



Tri-Party Agreement Milestone Review  
Meeting Minutes Transmittal/Approval  
February 17, 1993 (sheet 2 of 4)

1. M-01-00, GROUT CAMPAIGNS

The information was presented by G. Sanders (Attachment 1). Under "Planned Activities", Ecology asked if they were being informed of the developments in the Performance Assessment (PA), RL replied that Ecology was not involved but will be invited to the next significant meeting on the PA. This was followed by a short discussion of the past and current topics reviewed in the PA development.

At the close of the presentation, Ecology asked RL to expand the PA to include incremental use of grout. RL agreed to the Ecology request.

There were no new issues identified in the presentation.

— 2. M-02-00, PRETREATMENT

The information was presented by Steve Barker (Attachment 2). Under the "Accomplishments" section, Ecology asked when they would be able to see the draft plans and/or reports being developed.

Action: RL to provide Ecology and EPA a schedule describing when the documents would be available for review by Ecology and EPA.

Resp.: J. Peschong Date: TBD

EPA also suggested that future presentation charts include the report release dates and who will be receiving the report. Ecology also noted the timing of the report release dates do not appear to be consistent with the TWRS schedule.

Action: RL will provide Ecology and EPA a chart showing release dates for report and how it corresponds with the TWRS baseline schedule.

Resp.: J. Peschong Date: TBD

M-03-00, HWVP

The information was presented by J. Couey (Attachment 3). Under "Budget Assessment," it was noted the milestone underrun is due to under expenditures by the two subcontractors, Flour and UCAT.

M-31-00, ADDITIONAL DST'S

The information was presented by B. Hay (Attachment 4). In response to a RL question, under "Special Topics," Ecology said they are waiting for the TWRS rebaselining information before acting on the M-31-02 Dispute Resolution. RL noted they submitted to Ecology a list of proposed milestones last fall and asked Ecology for a status.

Action: Ecology to provide RL a status of the proposed milestone list.

Resp.: Dave Jansen Date: March 5, 1993

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**M-04-00, TREATABILITY STUDIES**

The information was presented by M. Dev (Attachment 5). There were no issues or action items identified.

**M-05-00, SST STABILIZATION**

The information was presented by G. Bishop. Under "Accomplishments," RL reported the March 15, 1993, date for pumping Tank T-101 is still achievable. It was also noted by RL they are proceeding with the assumption that T-101 is a leaker.

Under "Planned Actions," RL reported they have resolved concerns with DOE Headquarters regarding stabilization and have decided to continue tank stabilization activities with appropriate safety precautions.

Under "Schedule Performance," the M-05-04 Dispute Resolution was discussed and Ecology said they will proceed with responding to RL regarding the Dispute Resolution. In response to an Ecology request, RL said they will provide a stabilization schedule at the next unit managers' meeting.

Under "Special Topics," RL reported on the continued heat generation of Tank C-106 and their plan to add water for cooling. The RL discussed its "Emergency Action Plan" in the event of any tank leakage and requested Ecology to provide any comments.

**M-06-00, SST RETRIEVAL TECHNOLOGY DEVELOPMENT**

The information was presented by B. Nicoll (Attachment 7). There were no issues or action items identified.

**M-07-00, DEMONSTRATE SST TECHNOLOGY**

The information was presented by B. Nicoll (Attachment 8). Under "Accomplishments," RL noted milestone M-07-01 was completed eight months ahead of schedule. Ecology was also requested to respond to interim milestone M-07-02 by March 1993.

There were no issues identified in this presentation.

**M-08-00, SST FARM CLOSURE DEMONSTRATION**

The information was presented by B. Nicoll (Attachment 9).

Under "Planned Actions," there was a discussion on barrier development and RL invited Ecology and EPA to participate in a meeting next week regarding this subject. This was followed by a discussion of the various options for sub-surface barriers and what requirements must be satisfied.

There were no issues or action items identified.

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**M-09-00, TANK CLOSURE OF 149 SST'S**

The information was presented by D. Alexander (Attachment 10A) and supplemented with a copy of the TWRS/EIS schedule (Attachment 10B).

There were no issues or action items identified.

**M-10-00, SST TANK CORE SAMPLE ANALYSIS**

The information was presented by P. Hernandez (Attachment 11A)

Under "Special Topics," RL distributed a draft letter on "Push-Mode Core Sampling of Tank BY-104" (Attachment 11B) and provided a second letter regarding the rebaselining of TWRS (Attachment 11C).

RL announced there will be a TWRS Waste Characterization rebaselining meeting held on February 24, 1993, and invited EPA and Ecology participation. Topics will include paperwork requirements and data package validation. The meeting will be held in Room 780, Federal Building at 10:00 a.m.

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## AGENDA

## TRI-PARTY AGREEMENT MAJOR MILESTONE MANAGEMENT REVIEW

Wednesday, February 17, 1993

EPA Conference Room  
Medical Dental Center

<u>TIME</u>	<u>MILESTONE</u>	<u>TITLE</u>	<u>RL DIVISION DIRECTOR</u>	<u>LEVEL 2/3 MANAGER</u>	<u>PRESENTER</u>
9:00 am	M-01-00	Complete 14 Grout Campaigns	G. H. Sanders	J. L. Epstein	G. H. Sanders
9:30 am	M-02-00	Pretreatment	Lief Erickson	W. C. Miller	J. C. Peschong
9:45 am	M-03-00	Initiate HWVP Operations	R. W. Brown	R. A. Smith	R. L. Long
10:00 am	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
10:20 am		BREAK			
10:30 am	M-05-00	SST Stabilization	R. E. Gerton	R. E. Raymond	G. E. Bishop
11:00 am	M-06-00	Develop SST Retrieval Tech.	Lief Erickson	W. C. Miller	B. L. Nicoll
	M-07-00	Demonstrate SST Retrieval	Lief Erickson	W. C. Miller	B. L. Nicoll
	M-08-00	Full-Scale Farm Closure Demo.	Lief Erickson	W. C. Miller	B. L. Nicoll
11:30 am	M-09-00	Closure of 149 SSTs	R. D. Freeberg	T. M. Wintczak	D. H. Alexander
11:45 am	M-10-00	SST Core Sample Analysis	R. E. Gerton	J. G. Propson	P.R. Hernandez
12:15 pm		LUNCH			

TPA Project Managers' Site Review: UO-3, U-14, U-17, associated tanks/collection areas in U-Plant

Review coordinator: Cindy Borneman

ATTENDEES

TPA MILESTONE MANAGEMENT REVIEW

FEBRUARY 17, 1993

EPA CONFERENCE ROOM  
MEDICAL DENTAL CENTER

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<u>NAME</u>	<u>ORGANIZATION</u>	<u>MAILSTOP</u>
<u>F.T. CALAPRISTI</u>	<u>WHC/TPA</u>	<u>B2-35</u>
<u>J. L. EPSTEIN</u>	<u>WHC/GWOT</u>	<u>R4-01</u>
<u>G.H. Sanders</u>	<u>DOE-RL</u>	<u>A5-15</u>
<u>CL Young</u>	<u>WHC/TPA</u>	<u>B2-35</u>
<u>BA Austin</u>	<u>WHC/TPA</u>	<u>B2-35</u>
<u>JK YERXA</u>	<u>DOE/RL</u>	<u>A5-15</u>
<u>S.H. Wisness</u>	<u>DOE/RC</u>	<u>A5-15</u>
<u>A. Nylander</u>	<u>Ecology</u>	<u>Kennewick</u>
<u>J.A. Barber</u>	<u>WHC/Pretreatment</u>	<u>S4-58</u>
<u>Paul Day</u>	<u>EPA</u>	<u>B5-01</u>
<u>Carol Jansen</u>	<u>Ecology</u>	<u>Olympia</u>
<u>David Forehand</u>	<u>WHC/TPA</u>	<u>B2-35</u>
<u>Luis Soler</u>	<u>Dames &amp; Moore/GSSC/TPA</u>	<u>A4-35</u>
<u>D.W. Lindsay</u>	<u>WHC/TPA</u>	<u>B2-35</u>

ATTENDEES

TPA MILESTONE MANAGEMENT REVIEW

FEBRUARY 17, 1993

EPA CONFERENCE ROOM  
MEDICAL DENTAL CENTER

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<u>NAME</u>	<u>ORGANIZATION</u>	<u>MAILSTOP</u>
<u>Rodolfo Carreon</u>	<u>DOE - RL</u>	<u>A5-16</u>
<u>Thomas E RANNEY</u>	<u>WHC - SSTT</u>	<u>R1-49</u>
<u>LINNY BISHOP</u>	<u>DOE</u>	<u>R2-62</u>
<u>JAWW TABSI</u>	<u>WHC - TRAI</u>	<u>B2-35</u>
<u>MARSHA BELL</u>	<u>WHC</u>	<u>T6-16</u>
<u>PAUL HERNANDEZ</u>	<u>DOE</u>	<u>A4-02</u>
<u>AL SAMPSON</u>	<u>WHC</u>	<u>R2-18</u>
<u>D. WANJEK</u>	<u>DOE</u>	<u>A5-21</u>
<u>V. HALL</u>	<u>WHC</u>	<u>B1-59</u>
<u>D. ALEXANDER</u>	<u>DOE</u>	<u>A5-10</u>
<u>B. NICOLL</u>	<u>DOE</u>	<u>A5-16</u>
<u>M. MAHAFFEY</u>	<u>WHC</u>	<u>L4-73</u>
<u> </u>	<u> </u>	<u> </u>
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( 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, Acting Director Disposal Division  
Lori Huffman, RL Low-Level Waste Branch  
Joe Epstein, WHC Level 3 Manager**

**February 17, 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.

## Open Commitments

**Action:** Provide a copy of the draft grout C-2 analysis to the State in parallel with DOE review.

**Responsibility:** G. Sanders

**Status:** Document is being reworked to incorporate RL comments, new population dose calculations, and facility modifications. Resubmittal planned to RL mid February.

## Planned Activities

- Continue development of operating, maintenance, and administrative procedures
- Continue facility modifications and critical facility maintenance activities
- Continue analysis on GTF production capacity study
- Continue Compliance Assessment portion of Operational Readiness Review
- Submit DST vault closure implementation plan to RL February 1993
- Submit Performance Assessment to RL May 1993
- Complete Pilot Plant 106-AN test results February 1993
- Complete PSW core analysis March 1993
- Accept delivery on vault 102 and 103 Ventilation Systems March 1993
- Complete Hot Pilot Plant Engineering Study March 1993

## Accomplishments

- FSAR resubmitted to RL January 1993
- Accepted vaults 102-105 from contractor December 1992
- Completed DST waste transfer of 106-AN to feed tank 102-AP December 1992
- Submitted final Grout Issue Paper to DOE-HQ December 1992
- Initiated initial grout clearing for vaults 106-109 (M-01-02A) November 1992

# Milestone Assessment

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

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

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

## Milestone Assessment (cont.)

- **Cost versus Budget**

(Dollars in Millions)

Cumulative	Oct-Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
<b>FYTD Budget</b>	11.9	15.3	18.8	22.3	26.0	29.0	31.7	35.0	37.9
<b>FYTD Cost</b>	10.2								
<b>Spending Variance</b>	1.7								

**Variance Explanation:**      **Attributable to resource constraints in the areas of facility readiness activities (procedures, facility upgrades, compliance assessment).**

# 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, 104-AP upgrades (reprogramming), hot pilot requirement**
- **Ecology's concerns on hydrogen generation.**
  - **FSAR update planned (mitigation equipment) and an informational copy will be provided to Ecology subsequent to HQ review and approval. Planned for mid 1993.**
  - **Confirming analysis of the H<sub>2</sub> generation.**

## Special Topics (cont.)

- NRC ruling on petitions of States of Washington and Oregon with respect to high-level waste definition.
- Technical Issues
  - PA will be submitted to RL in May 1993
  - DST 101-AW, originally intended Vault 103 feed is now a watch list tank. DST 105-AP will be utilized as vault 103 feed.
  - Heat of Hydration data will be finalized in February 1993 to support the development of Vault 102 campaign plan.

