

# START

Meeting Minutes Transmittal/Approval  
 Unit Managers Meeting: Single-Shell Tanks  
 2704HV TWRS Office Building/Room G227  
 Richland, Washington

August 10, 1994

From/  
Appvl:

Wendell Wrzesinski  
 Wendell Wrzesinski, SST Unit Manager, DOE-RL

Date: 2/16/95

Appvl:

Scott E. McKinney  
 Scott McKinney, SST Unit Manager,  
 WA Department of Ecology

Date: 2/17/95

Appvl:

David R. Einan  
 Dave Einan, SST Unit Manager, EPA Region X

Date: 16 Feb 95

Appvl:

Mardine Campbell  
 Mardine Campbell, WHC, Contractor Representative

Date: 2/16/95

Meeting Minutes are attached. Minutes are comprised of the following:

Attachment #1, Meeting Summary/Summary of Action Items & Agreements  
 Attachment #2, Attendance List  
 No Agenda

Handout 1 - Waste Tank Safety Program TPA Status Report as of: 07/29/94  
 Handout 2 - Double and Single-Shell Tank Characterization M-44-00  
 Handout 3 - Single-Shell Tank Interim Stabilization/Isolation M-41-00



UNIT MANAGERS MEETING: SINGLE-SHELL TANKS  
MEETING SUMMARY/SUMMARY OF ACTION ITEMS AND AGREEMENTS

August 10, 1994

This SST Unit Managers meeting was held by telecon. There was no formal agenda issued.

M-40 SAFETY (G. Wilson) [Handout #1]:

The Waste Tank Safety Program TPA status report was given to Ecology.

M-41 INTERIM STABILIZATION (G. Bishop/T. Rainey) [Handout #3]

**ACTION (G. Bishop):** Send copies of the Integrated Schedule to McKinney and Stone of Ecology.

**ACTION (G. Bishop):** S. McKinney asked if the program plan for the Liquid Level Monitoring (LLM) Upgrades had been sent to him. Bishop responded that it had been sent two weeks ago. McKinney requested another copy be sent.

Ecology asked if a vadose monitoring plan has been developed? C. Ruud is requested to respond to this. Ecology wants a commitment to pursue vadose monitoring. If vadose monitoring is instituted, the need for LLM is reduced.

The thermocouple change package #M40-94-04 was discussed. This proposed change delays the milestone completion date five months (9/30/95) to accommodate additional tank waste sampling requirements. The delay is acceptable to Ecology.

The C-103 TPA change request will be signed by Roger Stanley at the next project managers meeting. Stanley has committed to have the change to McKinney by the week of August 23, 1994.

M-44 TANK CHARACTERIZATION (J. Clark) [Handout #2]:

**ACTION (J. Clark):** Transmit the Integrated Schedule with the TWAP.



## UMM Attendees

8/10/94

JHIVANN FURMAN - Pollock		376-1882	H6-0
Dave Eingan	ERA	876-3883	B5-01
Alex Stone	Ecol.	736-3018	<del>NI-08</del>
Lynn Bishop	DOE	372-1856	57-54
Mary Ann McLaughlin	WHC/TPAI	376-4084	B2-35
Charles Branch	DOE-RL	376-9450	57-54
George Wilson	WHC/WTSP	372-1130	57-14
JOHN M. CLARK	DOE-RL	376-2246	?
<del>THOMAS RANKIN</del>			
THOMAS RANKIN	WHC/TWR	373-3531	R2-04

**TRI-PARTY AGREEMENT MILESTONES  
WASTE TANK SAFETY PROGRAM**

STATUS REPORT AS OF: 07/29/94

No.	Title	Due	Status	Remarks
M-40-01	Complete Tank 241-SY-101 Low Speed Mixer Pump Test.  (Interim to SI-2g23 - 09/94)	03/94	Completed 03/17/94 ⊕	Completion of this TPA milestone was documented by WHC in a letter to RL dated March 17, 1994.
M-40-14	Close Ferrocyanide Unreviewed Safety Question.  (SI-2s13 - 01/94)	03/94	Completed 03/01/94 ⊕	Completion of this TPA milestone was documented by WHC in a letter to RL dated March 28, 1994.
M-40-16	Complete Sampling and Safety Evaluation of Liquid Organic in Tank 241-C-103.  (SI-2q15 - 03/94)	03/94	Completed 03/31/94 ●	Completion of this TPA milestone was documented by WHC in a letter to RL dated March 31, 1994.
M-40-17	Close Tank 241-C-103 Unreviewed Safety Question.  (SI-2j16 - 03/94)	05/94	Completed 05/19/94 ⊕	Completion of this TPA milestone was documented by WHC in a letter to RL dated May 25, 1994.
M-40-11	Close the Unreviewed Safety Question for the Criticality Issue.  (SI-2w17 - 03/94)	06/94	Completed 03/17/94 ⊕	Completion of this TPA milestone was documented by WHC in a letter to RL dated April 6, 1994.

