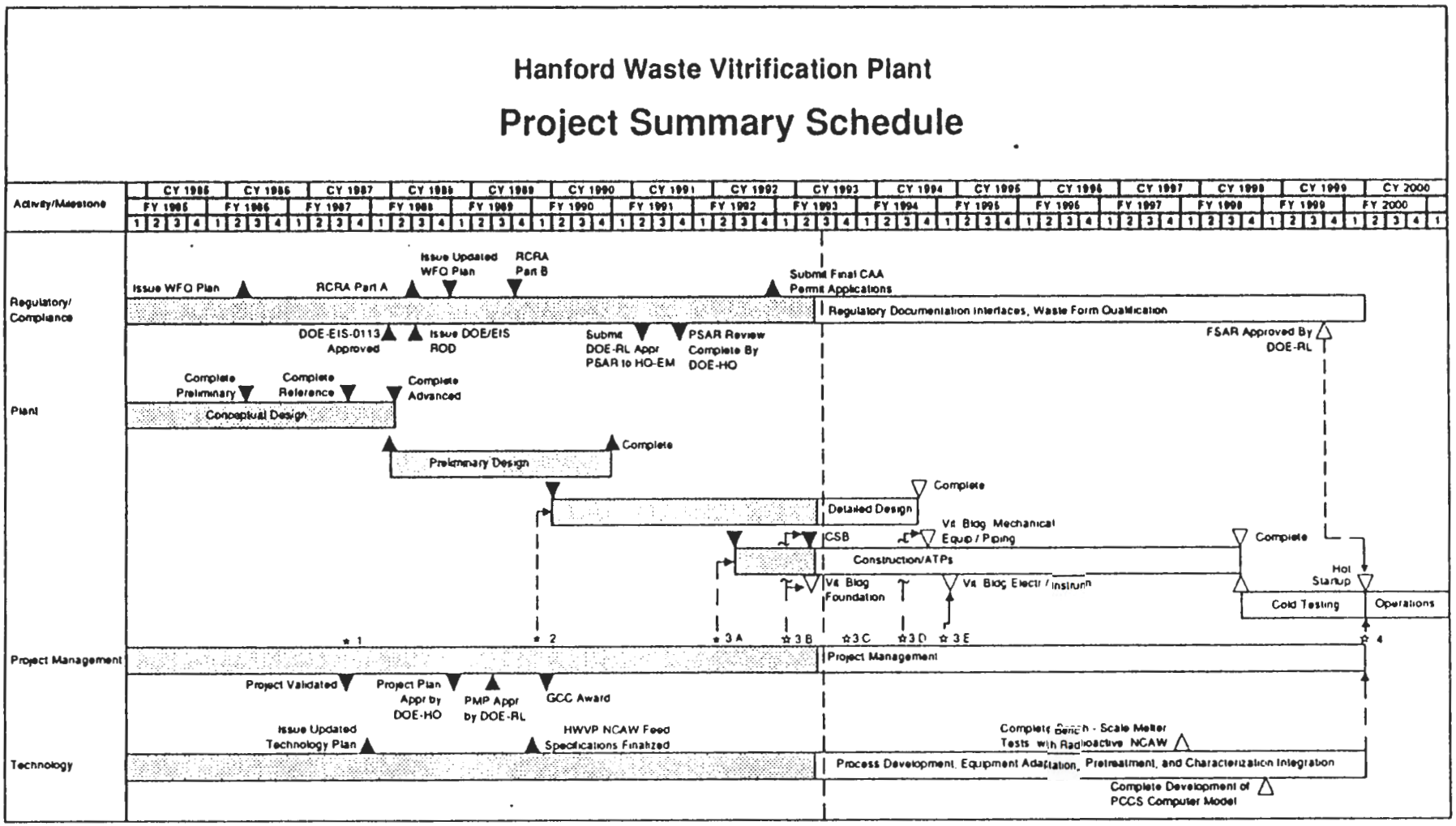
VARIANCE EXPLANATION:

The majority of the spending variance is due to:

UCAT is underspent because Site construction packages were delayed by weather and delayed Key Decisions. Initiation of construction of the Vitrification Building foundation is now forecasted for a September 1993 completion.

* Change Request HWVP-0713 was implemented replanning the Fluor budget to be consistent with design completion in December 1994 and rescheduling a portion of FY 1993 workscope to FY 1994. This resulted in a $12.3M budget reduction.

