START

0027578

Meeting Minutes Transmittal/Approval
Unit Managers Meeting: SST Operable Unit
725 Stevens Center, Room 208
Richland, Washington

March 10, 1993

From/
Appvl: Jim Dunn for Date: 4/14/93
Wendell Wrzesinski, SST Unit Manager, DOE-RL

Appvl: Scott E. McKinney Date: 4/14/93
Scott McKinney, SST Unit Manager,
WA Department of Ecology

Appvl: Doug Sherwood Date: 4/14/93
Doug Sherwood, SST Unit Manager,
EPA Region X

Appvl: D Pabst Date: 4/13/93
David Pabst, WHC, Contractor Representative

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

Attachment #1 - Meeting Summary/Summary of Action Items & Agreements
Attachment #2 - Agenda for Meeting
Attachment #3 - Attendance List

Handout 1 - Waste Retrieval Technology
Handout 2 - Single-Shell Tanks Characterization
Handout 3 - Single-Shell Tank Interim Stabilization/Isolation
Handout 4 - Spectral Gamma Logging of C-105 and C-106 Drywells
Handout 5 - Proposed Modifications to Milestone M-05

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

March 10, 1993

Introduction: **(D. Pabst, WHC)**.. The meeting commenced at 9:35 am. Introductions were made. The minutes of the February 10, 1993, SST Unit Manager Meeting were approved and signed. All parties were reminded that the next UMM will be held on April 14, 1993.

Retrieval: **(W. Wrzesniski, RL)**. The discussion topics were reviewed, per handout #1. RL provided to EPA and Ecology representatives a copy of, "Letter Report, Tank 241-C-106 Sluicing, Project W-320, WHC-SD-WM-ES-234, Revision 1."

DOE-HQ has been briefed on the proposed retrieval strategy, but have yet to give authorization to proceed in accordance with that strategy.

The current schedule for the retrieval of tank C-106 shows waste retrieval commencing in December 1996, ahead of schedule for the M-07-00 milestone.

WHC (Henderson) stated that the retrieval program is working closely with the Characterization Program to get early data on tank C-106. They are particularly interested in the physical, chemical, and radiological laboratory analyses. These analyses are required to support RCRA reporting requirements. These reporting requirements are driving the Data Quality Objective (DQO) process for characterization of SSTs.

RL (Wrzesniski) discussed the engineering studies being performed in support of the retrieval design. Work is continuing on sub-surface barrier studies. The various types of sub-surface barriers under consideration were discussed. A meeting is scheduled for March 24, 1993, to brief EPA and Ecology on this work.

A discussion on the study performed on potential tank leaks resulting from the retrieval process was conducted. Given that a leak in tank C-106 might occur while sluice retrieving the tank, and no surface barrier existed to prevent precipitation or other surface waters from providing a hydraulic head to drive contamination deeper, it would take approximately 60 to 75 years for contaminants from this hypothetical leak to reach the aquifer. Ecology indicated they were anxious to receive the report, as it would aid them in making regulatory decisions on the requirement to install such a barrier. RL (Nicoll) cautioned that the information was speculative and not finite, therefore data contained in the report should be used with extreme caution and conservatism. EPA (Sherwood) is looking forward to reviewing the report to verify site-wide consistency in assessing risk. Por-Flo modeling, used in this tank leak study, is accepted and used by EPA across the Hanford Site.

WHC (Henderson) indicated that Conceptual Design for tank C-106 retrieval would be replaced with other engineering studies.

RL (Wrzesinski) discussed the regulatory compliance issues that are known at this time. It was noted that a regulatory compliance strategy still needs to be developed, and the regulators were urged to provide their insights. A presentation in Lacey for April 1993 was discussed as a possible vehicle for developing this strategy. Ecology indicated that the meeting should include invitations to T. Michelena, M. Lerchen, G. Anderson, S. McKinney, and T. Tebb. All parties agreed that more than one meeting would most likely be required to define the strategy. The need for meaningful and timely input from the regulators was stressed.