### Change Notice Activity

- Change request M-01-92-01A has been denied by Regulators.
- Dispute resolution invoked by RL.

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**INITIATE PRETREATMENT OF  
DOUBLE-SHELL TANK WASTES**

**Milestone M-02-00**

**J. C. Peschong**

**Waste Pretreatment**

**February 17, 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 Draft Blending Study for first 20 tanks
- Issued Draft Pretreatment Technology Plan
- Issued Draft W-151 Mixer Pump Specification for review
- Issued Draft NCRW TRUEX Laboratory Development Report for Review (M-02-00-T3)
- Issued Draft Pilot Plant Siting Study and conducted peer review
- Issued Draft Plan for Rapid Deployment of Cesium Removal From DSS/DSSF

## **Accomplishments (Last three months)(Cont'd)**

- **Initial Pretreatment Module Engineering Study was released (M-02-00-T2)**
- **Issued TWRS Waste Pretreatment FY 1993 Program Description**
- **Issued supporting documents with backup planning data for Pretreatment FY 1993 Activity**
- **Tank Waste Technical Options Report issued for review**
- **Justification of mission need for Multi-Function Waste Remediation Facility (MWRF) was approved**
- **Issued Tank Farm Restoration and Upgrades Program Plan (WHC-EP-0392 Rev 1) meeting Target Milestone M-02-03-T1**

## **Planned Actions (Next six months)**

- **Issue TWRS Baseline Documents, Final Drafts for External Review**
  - **Functions & Requirements Documents**
  - **Integrated Technology Plan**
  - **TWRS Program Plan**
  - **TWRS Program Management Plan**
- **DOE/RL Project Plan and Project Management Plan for MWRF will be issued**
- **Issue Tank Waste Technical Options Report**
- **Issue Plan for Rapid Deployment of Cesium Removal From DSS/DSSF**

## **Planned Actions (Next six months)(cont'd)**

- **Issue Pretreatment Program Plan**
- **Issue report on NCRW TRUEX Laboratory Development (M-02-00-T3)**
- **Complete Engineering Study of Cesium Ion Exchange (M-02-00-T4)**
- **Issue Blending Study for First 20 Tanks (M-02-00-T5)**
- **Issue Pretreatment Technology Plan which includes Technology Plan for Selection of Actinide Separation Process (M-02-00-T6)**
- **Issue Pilot Plant Siting Study report**

# Milestone Assessment

## ● Schedule

<b>MILESTONE</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>STATUS</b>
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	On Schedule
M-02-00-T2	Complete engineering study of Initial Pretreatment Module (Tank Safety Treatment Module)	12/92	Completed 10/92

## Milestone Assessment (Cont)

- Schedule (Cont)

<b>MILESTONE</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>STATUS</b>
M-02-00-T3	Publish summary of NCRW TRUEX laboratory development work	12/92	3 months behind schedule
M-02-00-T4	Complete engineering study on Cs ion exchange	3/93	On Schedule
M-02-00-T5	Complete waste treatment feed optimization (blending) study	3/93	On Schedule
M-02-00-T6	Issue Technology Plan for selection of advanced (actinide) separation process	3/93	On Schedule
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 - Jan	Feb	Mar	Apr	May	Jun	Jul - Sep
<b>FYTD Budget</b>	4.6						36.4
<b>FYTD Cost</b>	3.5						
<b>Spending Variance</b>	-1.1						

## 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.
- The annual budget for the WHC portion of the M-02 work scope was reduced by \$6 Million from the December 1992 report to the January 1993 report due to the transfer of funds from WHC to PNL.

## Special Topics

- **Change Request submitted to DOE for review to move dates for M-02-00-T3 and M0-02-00-T7 due to expanded scope of incorporating recent results of glass composition variability studies**

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(ATTACHMENT 3)

## **Milestone M-03-00**

**Initiate Hanford Waste Vitrification Plant  
Operations**

**J. E. Couey**

**HWVP Project Office**

**February 17, 1993**

## **Milestone Description/Deliverables**

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**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**

## **Accomplishments (last three months)**

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- **U.S. Department of Energy-Headquarters (DOE-HQ) approved Change Request CR-0712 to increase TEC (from \$965M to \$1,210M)**
- **Completed design on Vitrification Building Foundation (B210A)**
- **Received Key Decision 3B, Approval to Commence Construction of Canister Storage Building (CSB)**
- **Awarded contract for excavation of the CSB foundation**
- **Ten (10) bids received on January 28, 1993, for construction of first phase of CSB; award pending DOE-HQ approval (M-03-04 - February 1993)**
- **Initiated Washington State Department of Ecology (Ecology) review of the construction permit application (Clean Air Act)**

## **Planned Activities (next six months)**

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- **Complete contract negotiations for Phase IIA construction - March 1993**
- **Initiate construction of the Vitrification Building Foundation (M-03-05 - March 1993)**
- **Complete excavation for the CSB**
- **Start concrete placement on the CSB foundation**
- **Issue Tank Waste Remediation System High-Level Waste Immobilization Technology Plan (formerly the HWVP Applied Technology Plan) - March 1993**

# M-03 Milestone Assessment

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## M-03 MILESTONE ASSESSMENT

### BUDGET VS. COST (\$ IN MILLIONS) ALL CONTRACTORS

CUMULATIVE	FYTD	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FYTD BUDGET	42.2	52.5	63.3	73.4	84.8	95.6	108.4	123.9	140.0
FYTD COST	32.0								
SPENDING VARIANCE	10.2								

#### VARIANCE EXPLANATION:

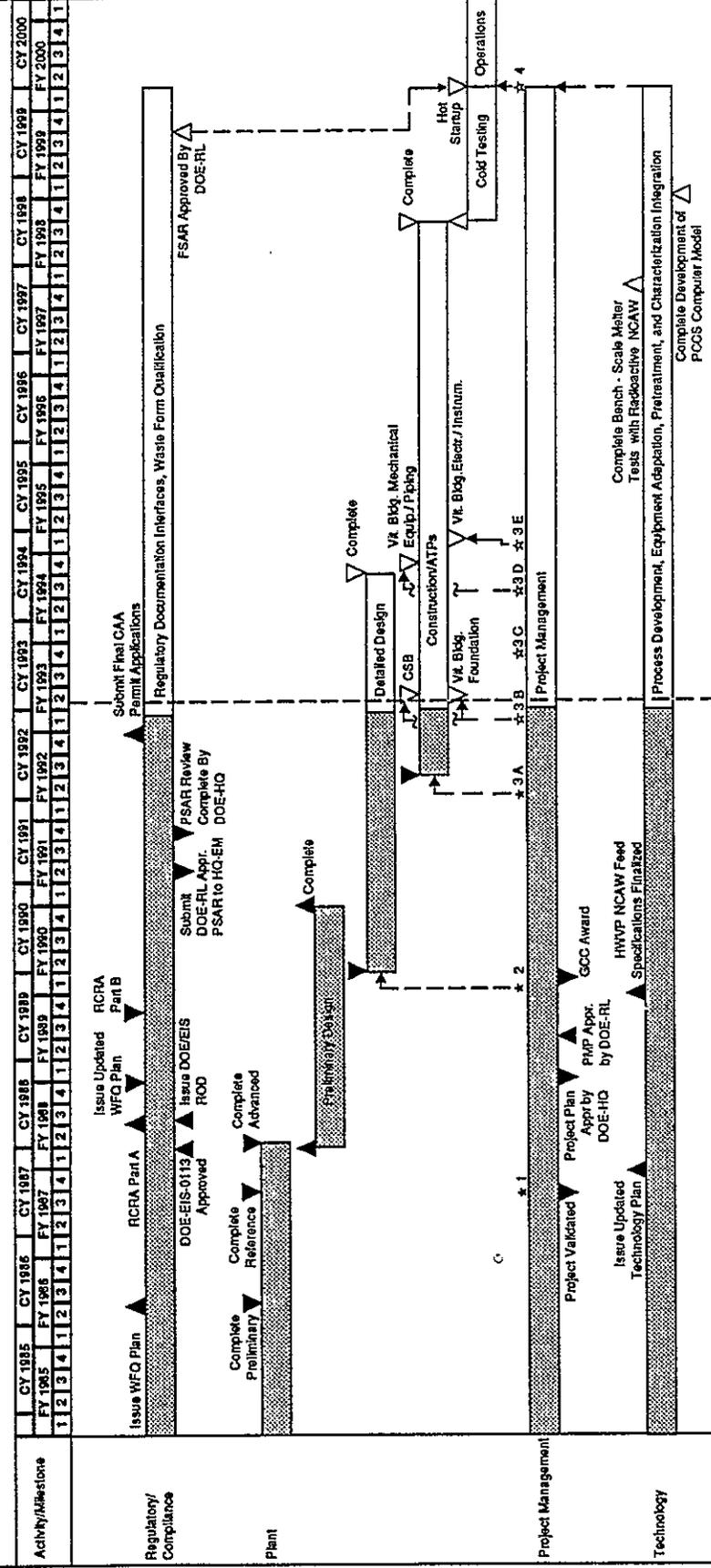
The majority of the spending variance is a result of the following:

Fluor is underspent due to the FY 1993 Budget being based on a staffing plan to accomplish a Design completion in June 1994, however, staff is being hired to support the delayed Design completion of December 1994. Change request HWVP-0713 is in process to replan the Fluor budget to be consistent with Design completion in December 1994 and reschedule a portion of the work currently planned in FY 1993 to FY 1994.

UCAT is underspent due to impaired progress on Site construction packages caused by weather, delayed Key Decisions, and subcontractors not progressing as scheduled. Also contributing to the spending variance is the delay of approval to commence construction of the Vitrification building foundation caused by the delay of Key Decision 3B, planned for November 1992 and forecast for a March 1993 completion. Staffing and associated costs have been delayed for Construction Management. Recommendations are to allow UCAT to proceed with Vitrification Building excavation and foundation slab construction packages to minimize a potential delay to project completion.

# Project Summary Schedule

## Hanford Waste Vitrification Plant 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

**ACRONYMS:**  
 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  
 RCDD - Record of Decision  
 WFO - Waste Form Qualification

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

## Special Topics

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- **Change Requests**

<b>Change Number</b>	<b>Class</b>	<b>Milestone</b>	<b>Description</b>
M-03-92-03	2	M-03-03	Change completion date for detail design from June 1994 to December 1994 approved on December 3, 1992

Item was in dispute resolution in November 1992.