Project Summary Schedule



LEGEND ☆ Key Decisions △ RL Controlled Milestone ▽ DOE-HQ Controlled Milestone

ACRONYMS.
ATP - Acceptance Test Procedure
CAA - Clean Air Act
CSB - Canister Storage Building
EIS - Environmental Impact Statement
FSAR - Final Safety Analysis Report
GCC - General Construction Contractor
NCAW - Neutralized Current Acid Waste
PCCS - Product Composition Control System
PMP - Project Management Plan
PSAR - Preliminary Safety Analysis Report
RCRA - Resource Conservation and Recovery Act
ROD - Record of Decision
WFQ - Waste Form Qualification

☆ Key Decision
1 - Approval of New Start
2 - Approval to Commence Detailed Design
3A - Approval to Commence Site Preparation
3B - Approval to Commence Construction
3C - Approval to Continue Construction
3D - Approval to Continue Construction
3E - Approval to Continue Construction
4 - Approval to Commence Operation

HWVP-0712

Special Topics

- Plant capacity of the HWVP is the subject of a two part engineering analysis currently being performed by the HWVP Project. Phase I, a feasibility analysis completed in March 1993, established that a fourfold (4X) increase in throughput can be achieved within the current Vitrification Building footprint (i.e., without changing the current Vitrification Building Foundation design). The increased capacity can be achieved by the incorporation of either of one of the following two melter concepts: a stirred melter or a high-temperature melter.

  Phase II, scheduled for completion in September 1993, will:

  - Develop melter conceptual design and its physical interface
  - Define items for immediate implementation versus future retrofit
  - Develop implementation strategy
  - Develop cost and schedule

Special Topics (cont.)

- Tank Waste Remediation System (TWRS) program rebaselining has impacted the Project schedule and TPA Milestone M-03-05, Vitrification Building Foundation, and DOE-HQ Milestone, Key Decision 3B.

  An "Agreement in Principle" has been signed by the TPA parties to delay start of construction of the Vitrification Building* by six months. A change request will be processed to reschedule Project milestones

  The six-month delay is to allow TPA parties and the public the opportunity to examine alternatives for waste remediation and renegotiate commitments

* and hot startup of the Plant.

(ATTACHMENT 4)

Provide Annual Reports of Tank Waste Treatability Studies

Milestone M-04-00D

M. Dev

Hanford Tank Waste Disposal Program

May 20, 1993

Milestone Description

- M-04-00

  Wastes stored in double-shell (DST) and single-shell (SST) tanks, as well as newly generated wastes destined to be stored in double-shell tanks, will be studied to determine the most appropriate treatment/disposal method. Studies to determine the long-term feasibility of grout or glass for disposal of these wastes are included in the scope of this milestone.

- DELIVERABLE(S)

  The report is due annually. It is a concise addenda to the previous year's report. It will provide traceability with the activities and developments stated in the previous year's report. The areas which are covered in this report include:
  - Treatability of existing and newly generated SSTs and DSTs wastes
  - Feasibility of using grout and glass as a final waste form
  - Safety issues, such as tank 101-SY, which impact treatment
  - Other treatment/disposal technologies, such as intermediate processing, which may have an impact on future disposal

- BASELINE SCHEDULE

  Submit report annually in September to the U. S. Environmental Protection Agency, and to the State of Washington Department of Ecology.

Accomplishments (Last three months)

- Resumed Los Alamos Technical Associates Contract, April 1

- Issued Internal Memorandum on April 27, 1993 Requesting Draft Contributions to Report by June 30, 1993

Planned Actions (next six months)

- Complete Draft Report July 30, 1993
- Issue Revision "D" of Annual Treatability Report, September 30, 1993

Milestone Assessment

- **Budget vs. Cost ($ in Thousands)**

Cumulative	Oct-Mar	Apr	May	Jun	Jul	Aug	Sep
FYTD Budget	17.7	26.6	70.4	88.6	109.3	130.0	150.8
FYTD Cost	0.7	2.8					
Spending Variance	17.0	23.8					

Variance Explanation:

- Spending Variance due to late start on report, and the expected billing delays. This delay is not expected to impact report issue date.