The requirement for public involvement in the C-106 retrieval decision was discussed. What the true requirement is, is unknown at this time. The questions was asked if the TWR public involvement process would be sufficient. All parties agreed that this subject warrants further discussion.

WHC (Shaw) discussed the field walkdown of tank C-106. Winter weather impeded the progress of this activity. The tank riser condition was discussed, with actual photographs taken during the walkdown used to demonstrate current conditions. Copies of these photos were provided to the EPA and Ecology representatives (not included in these minutes due to color photographs not duplicating well.) It was noted that the 2 hour walkdown operation took three months to plan and execute. Dose rates for personnel involved were well within expected limits.

A lunch break was declared at 12:00 until 12:30.

Characterization: **(P. Hernandez, RL).** Refer to handout #2. The core sampling schedule for tank C-106 is not yet refined to a point where specific dates for sampling can be provided. It is a priority tank, and RL and WHC recognize the urgency of the data which is required by the Safety and Retrieval programs.

The exhauster for the rotary mode sampling device was discussed. A meeting with Ecology, Department of Health, EPA, RL and WHC is desired, and was tentatively set for March 16, 1993. Three separate options are being pursued: No exhauster; particulate filter only; and, the full design as envisioned by WHC. It was noted that if the full sign is selected, the maximum number of cores per sampling system will be nine cores per year, the cost for the exhauster will be substantially greater, and the M-10-13 milestone probably will not be met on schedule. Even the reduced filtering system may impact the milestone.

Ecology (McKinney) asked if it was still possible to do vapor sampling prior to completion of the exhauster design, and utilize that data in the design work. This would potentially limit the design criteria. RL (Hernandez) stated that existing methods are not adequate for this purpose. MacTech (Soler) stated that pre-sampling is not necessarily representative, due to vapor space mixing and disruption of waste/air interface which occurs during the sampling process.

AI-3/10/93-01. **Provide status of vapor space sampling in hard saltcake tanks to assist in developing design of the exhauster.**
Due Date: April 30, 1993 **Actionee: P. Hernandez**

RL (Hernandez) discussed the re-baseline efforts underway for the M-10-00 major milestone, as part of the TWR re-baseline. Options for the major milestone were discussed, including the tank characterization report.

EPA (Sherwood) requested that WHC HASM provide a discussion on why Nickel 63 was dropped from the list of analyses on tank wastes. It was recommended this be part of the DQO process discussions.

RL (Hernandez) discussed the potential to push-mode sample tank BY-104 en lieu of rotary mode sampling. It is believed by WHC and RL that this tank may contain soft material allowing a push-mode sample, rather than a rotary-mode sample. RL asked of Ecology, "If we try to push-mode sample this tank and are unable to get a full sample, will the attempt count towards the milestone requirements?" Ecology responded that it urged RL to accelerate the taking of samples, but that it could not give advance approval to an approach which may not satisfy the requirement of the milestone.

Interim Stabilization: **(T. Rainey, WHC).** Refer to handout #3. Actions surrounding the pumping of tank T-101 were discussed. Photos confirm a surface level drop since the 1984 photos (last set taken). Liquid samples indicate a need to treat liquids for nitrates.

A video tape of enplacing the saltwell screen and pump into tank T-101 was shown. The tape showed the installation of the saltwell screen and pump occurred without difficulty.

A recent occurrence report on waste transfers from 244-TX is related to, but will not impact progress on pumping, tank T-101.

WHC (Rainey) discussed the Engineering Evaluation of Alternatives to be submitted for Milestone M-05-14. The alternatives being reviewed will be both in-tank and exterior alternatives. Without further review of the report itself, Ecology indicated that the approach to the EEA seems adequate.

WHC (Rainey) reviewed the timetable for resolving the Criticality USQ. The current schedule has the WHC report going to RL in FY 1993. One year is allowed for DOE (RL and HQ) review, and resolution announced in late FY 1994. This is estimated to occur in September 1994.

Ecology has reviewed the data provided by RL on overground transfer piping and found the proposal adequate as submitted.