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(Attachment 4)

**PROVIDE ADDITIONAL DOUBLE-SHELL  
TANK CAPACITY**

**MILESTONE M-31-00**

**B. J. HARP  
RL, MULTI-FUNCTION WASTE REMEDIATION FACILITY  
PROJECT OFFICE  
FEBRUARY 17, 1992**

**TPA Milestone M-31-00**

**Provide additional double-shell tank capacity**

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## **Open Commitments**

- **None**

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

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**Milestone Description**

- **M-31-00**            **Provide additional double-shell tank capacity. Construction complete.**
  
- **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 (In Dispute Resolution)**
  
- **M-31-02-T1**        **Complete detailed design for first new tanks  
Due 2/95**

TPA Milestone M-31-00

Provide additional double-shell tank capacity

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### 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)**

TPA Milestone M-31-00

Provide additional double-shell tank capacity

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## **Accomplishments (Last 3 months)**

- **Multi-Function Waste Tank Facility**
  - **Justification of Mission need approved by DOE-HQ  
(Supported MWTF and IPM continuation)**
  - **Project Plan approved by DOE-HQ  
(Allowed initiation of Preliminary (Title I) Design**
  - **Quality Assurance Program Plan approved by RL**
  - **Initiated Definitive Design (Title I) M-31-03  
(Complete)**

**TPA Milestone M-31-00**

**Provide additional double-shell tank capacity**

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

- **Complete Project Management Plan**
- **Complete Advanced Conceptual Design**
- **Complete Project FY 1995 re-validation**
- **Evaluate, plan, and execute Re-scoping based upon HQ guidance**

TPA Milestone M-31-00

Provide additional double-shell tank capacity

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## Planned Actions (continued)

- **Study to evaluate additional tank space requirements (M-31-02) Initiated**
  - **Waste generated during retrieval**
  - **Waste generated during decommissioning**
  - **Waste generated during remediation activities, and**
  - **Additional mission needs as identified**
  - **Validate the project for design only**

**TPA Milestone M-31-00**

**Provide additional double-shell tank capacity**

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## **Milestone Assessment**

- **Schedule**

- **Limited Definitive Design (Title I) activities have been initiated**
- **Impacts to M-31-02 completion, pending dispute resolution**

TPA Milestone M-31-00

Provide additional double-shell tank capacity

## Milestone Assessment

- **Schedule**
  - **Conceptual Design has been completed (M-31-01)**
- **Cost -vs- Budget**  
(Actuals through end of January)

Cumulative	October	November	December	January	February	March	Apr-Sept
<b>FYTD Budget</b>	<b>349.5</b>	<b>1073.2</b>	<b>1844.4</b>	<b>2264.5</b>	<b>2793.9</b>	<b>3171.9</b>	<b>4000.0</b>
<b>FYTD Cost</b>	<b>225.2</b>	<b>768.5</b>	<b>1228.8</b>	<b>2020.9</b>			
<b>Spending Variance</b>	<b>124.3</b>	<b>304.7</b>	<b>615.6</b>	<b>243.6</b>			

### Variance Explanation:

- **Awaiting outstanding commitment for consultants costs**
- **No underrun at end of Fiscal Year expected**

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

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## **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 impacts are reviewed and assessed**
- **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 projects (i.e., IPM, HWVP)**
- **A limited Title I work scope has been initiated to prevent any slippage in the current schedule**

**TPA Milestone M-31-00**

**Provide additional double-shell tank capacity**

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## **Special Topics**

**M-31-02 is in dispute resolution:**

- **The Evaluation requires information currently being developed as a part of TWRS planning and integration effort**
- **TWRS rebaselining will provide the integrated approach for the safe storage of tank wastes and project the future need and timing of new tank capacity**
- **Completion scheduled for March 1993**

**Provide Annual Reports of Tank Waste  
Treatability Studies**

**Milestone M-04-00D**

**M. Dev**

**Hanford Tank Waste Disposal Program**

**February 17, 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)

- No Activity

## **Planned Actions (next six months)**

- **Resume Los Alamos Technical Associates Contract February 1, 1993**
- **End Activity Period prior to preparation of FY 1993 report, February 28, 1993**
- **Complete Draft Report July, 30, 1993**

## Milestone Assessment

### ● Budget vs. Cost (\$ in Millions)

Cumulative	Oct-Mar	Apr	May	Jun	Jul	Aug	Sep
FYTD Budget	0.0	0.0	0.1	0.1	0.1	0.1	0.1
FYTD Cost	0.0						
Spending Variance	0.0						

Variance Explanation:

- None.

# **Complete Single-Shell Tank Interim Stabilization**

**Milestone M-05-00**

**G. E. Bishop  
Tank Farms Project Office**

**February 17, 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)**

- o Approval change number M-05-92-04.A, tank 241-C-106 interim milestone additions to M-05.**
- o Approval change number M-05-92-05.E, remedial actions necessary for assumed leaking single-shell tank 241-T-101.**
- o Completed milestone M-05-10, provide written basis for current water additions and status on measures to minimize water additions for tanks 241-C-105 and 241-C-106.**
- o Completed milestone M-05-11, provide revised contingency plan for leaks from 241-C-106.**
- o Completed milestone M-05-12, a plan which evaluates actions, schedules, and cost impacts for removing tank contents from 241-C-106.**
- o Completed milestone M-05-13-T1, initiate monthly psychometric measurements at 241-C-105 and 241-C-106 commencing fiscal year 1993, to be taken while exhausters are operating.**

## **ACCOMPLISHMENTS (LAST 3 MONTHS)** **(continued)**

- o Completed milestone M-05-13-T3, reduce the logging speed of the gross gamma probes for the 14 dry wells around 241-C-105 and 241-C-106.**
- o Completed milestone M-05-13-T4, provide to EPA and Ecology a plan for further improvements in gross gamma probe.**
- o Completed milestone M-05-15A, provide manual tape in-tank liquid level monitoring device in 241-T-101.**
- o Completed milestone M-05-18A, provide the revised data sheets and administrative procedures relevant to monitoring single-shell tank 241-T-101 liquid level detection instruments and identifying and reporting out of specification readings.**
- o Completed milestone M-05-18B, provide the revised procedures to accomplish controlling and tracking Discrepancy Reports generated to document adverse trends or data anomalies in the Hanford Tank Farm Operations.**

## **ACCOMPLISHMENTS (LAST 3 MONTHS)** **(continued)**

- o **Preparing to emergency pump tank 241-T-101**
  - **Safety evaluation for submersible pumping, criticality justification for continued operation, and request for authorization to pump at DOE-HQ.**

## **PLANNED ACTIONS (NEXT 6 MONTHS)**

- o **Complete milestone M-05-13, upgrade leak detection and site characterization at tanks 241-C-105 and 241-C-106. Milestone M-05-13-T2. Complete physical logging of 14 drywells.**
- o **Complete milestone M-05-16, initiate full scale removal of 241-T-101 liquids.**
- o **Complete milestone M-05-15, provide an engineering evaluation of alternatives for assumed leaker 241-T-101.**
- o **Complete milestone M-05-17C, provide the schedule for completing training of all operations supervisors and shift managers in accordance the upgraded supervisor training program.**
- o **Continue investigation of safety issues involved with watchlist tanks.**
- o **Negotiate changes to interim stabilization milestones M-05.**

# MILESTONE ASSESSMENT

## Budget Baseline Summary - January 1993

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
<b>FYTD BUDGET</b>	0.4	0.8	1.3	1.4	1.8	2.4	3.0	3.8	4.5	5.2	6.5	7.9
<b>FYTD COST</b>	0.3	1.0	1.8	2.6								
<b>SPENDING VARIANCE</b>	0.1	-0.2	-0.5	-1.2								

## Schedule Performance

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

**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.**
- o 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)**

### **Schedule Performance (continued)**

- For 12 remaining nonwatchlist tanks, physical and material condition of farms impact schedule and will likely pace stabilization work of remaining tanks. A detailed scope of this work has been prepared. Safety issues that have been identified also must be addressed (e.g., criticality).
- For 27 remaining watchlist tanks, unresolved safety issues (hydrogen generation, ferrocyanide, organic and high temperature) must be addressed prior to proceeding with stabilization.
- New interim milestones related to 241-C-105, 241-C-106, and 241-T-101 are being met on or ahead of schedule.

## **MILESTONE ASSESSMENT (continued)**

### **Technical Scope**

- o The milestone completion remains dependent on removal of current pumping restrictions. When this will occur is unknown.**
  
- o 44 tanks remain to be stabilized.**
  - 17 nonwatchlist tanks**
  - 27 watchlist tanks**
  
- o Watchlist tanks designated by public law 101-510, section 3137 (Wyden Amendment). Most have unreviewed safety concerns over hydrogen generation or ferrocyanide content. Others contain potentially flammable organics, or high temperature.**
  
- o 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**

- o **Due to restrictions of transfers within tank farms due to criticality concerns, the restart of pumping has been delayed.**
- o **Achievement of M-05 milestone is uncertain.**

### **Corrective Action**

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

### **Emergency Leak Response**

- o **Currently making preparations to emergency pump assumed leaking tank 241-T-101. This is a FeCN watchlist tank.**

## **SPECIAL TOPICS (continued)**

### **CONTINUED WATER ADDITIONS TO SST 241-C-106**

- o Most recent estimate of 241-C-106 heat load = 110,000 BTU/Hr.**
- o Requires continued water additions for evaporative cooling (est. 5 kgal every month).**
  - Would exceed thermal design limit on tank within 6 to 9 months**
- o Emergency Action Plan for this tank updated and provided to Ecology in December 1992 - No comments received.**
  - Reflects continued water addition should tank start to leak**
  - Would commence "Emergency Actions" to expeditiously remove as much liquid as necessary to mitigate leak.**

**SINGLE-SHELL TANK RETRIEVAL  
TECHNOLOGY DEVELOPMENT**

**Milestone M-06-00**

**Bruce Nicoll**

U.S. Department of Energy, Richland Field Office

**February 1993**

## Milestone Description

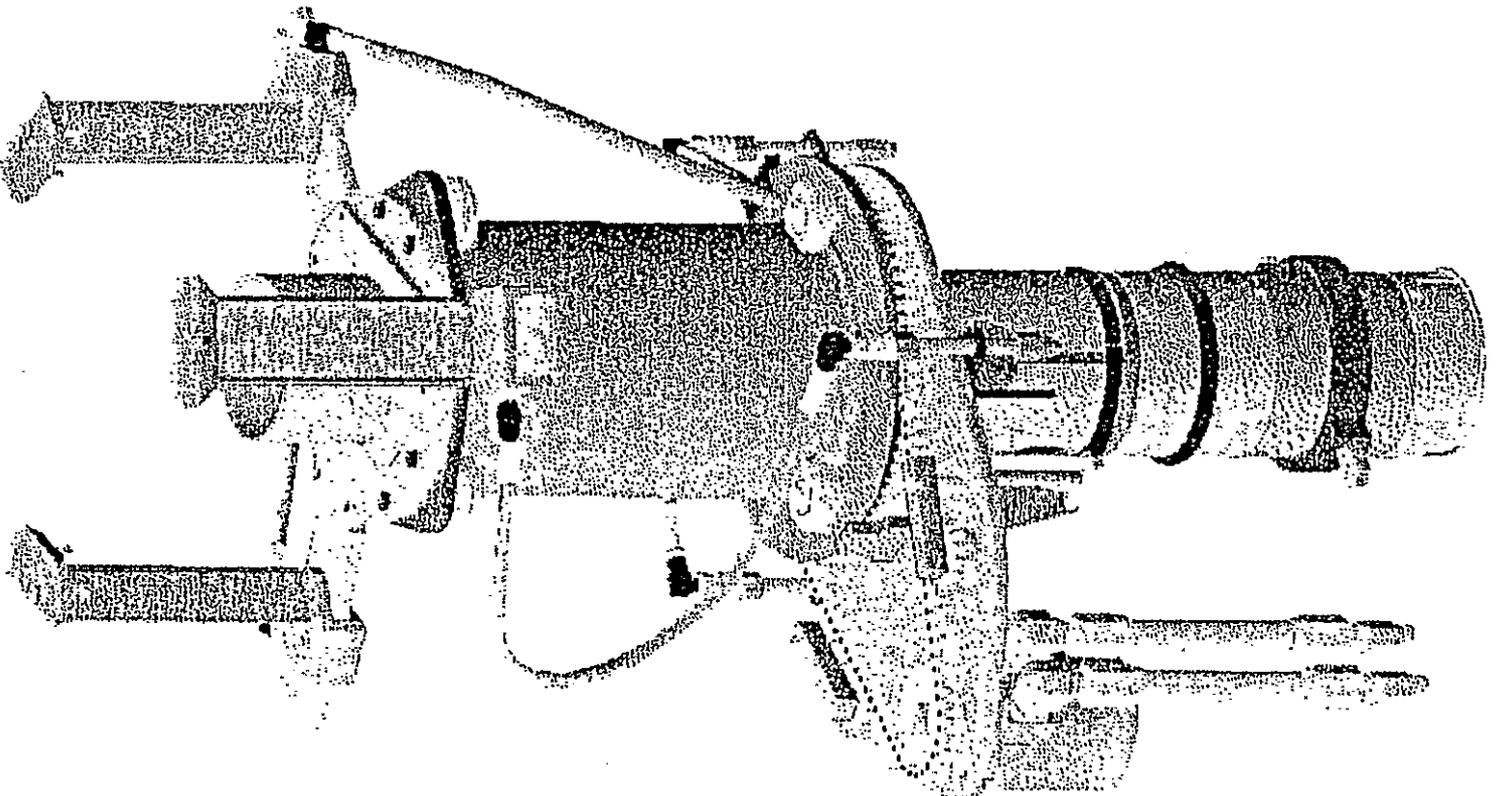
- **M-06-00**      **Develop single-shell tank waste retrieval technology and complete scale model testing.**
- **Deliverable(s)**      **Demonstrate retrieval technology for single-shell tank waste forms including sludge, saltcake and in-tank hardware. Show technology for support, control and deployment systems. Demonstrations to be performed in scale model tank, using simulated waste.**
- **Baseline Schedule**      **Complete demonstrations in June 1994.**