(ATTACHMENT 5)

PROVIDE ADDITIONAL DOUBLE-SHELL TANK CAPACITY

MILESTONE M-31-00

B. J. HARP
RL, MULTI-FUNCTION WASTE REMEDIATION FACILITY
PROJECT OFFICE
MAY 20, 1993

Open Commitments

- None

Milestone Description

- **M-31-00** Provide additional double-shell tank capacity. Construction complete. Due 1999

- **M-31-01** Complete Conceptual Design Report - for up to four tanks Due 9/30/92 (Completed)

- **M-31-02** Recommend additional double-shell tank milestone(s) Due 9/30/92

- **M-31-02-T1** Complete detailed design for first new tanks Due 2/95

Milestone Description (continued)

- M-31-02-T2 Construction start of first new tanks
  Due 10/95

- M-31-02-T3 Provide additional double-shell tank capacity. Construction complete for first new tanks.
  Due 6/99

- M-31-03 Initiate Definitive Design (Complete)

Accomplishments (Last 3 months)

- Multi-Function Waste Tank Facility
  - Evaluated project rescoping based on HQ guidance
  - Advanced Conceptual Design complete
  - Completed project FY 1995 re-validation for Project W-236A, and Design-Only Validation for Project W-260

Planned Actions (next six months [M-31])

- Complete Project Management Plan (at HQ awaiting concurrence)
- Obtain approval on Level 0 Change Request for project rescoping & acceleration June 1993
- Plan and execute Re-scoping based upon HQ guidance June 1993
- Obtain Key Decision 2 for Project W-236A
- Complete the Justification of Mission Need for Project W-260 (MWSF) MULTI-FUNCTION WASTE [illegible] FACILITY

Milestone Assessment

- Schedule
  - Limited Definitive Design (Title I) activities are continuing
  - Impacts to M-31-02 completion, pending dispute resolution

TPA Milestone M-31-00
Provide additional double-shell tank capacity

Milestone Assessment

- **Cost -vs- Budget** (000,s)
  (Actuals through end of January)

Cumulative	January	February	March	April	May	June	July-Sept.
FYTD Budget	2263.6	3103.2	3932.0	5067.2	6433.3	7740.0	11846.8
FYTD Cost	2020.9	2739.2	3574.3	4514.2			
Spending Variance	242.7	364.0	357.7	553.0			

Variance Explanation:

- Lack of billing from the outstanding test coupons procurement
- Lack of accumulation of consultant costs

Special Topics

Evaluate Re-scoping based upon HQ guidance

- EM-36 guidance to rescope and assess impacts per approved JMN and December 18, 1992, letter
- The MWTF project is working to current baselines until Level 0 Change Request is approved by HQ
- RL reviewing guidance and a study that assesses:
  - Potential MWTF project schedule acceleration to resolve watch list Tank, 101-SY
  - Cost and Schedule impacts to other project (i.e., IPM, HWVP)
- A limited Title I work scope has been initiated to prevent any slippage in the current schedule

Special Topics (Cont.)

M-31-02

- The Evaluation requires information currently being developed as a part of TWRS planning and integration effort

- The final TWRS rebaselining effort will provide the integrated approach for the safe storage of tank wastes and project the future need and timing of new tank capacity

- Verbal agreements for milestone M-31-02 Change Request have been made. RL is awaiting the final signed copy, prior to negotiating new milestones for Project W-260 (MWSF)

(ATTACHMENT 6A)

Complete Single-Shell Tank Interim Stabilization

Milestone M-05-00

T. E. Rainey
WHC/TWRS

May 20, 1993

MILESTONE DESCRIPTION

o M-05-00	Complete single-shell tank interim stabilization on all tanks except C-105 and C-106 by September, 1995. Complete interim stabilization on all tanks by September, 1996.
o Deliverable(s)	Interim stabilization will be considered complete when pumping of each tank is complete. Pumping will be complete when as much liquid as practical is removed to a double-shell tank. This occurs when pumping rate drops to 0.05 gpm. At this point, only 5000 gallons of supernatant and 50,000 gallons of interstitial liquid remain in the tank.
o Baseline Schedule	Interim stabilize single-shell tanks annually beginning in FY-1989.

ACCOMPLISHMENTS (LAST 3 MONTHS)

- Completed Milestone M-05-13, upgrade leak detection and site characterization at tanks 241-C-105 and 241-C-106.