The C-106 Emergency Action Plan is still in Ecology review. Action item 2/10/93-2 is rolled-over to the next SST UMM, at the request of Ecology.

Spectral Gamma Logging of Drywells Around C-105/C-106: (R. Welty, WHC). Refer to handout #4. Nine wells have been logged to date. Two or three more should be completed by March 13. The RLS truck needs to go to calibration services on March 15, 1993, and should return by April 5, 1993. This will allow getting the balance of the drywells logged by the milestone due date.

WHC (Brodeur) discussed the spectral gamma logging results analyzed to date. There are no indications of spikes in the readings which would indicate a leak from either tank. The analyses are continuing, but they are inconclusive. In response to an Ecology direct question as to whether C-105 or C-106 is leaking, WHC (Price) stated that gross gamma does not show anything to reflect a tank leak in C-105 or C-106.

Proposed Modification to the M-05-00 Milestone: (G. Bishop, RL). Refer to handout #5. The change package will be part of the TWR re-baseline effort.

The estimated completion of interim milestone M-05-03 is in July 1994, although this is not part of the milestone change package. This completion date is premised on the assumption that equipment will have failed and need replacing.

The meeting adjourned without further discussions.

Attachment 2

AGENDA
TRI-PARTY AGREEMENT
SINGLE-SHELL TANKS
Unit Managers Meeting

March 10, 1993, 10:30 a.m. to 4:00 p.m.
725 Stevens Center, Room 208, Richland, Washington

Time	Topic	Presenter DOE/Contractor
10:30	Opening Remarks / Introductions	Yerxa/Pabst
	o Review and Sign February Meeting Minutes	
10:45	Waste Retrieval Program	Wrzesinski/Henderson
	o Design Schedule Status	
	o Engineering Activities	
	o Regulatory Compliance Issues	
	o Field Walk-Down Status	
12:00	Lunch	
12:30	Characterization Program	Clark/Propson
1:30	Interim Stabilization Program	Bishop/Rainey
	o T-101 Pumping Status	
2:00	Spectral Gamma Logging of C-105/C-106 Drywells	Bishop/Welty
2:15	Re-Baseline of M-05-00 Milestones	Bishop
3:00	General Discussion	Yerxa/Pabst
4:30	Adjourn	All

LIST OF ATTENDEES
TRI-PARTY AGREEMENT
SINGLE-SHELL TANKS
Unit Managers Meeting

Attachment 3

March 10, 1993, 10:30 a.m. to 4:00 p.m.
725 Stevens Center, Room 208, Richland, Washington

NAME	AFFILIATION	MSIN	TELEPHONE
J. P. Harris	WHC Retrieval	S4-55	2-1237
W. R. WRZESINSKI	DOE-RL	A5-15	6-6751
S. E. McKinney	Ecology		(206) 459-6725
R. T. HENDRIX	WHC-RCRA Closures	H6-23	2-1597
J. M. HENDERSON	WHC-RETRIEVAL	S4-55	2-0377
BRUCE NICOLL	DOE-RL	A5-15	376-6006
T. M. SHAW	WHC-SST RET.	S4-55	2-1023
Jon VERKA	DOE-RL	A5-15	6-9628
Doug Sherwood	EPA	B5-01	6-5524
Luis Soler Jr	Dames&Moore	A4-35	2-3296
David Palmer	WHC-TPA	B2-35	376-9048
Jim Hemanad	DOE	A4-62	6-2304
Glen Bishop	DOE	R2-62	2-1856
Gene Sewat	DOE	R2-62	2-2046
T E RAMEY	WHC-TWR	R1-49	3-3531
R K WELTY	WHC	R1-80	3-1008
R.E. Raymond	WHC	R1-80	3-2785
J. R. Bradeau	WHC/Geophysics	H6-06	6-9689
J.W. Fassett	WHC/Geophysics	H6-06	6-4224
R.K. PRICE	WHC/GEOPHYSICS	H6-06	6-9148