**Status:**    ⊕ Ahead of Schedule            † Improving Schedule  
                  ● On Schedule                    ‡ Deteriorating Schedule  
                  ⊖ Behind Schedule

No.	Title	Due	Status	Remarks
M-40-06	Complete Vapor Sampling Characterization of Tank 241-C-103 (Phase 2)  (SI-2m18 - 06/94)	08/94	⊕	Revision 0 of the report has been formally transmitted to RL. Vapor Conference #5 took place in mid-July (a TPA milestone peer review requirement). The TPA milestone will be completed as soon as the Conference report is submitted.
M-40-13	Design and Fabricate a Spare Mixer Pump for Tank 241-SY-101.	09/94	●	Fabrication of the spare mixer pump is complete and will be shipped to Hanford for testing. Materials are being assembled for the trailer and hydraulic system for removal of the current test pump in the event of a pump failure.
M-40-15	Install Gas Monitoring Equipment in the Remaining Five Potentially Flammable DSTs.  (Interim to SI-2h36 - 04/95)	09/94	●	The gas monitoring system installation in tank 103-SY has been completed. Construction for DST 101-AW has been completed and construction has started for the three DSTs in AN farm.
M-40-02A	Develop Criteria for Upgrading Temperature Monitoring Capabilities in Ferrocyanide.  (Interim to SI-2t27 - 12/94)	09/94	⊕	Comments on the draft document "Criteria for Upgrading Temperature Monitoring in Ferrocyanide Tanks," have been received from Ecology. None of the comments were major, therefore, it is anticipated that the document can be released ahead of schedule.

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**Status:** ⊕ Ahead of Schedule      ↑ Improving Schedule  
 ● On Schedule                      ↓ Deteriorating Schedule  
 ⊖ Behind Schedule

No.	Title	Due	Status	Remarks
M-40-02B	Install Six of Twelve New Thermocouple Trees.  (Interim to SI-2t27 - 12/94)	09/94	⊖ ↓	This milestone cannot be met.  Installations of new thermocouple trees (TC) for SSTs is on hold pending integration of users requirements. TC installations will follow characterization sampling to maximize riser availability for sampling. A TPA change request has been proposed to project the completion of TC installations in all ferrocyanide tanks by September 1995.  Fabrication of TCs and preparation for installation continues.
M-40-02	Upgrade Temperature Monitoring Capabilities in Ferrocyanide Tanks.  (SI-2t27 - 12/94)	04/95	⊖ ↓	(See M-40-02B)

**Status:**    ⊕ Ahead of Schedule            † Improving Schedule  
                  ● On Schedule                    ‡ Deteriorating Schedule  
                  ⊖ Behind Schedule

No.	Title	Due	Status	Remarks
M-40-04	Complete Removal of Floating Organic Layer from Tank 241-C-103.  (SI-2u33 - 03/95)	06/95	● ↓	<p>This milestone is in jeopardy.</p> <p>Recent studies have greatly reduced the safety concerns over the organic layer. Verbal approval by Ecology has been received to defer a decision on removal of the organic layer until March 1995. A TPA Change Request is being prepared to document this change. This Safety Initiative will be rescheduled to reflect a March 1995 decision.</p> <p>Current planning for FY 1994 calls for completing the design of key elements and to complete testing to validate performance of the separation system to support a potential future implementation strategy.</p>
M-40-07	Commence Operation of a Vapor Treatment System in Tank 241-C-103.  (Interim SI-2n19 - 06/94)	06/95	⊕	<p>Planning has begun for the design, procurement, and testing of a vapor treatment system on tank 103-C. The recently completed engineering evaluation of alternatives will be used as a basis for the system selection.</p>

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**Status:** ⊕ Ahead of Schedule      ↑ Improving Schedule  
 ● On Schedule                      ↓ Deteriorating Schedule  
 ⊖ Behind Schedule