- Completed Milestone M-05-13-T2, complete physical logging of 14 drywells at tanks 241-C-105 and 241-C-106 using a spectral gamma probe.

  - Logging completed on all 15 drywells (exceeding requirement).

- Completed all milestones for tank 241-C-106 contained in Change Control M-05-92-04.A.

- Completed Milestone M-05-14, provide initial comprehensive report on the alternatives identified in the Engineering Evaluation of Alternatives.

ACCOMPLISHMENTS (NEXT 3 MONTHS) (continued)

- Completed Milestone M-05-15B, provide letter report on in-tank liquid level detection options available for tank 241-T-101, consistent with the requirements of WAC 173-303.

- Completed Milestone M-05-16, commence pumping tank 241-T-101 by March 15, 1993.

  - Pumping started on March 12 and completed on April 6. Declared interim stabilized on May 11.

PLANNED ACTIONS (NEXT 6 MONTHS)

- Complete milestone M-05-17C, provide the schedule for completing training of all operations supervisors and shift managers in accordance with the upgraded supervisor training program, June, 1993.

- Continue investigation of safety issues involved with watchlist tanks.

- Negotiate changes to interim stabilization milestones as part of TWRS rebaselining effort.

- Revise the C-106 emergency plan to include comments recieved from Ecology in May, 1993.

MILESTONE ASSESSMENT

Budget Baseline Summary - January 1993

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FYTD BUDGET	0.4	0.8	1.3	1.4	1.8	2.3	5.2	6.3	7.1	7.8	8.8	10.
FYTD COST	0.3	1.0	1.8	2.6	3.1	3.8	4.4					
SPENDING VARIANCE	0.1	-0.2	-0.5	-1.2	-1.3	-1.5	0.8					

Schedule Performance

- Pumping suspended on January 28, 1992, due to incident involving unidentified toxic fumes. Criticality concerns have since delayed restart of pumping.

- M-05-03 (4 tanks by 9-30-91) - Missed completion date. Pumping suspended for six weeks at the end of August 1991 due to concerns over compliance with Wyden Amendment. Pumping restarted in 241-BY farm and 241-C farm in November 1991.

MILESTONE ASSESSMENT (continued)

Schedule Performance (Continued)

- Pumping suspended in January 1992, due to noxious gas issues. Pumping since delayed by criticality issues.

  - Four (4) tanks will be pumped following resolution of safety issues (e.g., criticality) and pressure testing of transfer lines.

- M-05-04 (9 tanks by 9-30-92) - Milestone is in dispute.

  - Change Request M-05-92-02 submitted to extend completion date 120 days. Request denied by Ecology, currently in dispute resolution.

  - One (1) tank will be pumped following resolution of safety (criticality) issues, and pressure testing of transfer piping.

MILESTONE ASSESSMENT (continued)

Technical Scope

- The milestone completion remains dependent on removal of current pumping restrictions. When this will occur is unknown.

- 43 tanks remain to be stabilized:

  - 17 non-Watch List tanks
  - 26 Watch List tanks

- Watch List tanks designated by Public Law 101-510, section 3137 (Wyden Amendment). Most have unreviewed safety concerns regarding hydrogen generation or ferrocyanide content. Others contain potentially flammable organics or high temperature.

- Resolution of unresolved safety issues may require presently unanticipated modifications or alterations to the affected tanks, which could delay stabilization even further.

SPECIAL TOPICS

Issue

- Due to restrictions of transfers within tank farms due to criticality concerns, the restart of pumping has been delayed.

Corrective Action

- Technical issues require discussion for renegotiation of the M-05 milestone.

Emergency Leak Response

- Currently making preparations to emergency pump assumed leaker tank 241-BX-111. Proposed TPA Change Request M-05-93-01 submitted to Ecology and EPA for commencement of pumping by August, 1993.