Open Commitments

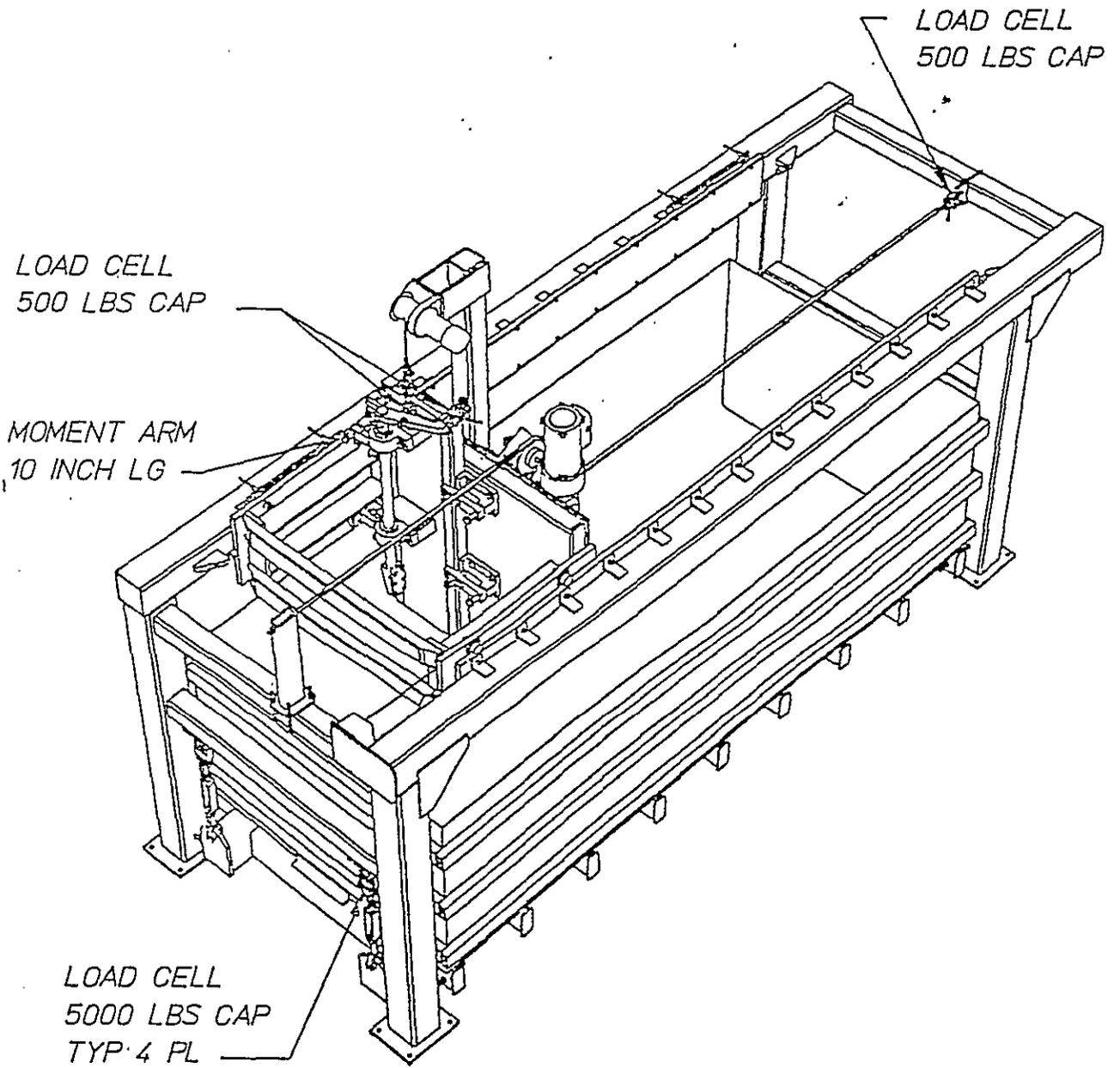
None

**Accomplishments (Last three months)**

- **Retrieval Demonstration for DOE Assistant Secretary - Duffy.**
- **Completed Bentonite Tests on Soft Waste Removal Device.**



SLUDGE DISLODGING END-EFFECTOR ASSY  
(ENGINEERING DEVELOPMENT UNIT)



9 3 1 2 0 0 1 2 1 8

# TEST FIXTURE ASSEMBLY

## Soft Waste Dislodging Tool

- **Bentonite Simulant**

- **Contents:**

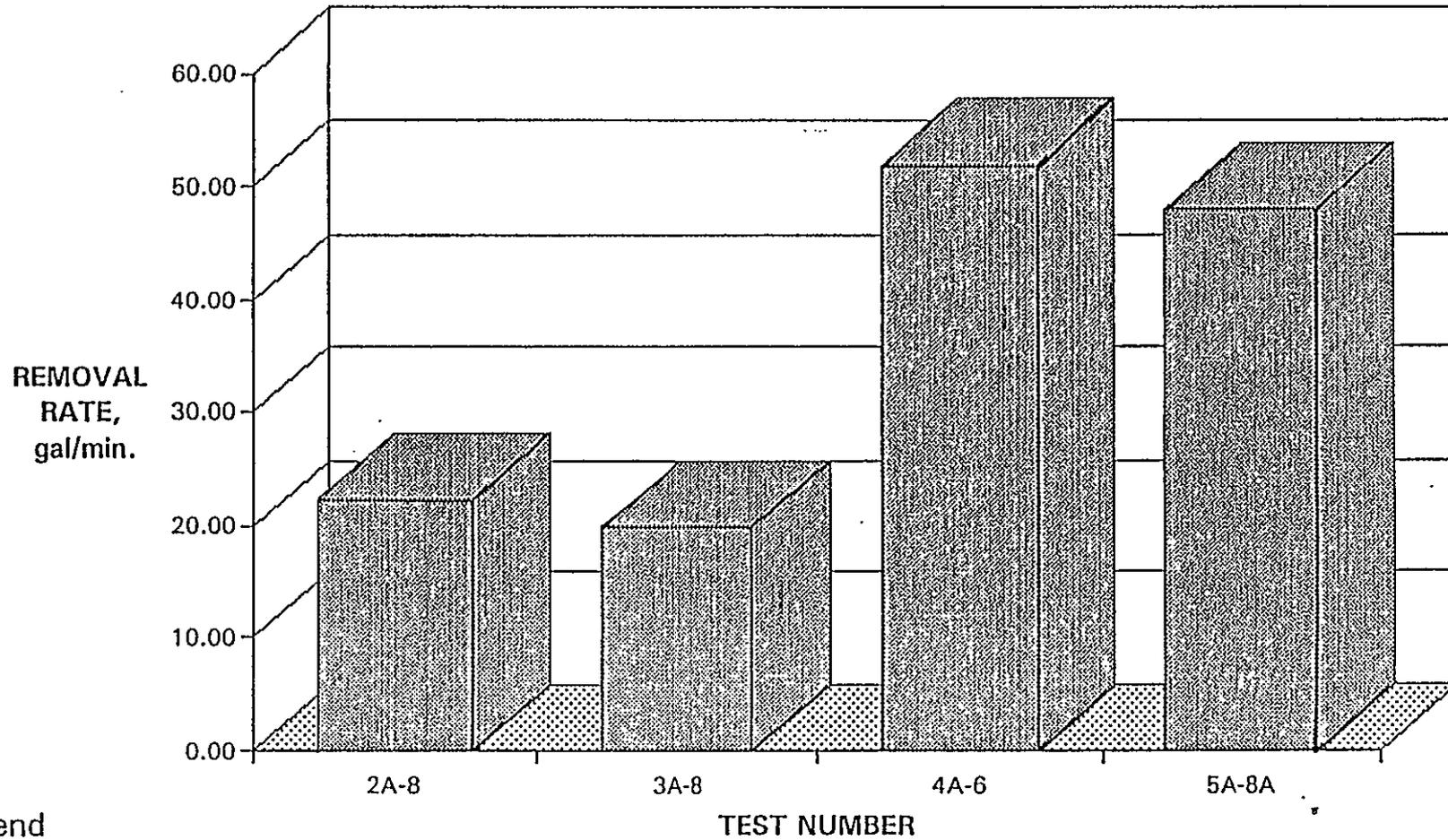
- Bentonite Clay 15 wt%
- Barium Sulfate 33 wt%
- Water 52 wt%