Handout 1

SINGLE-SHELL TANK UNIT MANAGERS MEETING

March 10, 1992

W. R. Wrzesinski
DOE-RL

J. M. Henderson
WHC

Single-Shell Tank Unit Managers Meeting 3/10/93

- Topics
  - Status of Design Schedule for C-106 retrieval
  - Engineering Studies to support design
  - Regulatory Compliance/Closure Issues
  - Field Walk-down Status

Single-Shell Tank Unit Managers Meeting 3/10/93

- ## Status of Design Schedule

  - Sluicing technique was performed at Hanford site during 1950's and 1970's during Uranium and Cesium recovery campaigns
  - 53 Single-Shell tanks were successfully sluiced
  - Because design of currently proposed sluicing technique does not differ greatly from past practice technique:
    - Conceptual design phase considered to be complete
    - Definitive design proposed to begin May 1, 1993
    - Allows completion of M-07 on or ahead of schedule
    - Moves regulatory compliance onto critical path
    - Selected characterization information needed by Jun/Jul, 93
    - Complete characterization data package needed by Dec, 93

Single-Shell Tank Unit Managers Meeting 3/10/93

- Engineering Studies to support design
  - Sub-Surface Barrier Engineering Study
    - Phase II: Additional system engineering evaluation of functions and requirements
      (Mar - Oct)
      - Update option selection
      - Prepare barrier development/demonstration plan

Single-Shell Tank Unit Managers Meeting 3/10/93

- Sub-Surface Barrier Engineering Study (Cont'd)
  - FY 1993 Barrier Development Work Status
    - System Analysis Session (SAS) conducted December 15-17, 1992
    - Final report completed mid-January, 1993
    - SAS close-out meeting scheduled for March 24, 1993. An invitation is being sent to Ecology and EPA to attend this close-out meeting.
  - Products to be developed for each barrier option consist of:
    - Description of concept installation
    - Sketches
    - Schedule
    - Cost estimate

- Engineering Studies to support design (Cont'd)

  - Engineering Study on Tank Leaks related to hydraulic retrieval of sludge from Tank 241-C-106

    - Simple 2-D leak models

    - Historical leak data from other Hanford and Savannah River tanks were used as a basis for leak volumes

    - Transport models were used to describe the movement of any leakage volumes in the soil column after any leak occurrence

    - Environmental impacts associated with tank leakage were evaluated

      - Local concentrations of waste constituents in groundwater resulting from the worst case leak scenario predicted to be greater than allowed by drinking water standards
      - These concentrations reflect the conservatism of the model
      - Actual concentrations will depend on the water well location, extent of mixing in the aquifer, and any lateral spreading that occurs

Single-Shell Tank Unit Managers Meeting 3/10/93

- Engineering Study on Tank Leaks related to hydraulic retrieval of sludge from Tank 241-C-106 (Cont'd)
  - Tank leakage would be limited to total inventory of drainable liquid contained in the tank at any time during the retrieval operation
    - Study determined a 37,000 gallon worst case leak volume
      - Assumes worst case crack pattern in concrete and steel
      - Assumes water inventory in tank exceeds minimum required for slurry pump suction
      - Assumes no cessation of activity on detection of a tank leak
    - If the tank were to leak, volume would more likely be on the order of a few thousand gallons, based on control of tank liquid inventory to minimum required for sluice pump operation

Single-Shell Tank Unit Managers Meeting 3/10/93

- Engineering Study on Tank Leaks related to hydraulic retrieval of sludge from Tank 241-C-106 (Cont'd)
  - Study was peer-reviewed by Lawrence Livermore National Laboratory
    - No major comments concerning assumptions or model development were generated during this review

- Engineering Studies to support design (Cont'd)

  - Advanced Engineering Studies underway by Kaiser Engineers Hanford

    A) Instrumentation Upgrade Requirements

       - To determine instrumentation needs to monitor process

    B) Riser Study

       - Catalog current configuration/contents of risers

    C) Development of cost estimates for:

       - surface barriers
       - leak detection caissons/laterals

- Engineering Studies to support design (Cont'd)

  - Advanced Engineering Studies planned to be conducted by Kaiser Engineers Hanford