No.	Title	Due	Status	Remarks
M-40-05	Complete Safety Alternative Test in High-Heat Tank 241-C-106.  (SI-2x38 - 06/95)	09/95	⊕	Following the additions of raw water to return the tank to its previous operating range and the anomalies that continued to occur with TC Tree #14, concerns were expressed that a steam "bump" of an explosive nature could occur. A special Response Team was assembled and quickly ascertained that the conditions within the tank were not significantly different than before the process test and that the tank was behaving consistent with historical norms. In fact, for the first time TC Tree #14 was indicating temperatures that analysis had predicted it should read. This was attributed to the shifting of sludge during the initial water additions that brought the TC tree into physical contact with the sludge.
M-40-03	Perform Vapor Characterization for all Ferrocyanide Watch List Tanks.  (SI-2o37 - 06/95)	11/95	⊕	Seven of 22 suspect ferrocyanide tanks have had initial in situ vapor samples performed.  Sampling has been delayed this last month as sample probes had to be taken out of the new TC Trees that are now on hold for installation in the ferrocyanide tanks.

**Status:** ⊕ Ahead of Schedule      ↑ Improving Schedule  
 ● On Schedule                      ↓ Deteriorating Schedule  
 ⊖ Behind Schedule

No.	Title	Due	Status	Remarks
M-40-08	Perform Vapor Characterization for all Organic Watch List Tanks.  (SI-2037 - 06/95)	11/95	⊕	One of 14 suspect organic tanks has had all sampling completed.  Ten Organic SSTs have been added to the Watch List. A TPA Change Control Form will be prepared to add these tanks to the TPA milestone. The impact on the schedule is unknown at this time.
M-40-10	Complete Vapor Space Monitoring of all Flammable Gas Generating Tanks.	01/97	●	On schedule.  (See M-40-15) SST vapor monitoring will follow the DST installations.
M-40-09	Close all Unreviewed Safety Questions (USQ) for Double-Shell & Single-Shell Tanks.	09/98	⊕	One USQ (flammable gas tanks) is outstanding. The SY-Farm portion of this USQ is scheduled for closure in March 1995.
M-40-12	Resolve Nuclear Criticality Safety Issue.	09/99	●	
M-40-00	Mitigate/Resolve Tank Safety Issues for High Priority Watch List Tanks.	09/01	●	

**Status:** ⊕ Ahead of Schedule      † Improving Schedule  
 ● On Schedule                      ↓ Deteriorating Schedule  
 ⊖ Behind Schedule

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**DOUBLE AND SINGLE-SHELL  
TANK CHARACTERIZATION**

**MILESTONE M-44-00**

**U.S. Department of Energy / Richland Operations Office**

**John Clark - U.S. DOE**

**Unit Managers Meeting**

**August 10, 1994  
Richland, Washington**

# DOUBLE AND SINGLE-SHELL TANK CHARACTERIZATION

## MILESTONE M-44-00

### TOPICS

- Accomplishments
- FY 1994 Milestone Status
- Special Topics
- Discussion

## ACCOMPLISHMENTS

- The Operational Readiness Review (ORR) for the rotary mode core sampling system was completed on 7/28/94. DOE senior staff was briefed and an exit meeting was held with WHC personnel.
- Action Plan for testing push mode sampling is complete. This plan delineates the use of different parameters that affect sample recovery and determines what combinations offer the best recovery. The test report indicates the best bit for push mode is a 60 degree bit.
- The push mode sample truck was moved to 200 West, tank 241-SY-103.
- Evaluation of laboratory staff training and a plan for improvement were completed.
- Historical Tank Contents Estimate Reports for 109 tanks in the Northeast and Southwest quadrants of Hanford Tank farms have been completed. These reports compile and reconcile all historical information on the waste tanks and provide estimate of current contents.

## ACCOMPLISHMENTS (Cont'd)

- Technical review was completed on the procurement of the Cone Penetrometer.
- Tank Characterization Reports (TCR) were prepared and are in final review for tanks 241-AP-101, 241-AP-103, 241-AP-107, 241-BX-107, 241-B-201, 241-AW-106, 241-B-110, 241-B-111, 241-C-110.
- A second Auger sample was taken from tank 241-BX-108 and sent to the 222-S Laboratory.
- The second upgrade of the Tank Characterization Database software has been completed and released. The upgrade included software modifications required to support the upgrade of the HEIS Sequent operating system to PTX. The software was tested following modification to ensure all functions were operational.
- Prepared Tank Characterization Plans for sampling Waste Tanks: 241-T-102, 241-S-102, 241-SY-103, 241-BX-108