- **Properties:**

- Density 95 to 96 lb/cu. ft
- Shear Strength 32,000 to 37,000 dynes/sq.cm

## SOFT WASTE DISLODGING TOOL

COMPARISON OF BEST TESTS FROM EACH SERIES



## Legend

2A-8 = Mechanical agitator using air

3A-8 = Scarifier using air

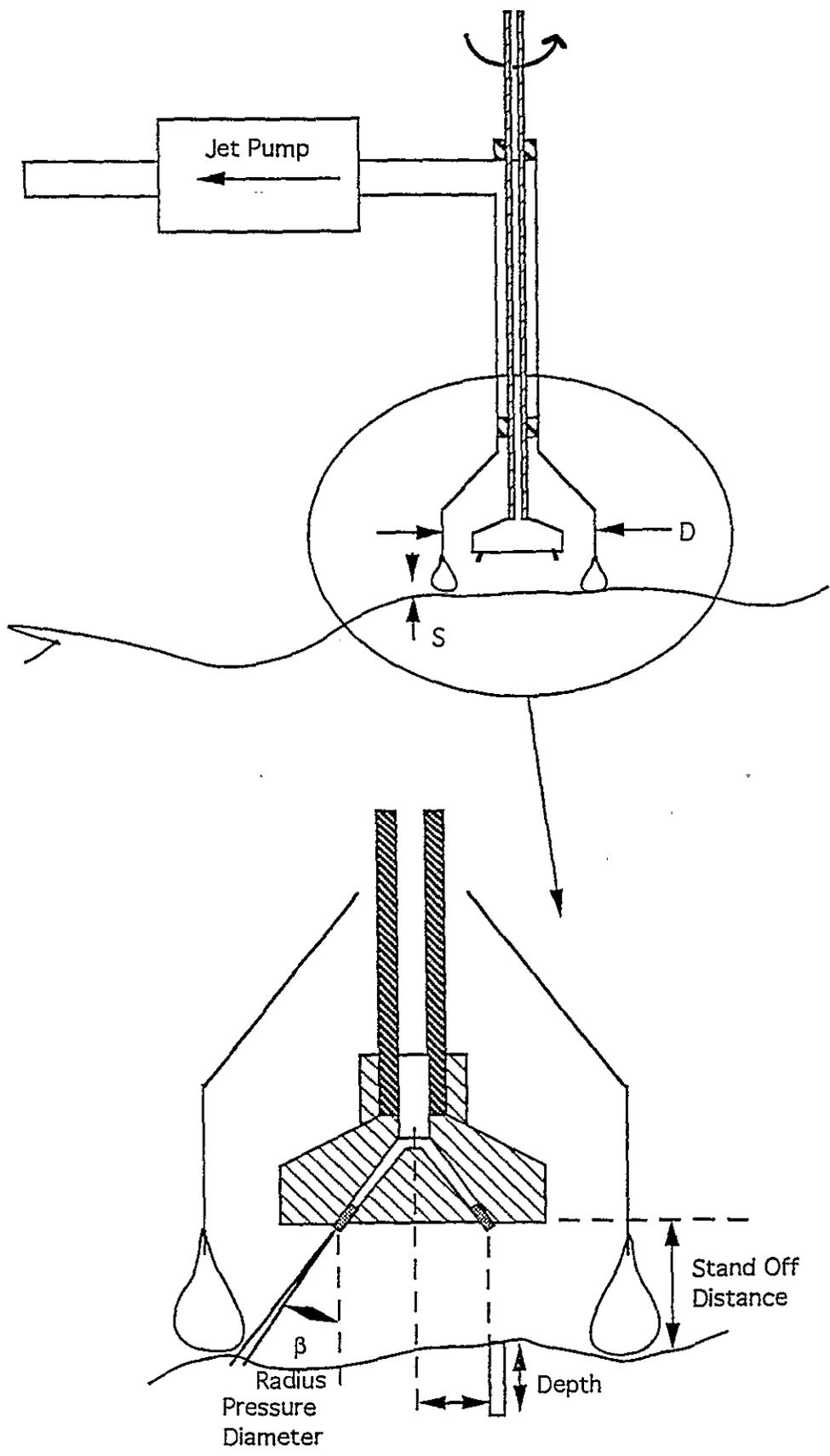
4A-6 = Scarifier using water

5A-8A = Mechanical agitator using water

## Planned Actions (Next six months)

- Complete WHC tests of soft waste removal device with kaolin simulants (simulates dry sludge).
- Initiate tests of confined sluicing device at UM-Rolla (all waste forms)
- 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 rubberizer at LLNL
- Test abrasive water jets and model 12" pipe cutter at Sandia for in-tank hardware removal.

9 3 1 2 4 7 9 1 2 5 2



## Milestone Assessment

- **Schedule**

- M-06-02 start of testing met September 1992
- Expect completion 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 (cont'd)

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

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FYTD Budget			706									3400
FYTD Cost			632									
Spending Variance			74									

Variance Explanation: Delays in contract placements for testing and equipment at various labs.

9 3 1 2 1 2 3 1 2 5 6

(ATTACHMENT 8)

# **FULL-SCALE DEMONSTRATION OF WASTE RETRIEVAL TECHNOLOGY**

## **Milestone M-07-00**

**Bruce Nicoll**

U.S. Department of Energy, Richland Field Office

**February 1993**

## Milestone Description

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

## OPEN COMMITMENTS

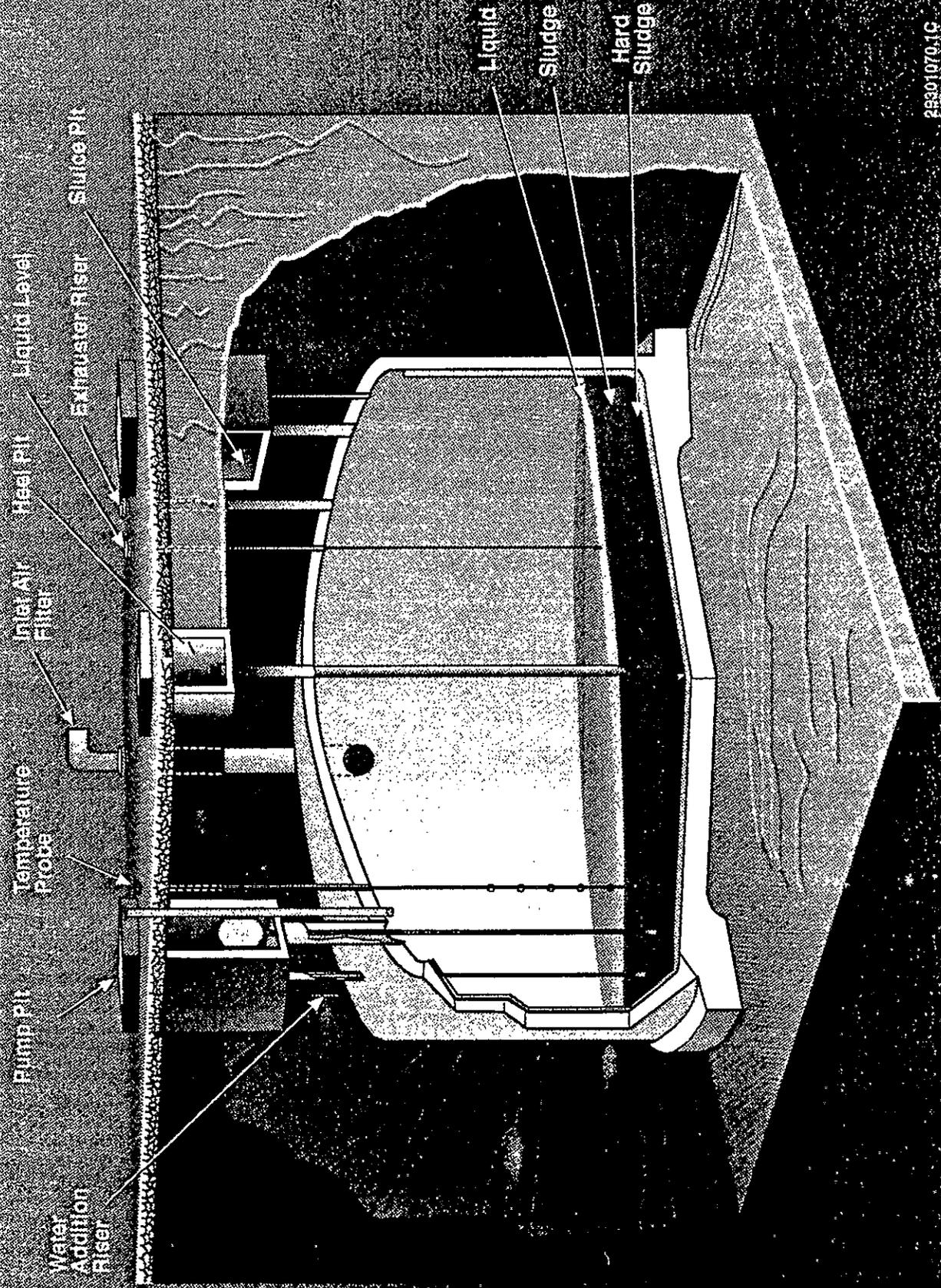
- None

## Accomplishments (Last three months)

- M-07 Tank Selection criteria and recommendations (M-07-01) approved by DOE-RL and DOE-HQ
  - To be provided to regulators February 1993, based on completion of preliminary feasibility assessment of hydraulic retrieval techniques by DOE-RL
    - This assessment to be based on WHC recommendation drawn from:
      - Engineering Study of Tank Leaks Related to Hydraulic Retrieval of Sludge from Tank 241-C-106
      - Letter report from KEH on sluicing system costs/schedules
  - Final documents will be made available to WDOE in March - April, 1993
  - An open dialogue with the regulators must start in March-April