    A) Shielding Requirement Study

      - Shielding requirements for transfer lines and HVAC

    B) Above-ground piping study

      - To determine alternative configurations for above-ground piping for vehicle crossings/roads and pit penetration

    C) Enhanced sluicer concepts study

      - To enhance past-practice sluicer design to improve:
        - positioning control of sluicer jets within tank
        - reliability of sluicer systems

      - study will conduct cost/benefit determination for enhancements

Single-Shell Tank Unit Managers Meeting 3/10/93

- Advanced Engineering Studies planned to be conducted by Kaiser Engineers Hanford (Cont'd)

  D) Preliminary equipment safety class study

  - To determine optimum combinations of safety classes on portions of systems for minimum "over-designs" to meet all safety requirements

  E) HVAC system simplification/cost reduction study

  - To incorporate concepts/lessons learned from HVAC system designed for Core Sampling Rotary Mode

Single-Shell Tank Unit Managers Meeting 3/10/93

- ## Regulatory Compliance/Closure Issues
  - A position paper is being prepared for submittal to Ecology
  - This paper will address the following issues:
    - Sluicing retrieval of tank C-106
    - Characterization needs for regulatory compliance
    - Tank Leakage
    - Barriers (both Surface and Sub-surface)
    - Leak Detection
    - Closure (Clean Closure vs. Landfill)
  - This position paper will be presented during Mar/Apr, 1993 at a location convenient to the Regulators (Lacey or Richland)

Single-Shell Tank Unit Managers Meeting 3/10/93

- ## Field Walk-down Status

  - On Friday, 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

SINGLE-SHELL TANK CHARACTERIZATION

MILESTONE M-10-00

Paul Hernandez - USDOE/RL
John Propson - WHC

Single-Shell Tanks Unit Managers Meeting

March 10, 1993
Richland, Washington

SINGLE-SHELL TANK CHARACTERIZATION MILESTONE M-10-00

TOPICS

- Accomplishments
- FY 1993 Milestone Status
- Special Topics

ACCOMPLISHMENTS

- The second sample core has been retrieved from Tank 241-T-107, retrieval of the third core is in progress.
- The second draft of the Characterization Strategic Plan is under review.
  - The plan will identify characterization requirements and recommend one cohesive strategy.
  - A comprehensive plan directed toward timely M-10-00 completion and integrating other programmatic needs for characterization of >10 mrem/hr wastes.

ACCOMPLISHMENTS (cont'd)

- Performed test drilling, using the newly installed rotary mode drill system, into simulated waste product.

- Started formal acceptance test procedures on the rotary mode sampling truck.

- WHC issued a draft envelope test report for internal review.

FY 1993 MILESTONE STATUS

- M-10-13-T2 Complete R & D and installation of Hard Salt Cake Sampler and Hydrostatic Balance System - December 31, 1992
    - Completed ahead of schedule on December 2, 1992
- M-10-13 Complete deployment of the Rotary Mode Core Sampling System - September 30, 1993
    - Presently on schedule
- Near-Term Core Sampling Schedule includes Tanks T-107* Core 3, T-105, T-102, C-106*, C-111*, C-108* and possibly T-101*

* Safety issue tanks

SPECIAL TOPICS

- **Rotary Mode Exhauster Re-Design may effect progress towards meeting the M-10-13 Milestone**

  - Revised design with HEPA, VOC, and ammonia treatment (full exhauster) results in a delay until November 1, 1993.
  - Arranging a meeting for March 11, 1993 with WDOH and WDOE to propose alternatives to the full exhauster.
  - Preferred option is exhauster with particulate filter only (only 50 SCFM for 20 minutes per two hour sampling event).
  - Safety documentation changed from Safety Analysis Report to Safety Assessment in the interest of reducing review times.