## **FY 1994 Milestone Status**

- **M-44-07** Complete all FY 1992 and 1993 core sample analyses and complete validation of the resulting data.
  - **Completed - ahead of schedule - on November 18, 1993**
- **M-44-04** Input Data from 3 HLW Tanks into Tank Characterization Database by January 31, 1994.
  - **Completed - ahead of schedule - on January 13, 1994**
- **M-44-01A** Issue Draft of FY95 Tanks Waste Analysis Plan to Ecology and EPA.
  - **Completed - ahead of schedule - on May 23, 1994**
- **M-44-02A** Annual Update to TWAP to EPA/Ecology, due 8/31/94.
  - **On schedule for completion. No comments received to date from state or EPA.**

## **FY 1994 Milestone Status (Cont'd)**

- **M-44-05 Issue 20 Tank Characterization Reports, due 9/30/94.**
  - 14 drafted of which 7 are anticipated for transmittal in August. Rest are on schedule.
- **M-44-06 Input Data from 20 HLW Tanks into Tank Characterization Database, due 9/30/94.**
  - 91% complete in July. Ahead of schedule.

## SPECIAL TOPICS

- 325 Laboratory Restart Package

### Problem:

The 325 laboratory remains in stand down following the pause on April 21, 1994.

### Corrective Actions:

The 222-S laboratory is still able to accommodate all analyses from the Characterization Program.

## SPECIAL TOPICS

- **Status of Push-Mode Core Sampling Events**

Problem:

Initial sampling events of two tanks in C Farm resulted in poor recovery.

Corrective Actions:

The push mode testing is producing very good recoveries with some simulants that have been historically troublesome. By using a different bit design and some different insertion rates, the WHC engineers have found some combinations that can fix the past problems with low recovery on push mode.

## SPECIAL TOPICS

- **Status of Rotary-Mode Core Sampling Equipment**

**Problem:**

Rotary trucks deployment behind schedule.

**Corrective Actions:**

WHC completed the Readiness Evaluation on July 11, 1994. DOE-RL Operational Readiness Review was completed July 28, 1994 and was signed off August 4, 1994. Expect to start sampling mid to late August depending on closure of prestart items. The work package for tank 241-BY-106 is being accelerated due to last minute problems in gaining access to 241-C-106.

## SPECIAL TOPICS

- Riser Availability

Problem:

Many SSTs only have 1-3 available risers. Competing for instrument installation through these risers may leave none for Characterization (e.g. Thermocouple trees, LOWs).

Corrective Actions:

Integrate instrument installation/Characterization activities. Confirm risers with cameras/"plug gauge" (to see if straight, etc.) Integrating instrument installation schedule with sampling schedule to reduce impacts.

**Single-Shell Tanks  
Interim Stabilization/Isolation**

**T. E. Rainey  
Single-Shell Tank Unit Managers Meeting**

**August 10, 1994**

**JULY, 1994**

**SST INTERIM STABILIZATION/ISOLATION**

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**ACCOMPLISHMENTS**

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**Emergency Pumping**

- 241-T-111 pumped 0.8 K gal., total pumped 5.0 K gal.
- 241-BX-111 pumped 0.6 K gal., total pumped 115.1 K gal.

**Interim Stabilization**

- 241-BY-102 pumped 3.8 K gal., total pumped 16.8 K gal.
- 241-BY-109 pumped 8.4 K gal, total pumped 16.3 K gal.
  
- Photos taken in 241-BX-110, estimated 5,000 supernatant remain

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**JULY, 1994**

**SST INTERIM STABILIZATION/ISOLATION**

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**CURRENT ACTIVITIES**

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**Emergency pumping tank 241-T-111 (M-41-16A-T01)**

**Emergency pumping tank 241-BX-111**

**Pumping 241-BY-102 and 109 (M-41-01-T2)**

**Preparing to pump tanks 241-C-102, 107, and 110 (M-41-01-T1)**

**Continuing restoration of 244-U double-contained receiver tank  
(M-41-02-T04)**

**Continuing procurement of HLLW Cask (M-41-03B)**

**Preparing safety study analysis on interim stabilization of remaining Watch  
List tanks (M-41-07)**

**Preparing to pump 7 non-watch list tanks in 241-S farm (M-41-09-T1)**

**JUNE, 1994**

**SST INTERIM STABILIZATION/ISOLATION**

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**CURRENT ACTIVITIES (CON'T.)**

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**Preparing schedule for pumping Non-Watch List and Organic Tanks in  
241-U Farm (M-41-08 & M-41-13)**

**Completing fabrication for emergency overground piping system  
(M-41-02-T02)**

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