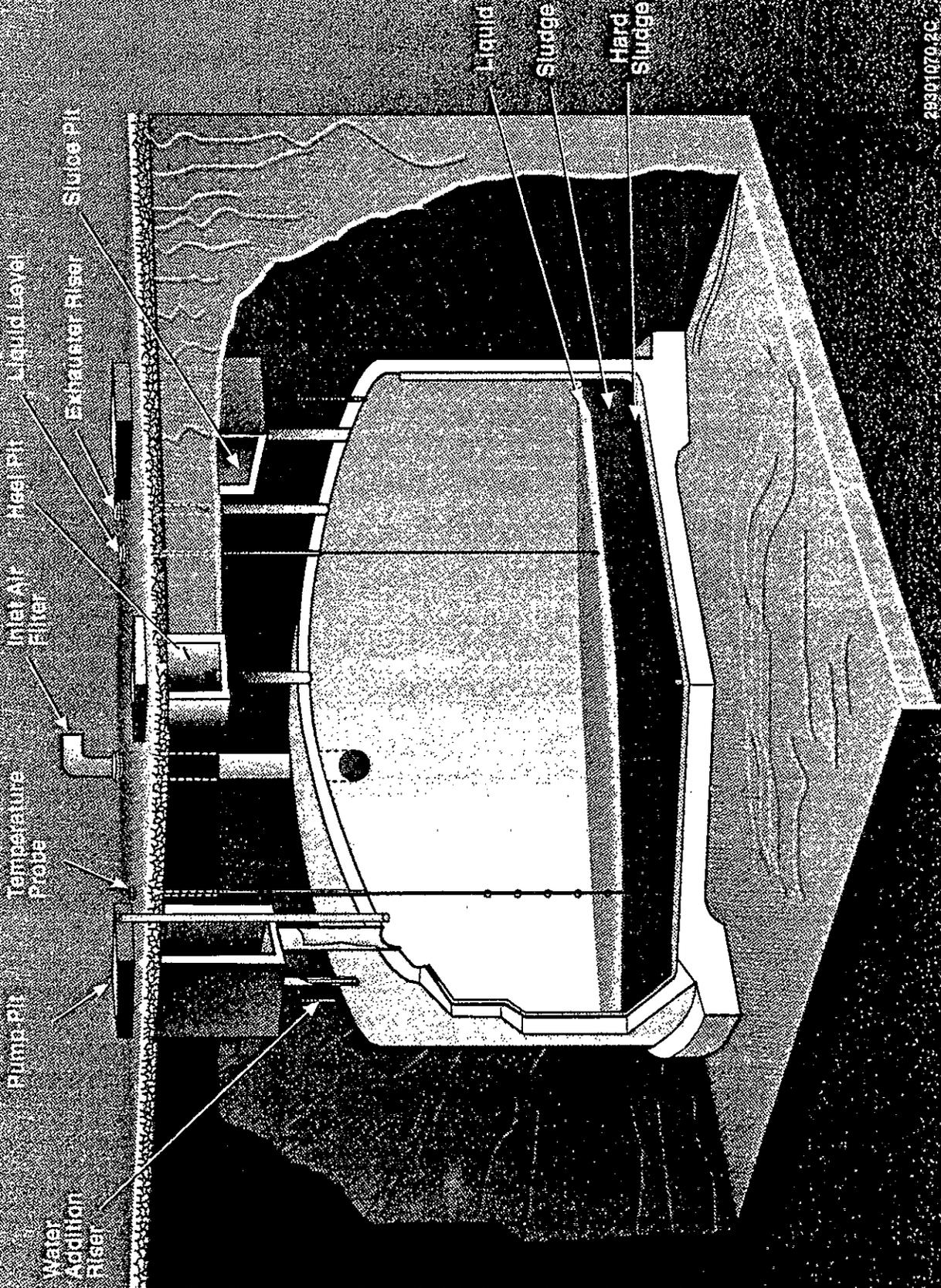
9 3 1 2 0 9 3 1 2 6 0

# Single Shell Tank 241-C-106 (with failed equipment in place)



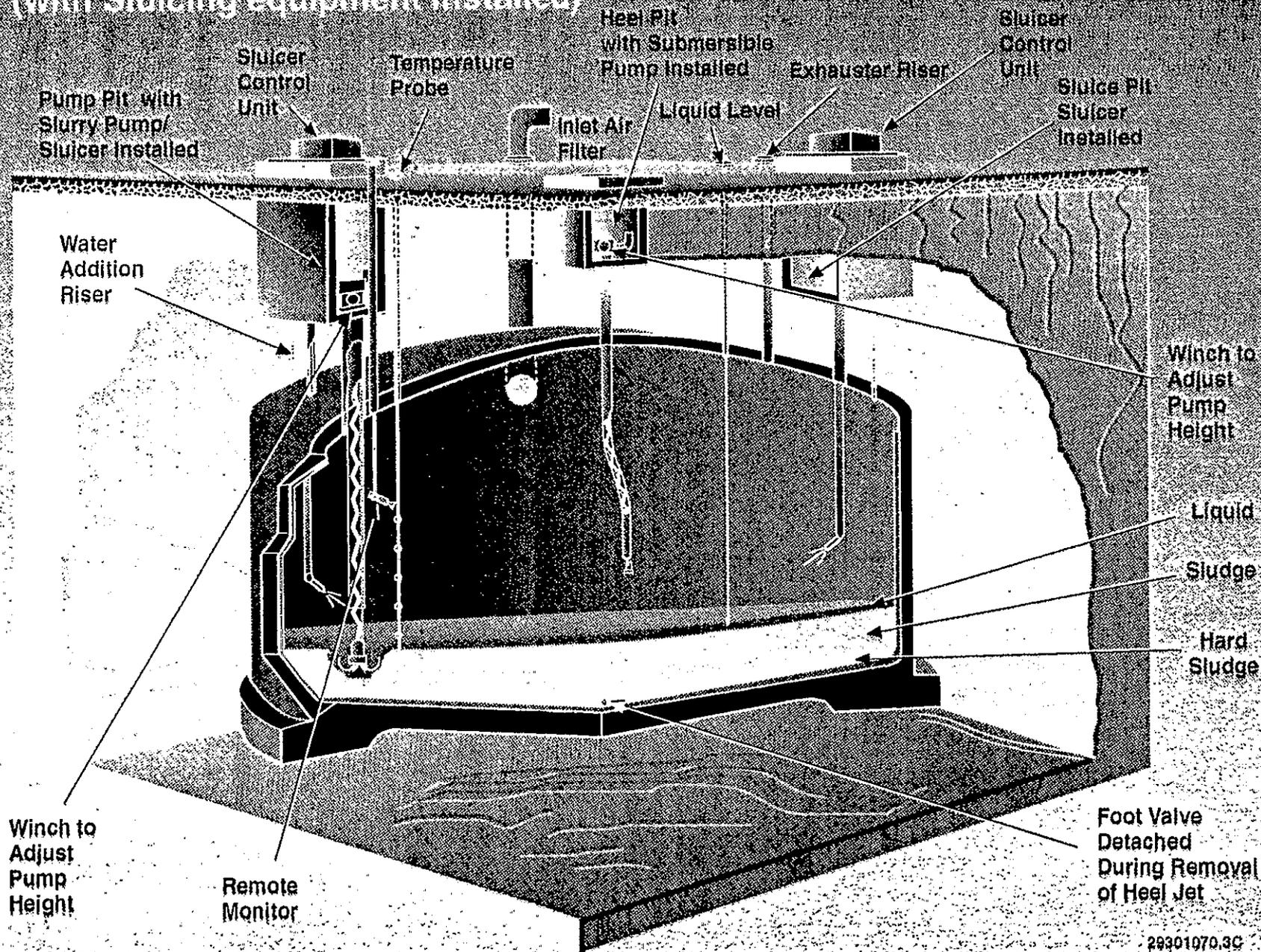
# Single Shell Tank 241-C-106

(with failed equipment removed and pits in process of cleanup)



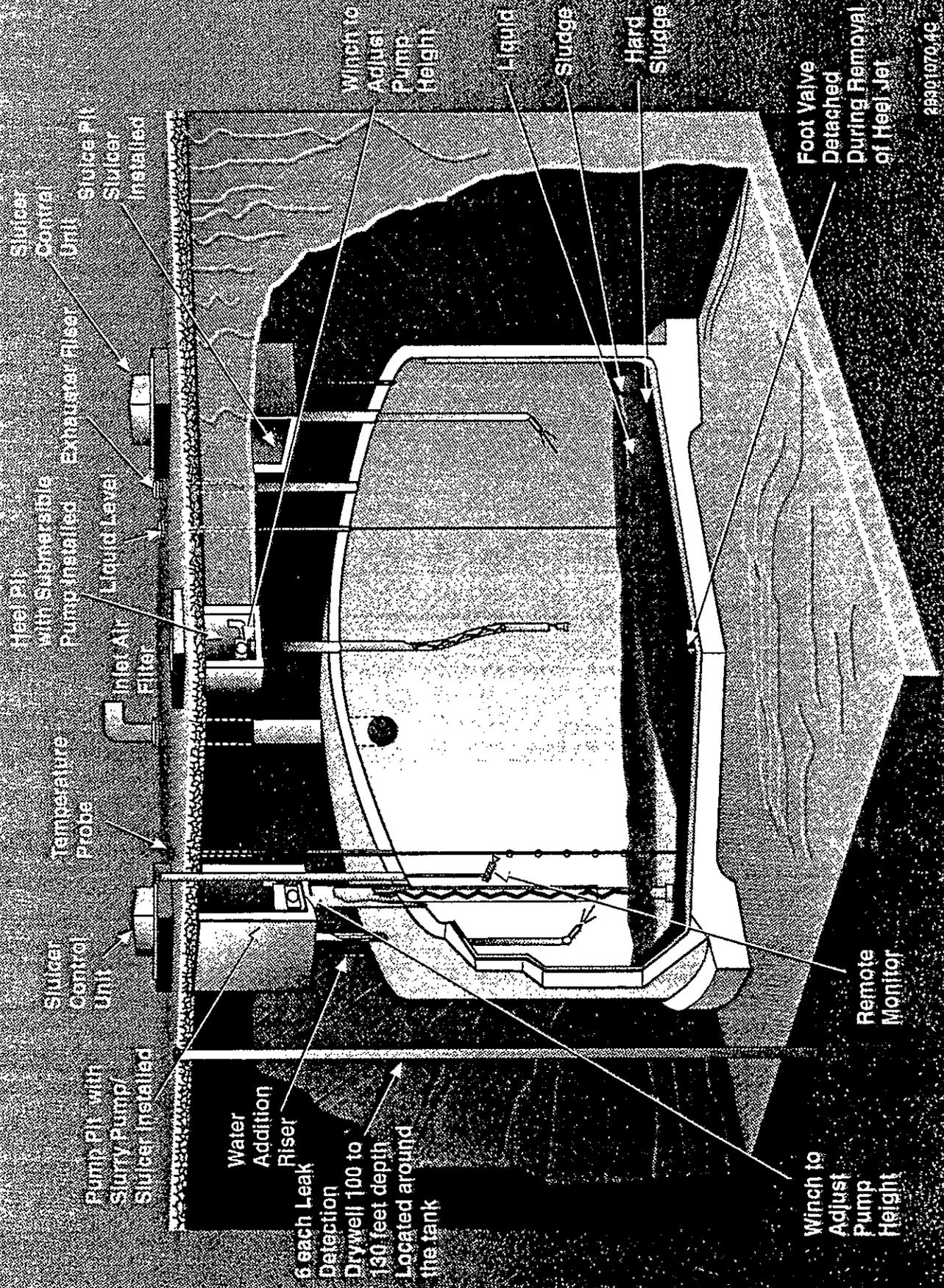
# Single Shell Tank 241-C-106

(with Sluicing equipment installed)



# Single Shell Tank 241-C-106

(sluicing process approximately 50% completed)