(ATTACHMENT 6B)

SX-102

LOW Decrease

SX-102 TANK STATUS

Supernatant 0K gallons

Drainable Liquid 183K gallons

Pumpable Liquid 177K gallons

Saltcake 426K gallons

Sludge 117K gallons

Sound (built 1953-54)

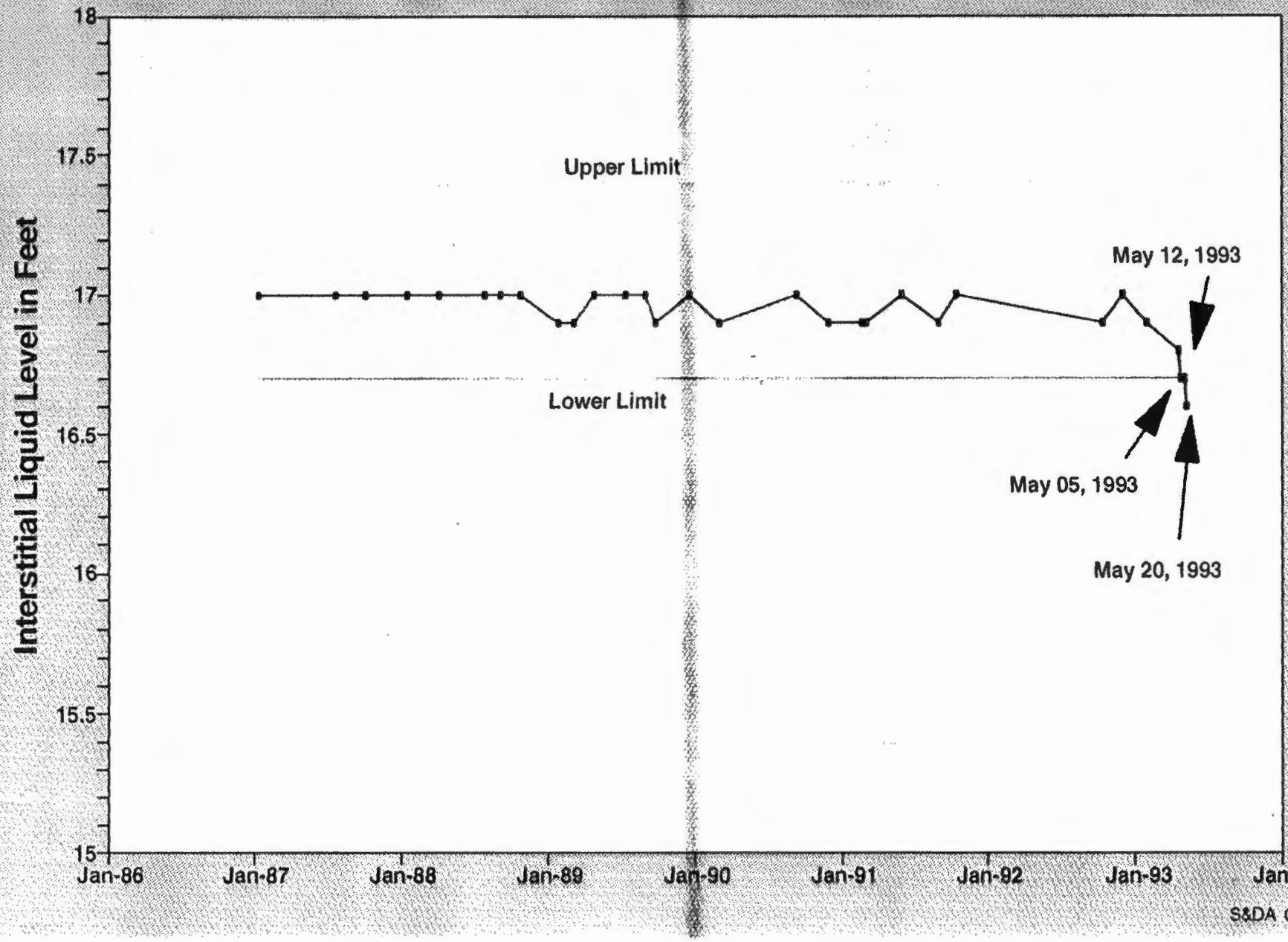
- Non-Stabilized, Partial-Isolated
- Watchlist Tank (Hydrogen)
- Solid Surface (some liquid pools)
- Tank has Active Ventilation
- Capacity - 1,000,000 gallons (nomina

ACTIONS TAKEN

- Additional LOW Reading - (0.3') Complete
- FIC Surface Level Checked - (197.3") Complete
- LOW Frequency Increased to Weekly - Complete
- Discrepancy Report Issued - Complete
- Occurrence Report Issued - Complete
- LOW Trend Analysis - Ongoing
- Determination of Tank Integrity - Ongoing

SX-102 Liquid Observation Weii (LOW)

Well No. 41-02-61 (Neutron Probe)



(ATTACHMENT 7)

SINGLE-SHELL TANK RETRIEVAL TECHNOLOGY DEVELOPMENT

Milestone M-06-00

W. R. Wrzesinski

Tank Waste Remediation System

May 20, 1993

Milestone Description

- M-06-00 — Develop single-shell tank waste retrieval technology and complete scale model testing.