Sluicer Control Unit

Sluicer Installed

Heel pit

with Submersible Pump Installed

Exhauster Riser

Liquid Level

Inlet Air Filter

Temperature Probe

Sluicer Control Unit

Pump Pit with Slurry Pump/ Sludger Installed

Water Addition Riser

6 each Leak Detection Drywell 100 to 130 feet depth Located around the tank

Winch to Adjust Pump Height

Liquid

Sludge

Hard Sludge

Remote Monitor

Foot Valve Detached During Removal of Heel Jet

Winch to Adjust Pump Height

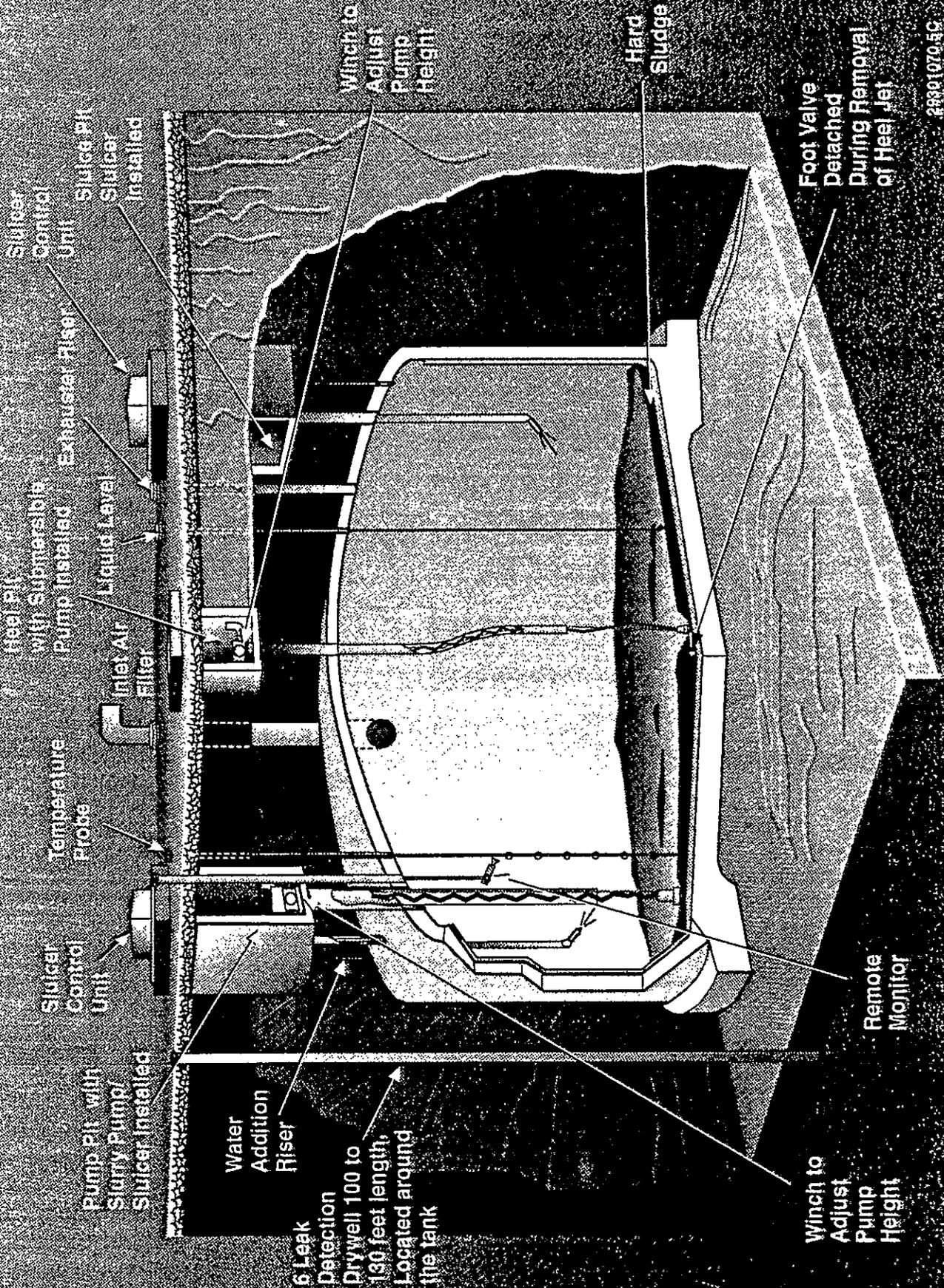
Remote Monitor

Foot Valve Detached During Removal of Heel Jet

Winch to Adjust Pump Height

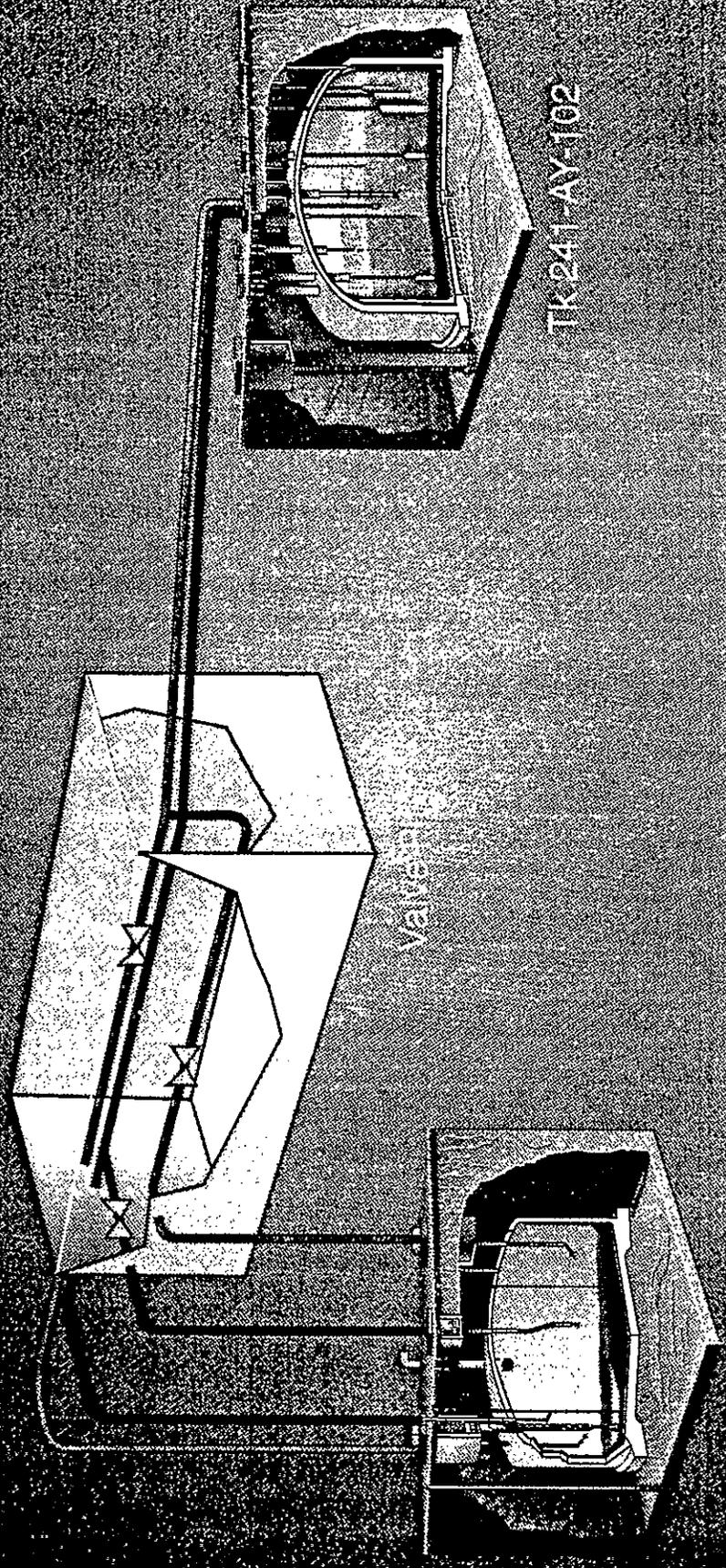
# Single Shell Tank 241-C-106

sluicing process completed (90% hard sludge still in place)



9 3 1 2 0 0 1 2 6 5

# Tank to Tank



TK 241-C-106

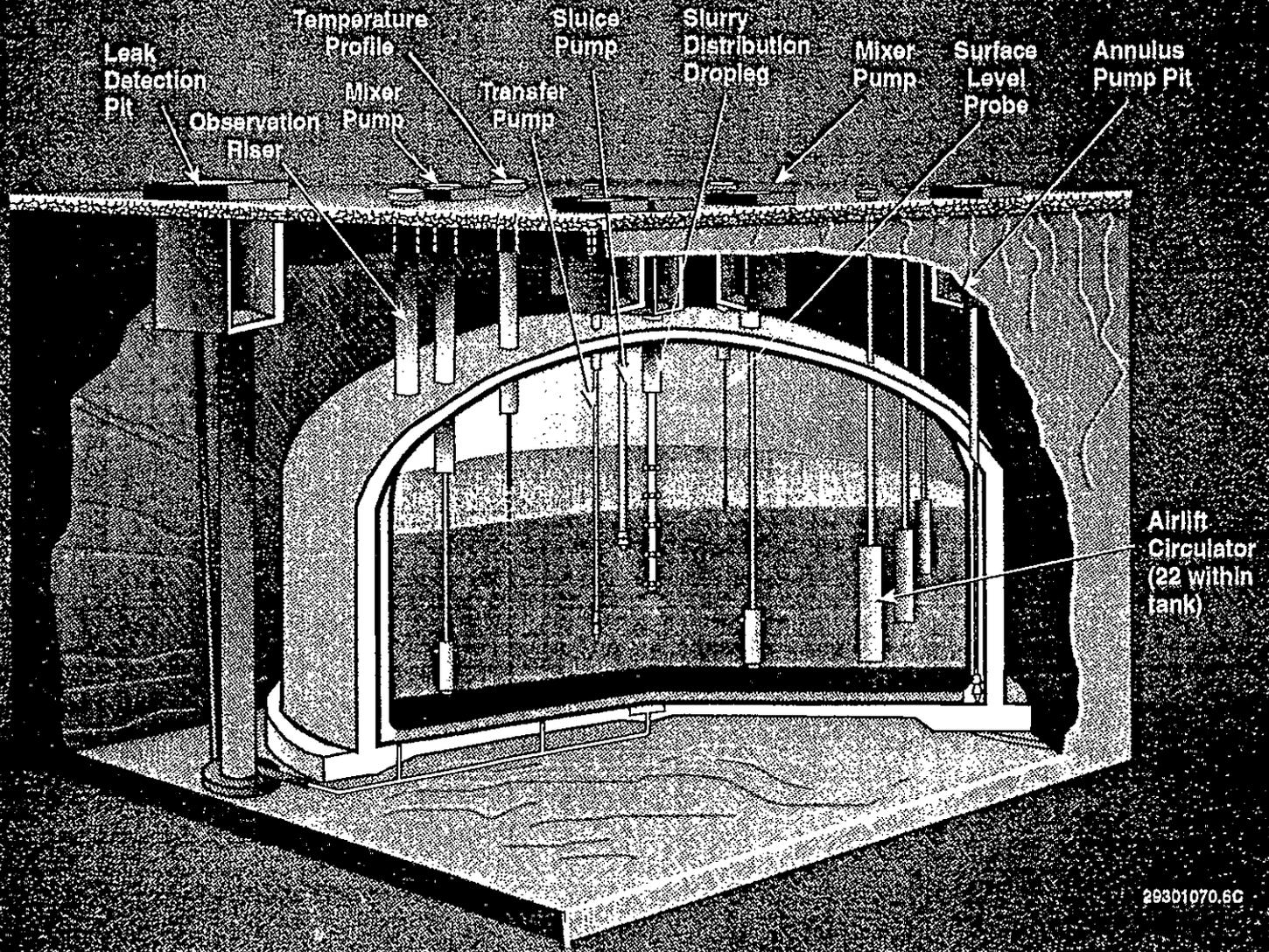
TK 241-AY-102

Slurry Lines ———

Sluice Lines - - - - -

2801007C

# 241-AY-102 Double-Shell Receiver Tank



## Planned Actions (Next six months)

- Complete M-07 tank selection (M-07-01 and 02)
- C-106 Sluicing Effort (Project W-320)
  - Tank C-106 Core Sampling and analysis
  - Complete Engineering Studies/Analyses
  - Field walk-downs in support of conceptual design
  - Preparation of Functional Design Criteria
  - Start Conceptual Design
  - Preparations of detailed plans for:
    - Operations
    - Quality Assurance
    - Detailed Design
  - Regulatory compliance/safety documentation
    - Initiate safety documentation
    - Initiate environmental documentation (RCRA, CAA, NEPA)
  - Obtain DOE-HQ approvals prior to initiation of design activities

# Milestone Assessment

- Schedule

- Based upon sluicing as the retrieval method for 106-C, initiation of retrieval from SST by 10/97 is possible
- Critical items for achieving success:
  - Definition of the Retrieval System
  - Functional Design Criteria
  - DOE-HQ Approvals
  - Completion of Waste Characterization Analyses
  - Conceptual Design
  - 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 proposed to resolve high heat safety issue (i.e., stop water additions to Tank 241-C-106)
  - 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
- Complete 95% waste retrieval with long-reach manipulator system, if required

# Milestone Assessment M-07

## ● Budget vs. cost (\$ in thousands)

Cumulative	Oct-Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept
FYTD Budget	1164	1620	2124	2535	3049	3424	3900	4427	5010
FYTD Cost	1026								
Spending Variance	138								

### Variance Explanation:

- Walkdowns delay because of weather
- Billing delays from off-site vendor and review groups

9 3 1 2 9 8 1 2 7 1

(Attachment 9)

# **FULL-SCALE SINGLE-SHELL TANK FARM CLOSURE DEMONSTRATION**

## **Milestone M-08-00**

### **Bruce Nicoll**

**U.S. Department of Energy, Richland Field Office**

## **February 1993**

## 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 Phase I System Engineering Study for Sub-surface Barrier development**
  - **Identified mission/goals**
  - **Identified functions and requirements**
  - **Identified interfaces, issues, options**
  - **Developed schedule and cost estimate**