- Deliverable(s) — Demonstrate retrieval technology for single-shell tank waste forms including sludge, saltcake and in-tank hardware. Show technology for support, control and deployment systems. Demonstrations to be performed in scale model tank, using simulated waste.

- Baseline Schedule — Complete demonstrations in June 1994.

Open Commitments

None

Accomplishments (Last three months)

- Initiated Testing with Kaolin/Water (66-33%) Sludge Simulant at WHC
  - 20-47 GPM retrieval rates achieved with air-complete
  - Up to 70 GPM retrieval rate with water (mechanical agitator)
  - More difficult to dislodge and transport initially
  - Plugging encountered in waste hopper - need to watch diameters
  - Multiple passes may be needed for effective removal
- Sandia has Successfully Deployed 4" Cutter for In-Tank Hardware Removal
- Sandia has also Progressed on Bread Boarding Hydraulic Systems for 12" Cutter
- University of Missouri Rolla has Completed Preliminary Water Jet Tests on Hard Wastes Showing Waste Removal Potential
- LLNL Completed Test Firing at 40KSI of Hydraulic Impact End Effector (Water Cannon) - Double Hearing Protectors Required.

Planned Actions (Next six months)

- Define M-06-00 June 1994 Deliverable by September 1993.
- Complete WHC tests of soft waste removal device with kaolin simulants (simulates dry sludge).
- Initiate tests of water jets at Quest Industries - Kent, WA (all waste forms)
- Initiate tests of vacuum conveyance system at PNL Richland, WA (all waste forms)
- Optimize water cannon salt cake rubbelizer at LLNL
- Test abrasive water jets and model 12" pipe cutter at Sandia for in-tank hardware removal.

Milestone Assessment

- Schedule
  - Expect completion of M-06-00 on schedule June 1994

- Technical Scope
  - Early end effector tests show desired retrieval rates achievable.
  - Specific June 1994 deliverables to be defined by September 1993.

Special Topics

No major issues.

MILESTONE ASSESSMENT

- **Budget vs. Cost ($ in 000's)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FYTD Budget	62	332	738	1,055	1,366	1,640	1,864	2,098	2,327	2,539	2,745	3,125
FYTD Cost	37	300	612	736	976	1,177	1,397					
Spending Variance	25	32	126	319	390	463	467					

Variance Explanation: Delays in contract placements and delivery for testing and equipment at various labs. Not expected to impact milestone completion June 1994.

(ATTACHMENT 8)

FULL-SCALE DEMONSTRATION OF WASTE RETRIEVAL TECHNOLOGY

Milestone M-07-00

W. R. Wrzesinski DOE-RL

W. C. Miller WHC

May 1993

Milestone Description

• M-07-00	Initiate full-scale demonstration of waste retrieval technology
• DELIVERABLES	Deliverable is defined as start-up of the waste retrieval equipment in the selected single-shell tank
• BASELINE SCHEDULE	Initiate retrieval operations - October 1997

OPEN COMMITMENTS

- None

Accomplishments (Last three months)

- Project Validation Reviews with DOE-HQ completed

- Cost estimates and baseline schedules for sluicing retrieval project completed

- M-07-01 - Tank Selection Criteria documentation submitted to Ecology 2/2/93 (due 10/31/93)

- M-07-02 - Ecology concurrence on Tank Selection Criteria received 4/28/93 (due 12/31/93)

Accomplishments (Last three months) (Cont)

- Field Walk-down Status
  - On February 26, 1993, weather and resources allowed for initial lifting of cover blocks over pits adjacent to tank C-106
  - Photographs show condition of pits
    - Two covers over north and south pits, one cover over heel pit
    - Sluicer thought to be in South pit was absent
    - Broken P-10 pump present in North pit
    - As expected, high levels of contamination/dose rate present
    - Much debris present in pits
    - Removal of foam from pits has allowed snow entry to pits

Planned Actions (Next six months)

- C-106 Sluicing Effort (Project W-320)
  - Tank C-106 Core Sampling and analysis
  - Complete Advanced Engineering Studies/Analyses
  - Completion of Functional Design Criteria
  - Commencement of Definitive Design
    * After approval of Functional Design Criteria and project schedule/costs by RL
  - Regulatory compliance/safety documentation
    Continue safety documentation (PSE/PSEL)
    Continue environmental documentation (RCRA, CAA, NEPA)
    * ADM in WHC review
    * Regulatory Permitting Plan being written
  - DOE-HQ approvals required to initiate design, procurement and construction activities expected to be received in May, 1993

Milestone Assessment

- **Schedule**

  - Utilizing sluicing as the retrieval method for C-106, initiation of retrieval by 10/97 possible

  - Critical items for achieving successful completion of the milestone:

    - Completion of the Functional Design Criteria
    - DOE-HQ Approvals
    - Completion of Waste Characterization Analyses
    - Definitive Design
    - Construction

Milestone Assessment (Cont)

Technical Scope

- Retrieval options for M-07 tank include both sluicing and long reach manipulator systems (reference technologies)

- Propose to initiate retrieval demonstration with sluicing

  - Sluicing technique to be used similar to past-practice technique used at Hanford in 1950's and 1970's.

  - Utilizes low pressure water stream to mobilize waste into slurry stream which is pumped from the tank

  - No sub-surface barriers are planned to be utilized during retrieval of the M-07 waste tank

- Complete 95% waste retrieval with long reach manipulator system, if required

Milestone Assessment (Cont)

- Budget vs. Cost ($ in 000's)

Cumulative	Oct - Mar	Apr	May	Jun	Jul	Aug	Sep
FYTD Budget	1726	2197	2979	3615	4222	4677	5060
FYTD Cost	1705	2134					
Spending Variance	21	63					

Variance Explanation:

- Not required, variance is less than 10%

SPECIAL TOPICS

• Regulatory Compliance Position Paper

- A position paper is being prepared to establish a preliminary position for meeting regulatory requirements
- This paper will provide the Hanford position on the following issues:
  - Sluicing retrieval of tank C-106
  - Tank Leakage
  - Leak Detection
  - Characterization needs for regulatory compliance
  - Barriers (both Surface and Sub-surface)
  - Closure (Clean Closure vs. Landfill)
- This position paper planned to be presented during next few months at a location convenient to the Regulators (Lacey or Richland)
- Based upon this position paper, DOE plans to meet with the regulators to begin working toward agreement on regulatory compliance for waste tank retrieval

SPECIAL TOPICS (con't)

- A Core Sampling Recovery Test Strategy is currently being prepared to determine the variability in obtaining core samples for maximizing the recovery potential.
    - Assigned objective is to demonstrate the ability of Core Sample Truck #1 to obtain satisfactory core samples from waste tanks.
    - Implementation of the Test Strategy will involve core sampling.
    - Two-phased testing program scheduled May 24, 1993 to Sept 17, 1993.
        - If the sampling is successful, cores retrieved will count toward the completion of Milestone M-10-07.
            - Phase one tanks: T-105, T-101, C-111, and C-108
            - Phase two tanks: C-106, C-105, C-104, AN-107, and BX-109

Milestone Description

• M-08-00	Initiate full-scale tank farm closure demonstration project
• DELIVERABLES	Initiation is defined as full-scale waste retrieval
• BASELINE SCHEDULE	Initiate full-scale closure demonstration - June 2004

OPEN COMMITMENTS

- None

Accomplishments (Last three months)

- Completed Sub-Surface Barrier Systems Analysis Study (SAS) Close-out Presentation, March 24, 1993
  - Attended by Gary Anderson of Ecology
  - Assumed functions and requirements for sub-surface barrier systems
  - Evaluated specific sub-surface barrier concepts against the assumed functions and requirements
  - Selected two or three configurations which could be deployed in the C tank farm
- Completed Retrieval Technology Plan

Planned Actions (Next six months)

- Complete Retrieval Program Plan
- Initiate Phase II of Sub-surface barrier development
  - Additional system engineering evaluation of functions and requirements
  - Regulator input needed on expectations and requirements before commencement of Phase II barrier development work
  - Prepare sub-surface barrier test and evaluation plan

Milestone Assessment

- **Schedule**

  - Activities during FY 1993 support the retrieval demonstration portions of the M-08 milestone date.