## Planned Actions (Next six months)

- Complete Retrieval Program Plan
- Complete Retrieval Technology Plan
- Initiate Phase II of Sub-surface barrier development
  - Additional system engineering evaluation of functions and requirements (Mar-Oct)
  - Regulator input needed on expectations and requirements before commencement of Phase II barrier development work
- Establish near term DST/SST Retrieval Sequence for Pretreatment (Baseline) (March 1993)

# Milestone Assessment

- Schedule

- Activities planned for FY 1993-1994 will support M-08 demonstration
  - Engineering studies and functional design criteria development
  - Technology evaluations
  - Detailed planning and scheduling
  - Support to NEPA documentation preparation for the EIS
- M-08 activities are on schedule

## Milestone Assessment (Cont)

- Technical Scope

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

# Milestone Assessment M-08

## ● Budget vs. cost (\$ in thousands)

Cumulative	Oct-Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept
FYTD Budget	947	1218	1497	1690	1925	2135	2296	2527	2908
FYTD Cost	449								
Spending Variance	498								

### Variance Explanation:

- Manpower restrictions have delayed start of a number of activities
- Internal/External reviews have not occurred as planned

9 3 1 2 3 7 2 1 2 7 9

(ATTACHMENT 10A)

## **Single-Shell Tank Closure**

**Milestone M-09-00**

**Reporting Made to Interim Milestones  
M-09-01 and M-09-02**

**February 17, 1993**

## **Milestone Description**

- **M-09-00**      **Complete Closure of all 149 single-shell tanks by June 2018.**
  
- **Deliverables**      **Closure and removal of required waste from the 149 single-shell tanks will be effected in accordance with the approved closure plan(s). As stated in the Hanford Defense Waste-Environmental Impact Statement Record of Decision, a supplemental EIS will be prepared prior to making any final decisions regarding disposal of single-shell tank waste. The final closure plan(s) will address the recommendations of the supplemental EIS.**
  
- **Baseline Schedule**
  - **Complete preparation of supplemental environmental impact statement (SEIS) and issue draft for public review by June 2002 (M-09-01).**
  - **Submit closure plan to Ecology for approval by December 2003 (M-09-02).**

## Open Commitments

None

## Accomplishments (last three months)

- **TWRS-EIS Notice-of-Intent (NOI) continues progressing through DOE-HQ review/revision cycle.**
- **Prepared and issued for WHC internal review draft Regulatory Assessment Report on Closure of SSTs as landfills.**
- **Issued draft Tank Waste Technical Options Report for WHC and RL review.**
- **Presentation made to EPA, Ecology and DOE project managers December 16, 1992, on TWRS-EIS Integration with other NEPA documentation.**

## Planned Action (next six months)

- **Finalize and issue Tank Waste Technical Options Report.**
- **Finalize TWRS-EIS NOI and publish in Federal Register.**
- **Initiate preparation of TWRS-EIS Technical Support Document.**
- **Complete preparation and issue draft Regulatory Assessment Report on closure of SSTs as landfills.**
- **Complete preparation and issue draft Risk Assessment Report on closure of SSTs assuming closure as landfills.**
- **Revise and submit WHC approved SST System Closure/Corrective Action Work Plan to RL for approval and submittal to Ecology and EPA for review.**
- **Hold TWRS-EIS NOI public scoping meeting.**

## **Milestone Assessment**

- **Schedule**
  - **Issue TWRS Technical Options Report - on schedule (3/93)**
  - **Issue to Federal Register TWRS-EIS NOI - expected (4/93)**
  - **Issue draft Regulatory Assessment report on closure of SSTs after waste retrieval as landfills - on schedule (3/93)**
  - **Issue draft Risk Assessment report for closure of SSTs after waste retrieval assuming closure as landfills - two months behind schedule**
  - **Issue revised SST system Closure/Corrective Action Work Plan (Rev 1) to Ecology - on schedule (7/93)**
  - **SEIS (M-09-01) - under review (6/02)**
  - **Closure Plan (M-09-02) - on schedule (12/03)**
  - **SST Closure (M-09-00) - planned for future action (6/18)**

## Milestone Assessment (cont'd)

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

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>FYTD Budget</b>	<b>252</b>	<b>633</b>	<b>857</b>	<b>1237</b>	<b>1642</b>	<b>2142</b>	<b>2331</b>	<b>2597</b>	<b>2777</b>	<b>3036</b>	<b>3068</b>	<b>3075</b>
<b>FYTD Cost</b>	<b>19</b>	<b>471</b>	<b>739</b>	<b>1048</b>								
<b>Spending Variance</b>	<b>233</b>	<b>162</b>	<b>118</b>	<b>189</b>								

**Variance Explanation:** Reflects continued review/extended schedule for the TWRS-EIS Notice-of-Intent (NOI) and behind schedule for Risk Assessment.



# **SINGLE-SHELL TANK CHARACTERIZATION**

## **MILESTONE M-10-00**

**Paul Hernandez - USDOE/RL**

**John Propson - WHC**

**Waste Characterization Program**

**February 17, 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)

- Retrieved one core from tank 241-T-107
- WHC has received/implemented RL OPA Audit 93-02 response items and is cleared to resume core sampling tank 241-T-107 as of February 3, 1993.
- Received and tested the purge gas trailer. (M-10-13-T2)
- Completed TPA target milestone M-10-13-T2, "Complete R&D and installation of hard salt cake sampler and hydrostatic balance system" on December 2, 1992 - 29 days ahead of schedule.
- Issued the updated Waste Characterization Plan.

## Accomplishments (Last three months - cont'd)

- Completed the first draft of the Characterization Strategic Plan.
- Completed the Master Core Sampling Schedule detailing the waste tank sampling schedule through 1998 based on current TWRS priorities.
- Re-evaluation of rotary mode modular exhauster design criteria has resulted in a re-design to reduce size and potentially improve mobility.

## Planned Actions

- Near term schedule includes Tanks T-107\*, Cores 2 and 3, T-105, T-102, C-106, C-111\*, and C-108\* and possibly T-101\*.

\*Safety issue tanks.

# MILESTONE ASSESSMENT

- Schedule Performance

- M-10-13-T2 Complete R&D and installation of Hard Salt Cake Sampler and Hydrostatic balance system - December 31, 1992.
  - Completed December 2, 1992
- M-10-07 Obtain a total of 24 core samples - September 30, 1993.
  - Presently on schedule.
- M-10-13 Complete deployment of the rotary mode core sampling system - 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	13.040	14.668	16.026	17.333	18.837	20.359
FYTD Cost	.583	3.138	4.874	6.902								
Spending Variance	1.117	.562	.730	.759								

### Variance Explanation:

- WHC standdown on core sampling impacted spending in both the SST core sampling and FY93 lab support cost accounts.
- Positive spending variances outweigh negative ones attributable to rotary exhauster redesign and some unanticipated lab expenses.

## SPECIAL TOPICS

- Core sampling interrupted by WHC operations stand-down on November 11, 1992.
  - WHC has received/implemented RL OPA Audit 93-02 response items and is cleared to resume core sampling on February 3, 1993.
- Rotary Mode Exhauster re-design may effect meeting the M-10-13 Milestone.
  - Impact, if any, will be identified during a review of the updated CPM schedule.
  - If necessary, a recovery plan will be developed to maintain milestone completion dates.
  - Status update next MSMRM.

## **SPECIAL TOPICS (con't)**

- **Rebaselining TWRS Waste Characterization Program**
- **Issue - Should the TWRS Waste Characterization Program as presently required (and defined) by the TPA, be continued, given the "Retrieve All Wastes" planning base?**

## **REBASELINING TWRS**

- **Introduction to TWRS waste characterization rebaselining meeting with regulators proposed for week of February 22, 1993.**
- **Paperwork requirements - What are expectations of the regulators?**
  - **Is any documentation required beyond an issue paper and draft TPA change request? This would be similiar to what has been produced for HWVP, Grout, and/or stabilization programs.**
- **A quick response from the regulators is necessary to meet rebaselining target of 3/31/93.**

## REBASELINING TWRS (cont)

- **Validated data packages - Do current requirements make sense?**
  - **Should a disposal form QA protocol be applied to a feed stock process sample?**
  - **Current VDP may not be representative of entire tank contents.**
  - **Consider content of VDP's during rebaselining effort.**

DRAFT

93-CHB-xxx

Mr. Paul T. Day  
Hanford Project Manager  
U.S. Environmental Protection Agency  
Region 10  
712 Swift Boulevard, Suite 5  
Richland, Washington 99352

Mr. David B. Jansen, P.E.  
Hanford Project Manager  
State of Washington  
Department of Ecology  
Post Office Box 47600  
Olympia, Washington 98504-7600

Dear Messrs. Day and Jansen

PUSH-MODE CORE SAMPLING OF FERROCYANIDE TANK BY-104 CONTAINING SALTCAKE

You may recall that BY-104 is scheduled to be the first tank to be sampled with the rotary-mode core sampling system, which will not be completed until September, 1993. However, based upon recent experience with thermocouple tree installation in tank BY-104, the Department of Energy is considering core sampling this tank with the existing push-mode core sampling system. During thermocouple installation the crust material was found to be softer than anticipated. We believe that the combination of hand augering through the surface crust and push-mode core sampling through the remainder of the waste will provide a representative sample of the tank contents.

It is desirable to obtain full-depth core samples and complete laboratory analyses as soon as practicable for this ferrocyanide tank, to expedite the resolution of safety issues.

It is anticipated that use of the push-mode core sampler on tank BY-104 will be a success, but there is no guarantee. This places RL and its contractor at risk in terms of completing the M-10-07 interim milestone, which requires 24 cores from 12 SSTs. If time and resources are consumed in the effort to core sample BY-104 and the samples prove to be unobtainable, DOE requests that 2 cores be counted towards the completion of M-10-07. Your agreement in allowing credit for potential cores is integral in DOE's decision to proceed with push-mode core sampling of BY-104. Success in this endeavor will accelerate the characterization of the ferrocyanide tanks.

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Mssrs. Day Jansen

-2-

Please advise us by return correspondence if this memorandum meets your needs with respect to modifying data package requirements. If you have any questions, please contact Mr. John M. Clark, Chief, TWRS Waste Characterization Branch on (509) 376-2246.

Sincerely,

ORIGINAL SIGNED BY

STEVEN H. WISNESS *Mike Skonipson*

Steven H. Wisness  
Hanford Project Manager

SFD:PRH

Enclosure

cc w/enc:  
S. McKinney, Ecology  
D. Sherwood, EPA  
J. Propson, WHC  
T. Veneziano, WHC

bcc: SFD OFF FILE #1400.1A U:CHB.106  
SFD RDG FILE  
TWS RDG FILE  
CHB RDG FILE  
TPA RDG FILE  
PRH RDG FILE  
EAP RDG FILE

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OFFICE >	SFD	SFD	SFD	TPA	EAP	OCC <i>William</i>
SURNAME >	P. HERNANDEZ	J. M. CLARK	CHRISTENSEN	J. YERXA	J. BAUER	R. CAROSINO
DATE >	12/21/92	12/21/92	<i>Pre J. Concurrent</i>	<i>12-23-92</i>	<i>12/23</i>	<i>12/23/92</i>
OFFICE >	TPA					
SURNAME >	S. WISNESS					
DATE >						

(Please Return To Mary Tschirky, A4-02, 6-9106)



12S 19247 RL