Milestone Assessment (Cont)

- **Technical Scope**

  - Current TWRS plans are to demonstrate retrieval of waste for entire tank farm as part of closure demonstration

  - Closure demonstration will be accomplished by the Environmental Restoration Program.

FULL-SCALE SINGLE-SHELL TANK FARM CLOSURE DEMONSTRATION

Milestone M-08-00

W. R. Wrzesinski DOE-RL

W. C. Miller WHC

May 1993

Milestone Assessment (Cont)

- **Budget vs. Cost ($ in 000's)**

Cumulative	Oct - Mar	Apr	May	Jun	Jul	Aug	Sep
FYTD Budget	1267	1398	1591	1801	2016	2282	2436
FYTD Cost	816	981					
Spending Variance	451	417					

Variance Explanation:

- Manpower shortfalls continue to delay the start and completion of a number of activities
- Internal/External reviews have not taken place as planned

 (ATTACHMENT 9)

SINGLE-SHELL TANK CHARACTERIZATION

MILESTONE M-10-00

Paul Hernandez - USDOE/RL
John Propson - WHC

Waste Characterization Program

May 20, 1993

Milestone Description

o M-10-00	Sample and analyze at least two complete core samples from each single-shell tank.
o DELIVERABLE(S)	Obtain and analyze a minimum of two core samples from each single-shell tank. Samples will be collected and analyzed to determine the characteristics of significant waste strata to support timely development of tank waste retrieval technology and to assist in preparation of single-shell tank closure plans and the supplemental EIS. Samples will be collected and analyzed in accordance with a single-shell tank waste analysis plan.
o BASELINE SCHEDULE	Complete single-shell tank waste characterization by September 1998.

Accomplishments (Last three months)

- Completed the scheduled core sampling in T-Tank Farm, extracting a total of seven cores from tanks T-102, T-105, and T-107.
- Completed and released characterization data packages for Tanks B-202, BX-107, C-109, S-104, T-104 along with addenda for the Tank C-110 and T-111 data packages.
- Completed and released two Tank Characterization Reports, a comprehensive estimate of tank contents, for Tanks C-112 and U-110.
- Completed an envelope test report on Rotary Mode Sampling.
- The Notice of Construction (NOC) for the Rotary Mode Sampling System HEPA exhauster is being finalized.
- Acceptance testing of the Rotary Mode Sampling System is continuing. Several cores have been taken from simulated sludge and liquid wastes with 98% to 100% recovery.

Planned Actions

- Near term core sampling schedule includes Tanks T-105, T-101, C-111, and C-108. (See special topics)

- Complete acceptance testing of the Rotary Mode Sampling System.

- Initiate Operational Test Program on the Rotary Mode Sampling System.

- Issue the Safety Analysis for the Rotary Mode Sampling System and prepare for the Operational Readiness Review.

- Receive components for the Rotary Mode Sampling System HEPA filtration exhauster.

MILESTONE ASSESSMENT

- **Schedule Performance**

  - M-10-07 — Obtain a total of 24 core samples from 12 SSTs - September 30, 1993.
    - Milestone may be missed. (see Special Topics)
  - M-10-13 — Restore rotary mode core sampling capability to the Hanford Site. - September 30, 1993.
    - Presently on schedule.

MILESTONE ASSESSMENT (cont'd)

- ## Budget vs. Cost ($ in Millions)

Cumulative	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FYTD Budget	1.700	3.700	5.604	7.661	9.557	11.375	13.395	15.537	17.416	19.244	21.266	23.456*
FYTD Cost	.583	3.138	4.874	6.902	8.680	11.361	14.279					
Spending Variance	1.117	.562	.730	.759	.877	.014	(.884)					

Change Control

- The FY 1993 budget for SST Sampling and Analysis was increased by $3.2 million to fully fund planned laboratory activities associated with SST characterization.

* Represents five cost accounts within the Characterization Program Budget directly related to SST sampling and analysis.

SPECIAL TOPICS

- Core Sampling Status

  - A core sampling stand-down has been ordered due to problems in the sample recovery process.

    - Several independent investigations and assessments of equipment and procedures have been initiated and are ongoing.