SPECIAL TOPICS (cont'd)

- **Rebaselining the TWRS Waste Characterization Program**
  - Met with WDOE and EPA on February 24 and March 3, 1993 to promote early participation by the regulators.
  - Agreement in principle on draft proposal for M-10-00 options (attached).
  - Agreement in concept of Tank Characterization Report to replace Validated Data Packages (attached).
  - Close-out meeting to be held the week of March 15, 1993.
  - Next steps:
    - DOE to submit draft TPA change package.

SPECIAL TOPICS (cont'd)

- 241-BY-104 push-mode core sampling

Tank Characterization Reports

A Tank Characterization Report is a single document that integrates relevant historical information with tank contents sample analytical results data (if necessary) and statistical data analysis to provide a comprehensive evaluation of a subject tank.

OUTLINE

1.0 Introduction

2.0 Existing Tank Contents Information and Evaluation
- Tank History
- Expected Tank Contents

3.0 Relevant Sampling Events Utilized
- Who - What - When - Where

4.0 Analytical Results From Sampling Events

5.0 Discussion of Existing Tank Contents Info and Analytical Results
- Statistical Analysis Performed

6.0 Conclusions

DRAFT

M-10-00 OPTIONS

Objective: New description of M-10 Characterization milestone

MAJOR MILESTONE

M-10-00: Characterize all Hanford HLW tanks, SST's and DST's, by the year 1999. Sample and analyze (if appropriate); document findings in tank characterization reports.

INTERIM MILESTONES

M-10-07: Take 24 core samples from DST's or SST's - 9/30/93

M-10-07-T1: Resubmit TWRS waste analysis plan after completing review via DQO process. - 9/30/93

M-10-07-T2: Submit 3 tank characterization reports for initial evaluation. - 9/30/93

M-10-08: Complete all FY '92 and '93 core sample analyses in accordance with the Waste Analysis Plan, except for those already in process using existing (pre-rebaselining) procedures. - 9/30/94

M-10-08: Issue X Tank Characterization Reports. - 9/30/94

M-10-09: Issue Y Tank Characterization Reports. - 9/30/95

M-10-10: Issue Z Tank Characterization Reports. - 9/30/96

M-10-11: Issue XX Tank Characterization Reports. - 9/30/97

M-10-12: Issue YY Tank Characterization Reports. - 9/30/98

M-10-13: Restore Rotary Mode Core Sampling to Hanford. - 9/30/93

M-10-14: Issue ZZ Tank Characterization Reports. - 9/30/99

Single-Shell Tanks
Interim Stabilization/Isolation

T. E. Rainey

Single-Shell Tank Unit Managers Meeting

March 10, 1993

ACCOMPLISHMENTS

241-T-101 ACTIONS

COMPLETED VAPOR SAMPLING (FEBRUARY 25, 1993)

OBTAINED IN-TANK PHOTOGRAPHS (MARCH 4, 1993)

OBTAINED LIQUID SAMPLES (MARCH 4, 1993)

RECEIVED AUTHORIZATION TO INSTALL PUMP FROM DOE-HQ (REQUIRED FEBRUARY 19, 1993, RECEIVED FEBRUARY 24, 1993)

INSTALLED SALTWELL SCREEN (MARCH 8, 1993)

COMPLETED INSTALLATION OF SUBMERSIBLE PUMP (MARCH 9, 1993)

RECEIVED AUTHORIZATION TO PUMP 241-T-101 PENDING READINESS REVIEW (FEBRUARY 26, 1993)

PLANNED ACTIVITIES

MILESTONE M-05-13-T2 (DUE APRIL 1993)

COMPLETE PHYSICAL LOGGING OF 14 DRYWELLS AT TANKS 241-C-105 AND 241-C-106 USING A SPECTRAL GAMMA PROBE
- LOGGING COMPLETED ON 9 DRYWELLS

MILESTONE M-05-14 (DUE MARCH 1993)

COMPLETE ENGINEERING EVALUATION OF ALTERNATIVES FOR RESPONSE TO 241-T-101 ASSUMED LEAK
- DRAFT IN REVIEW

MILESTONE M-05-15B (DUE MARCH 1993)

PROVIDE LETTER REPORT ON IN-TANK LIQUID LEVEL DETECTION OPTIONS AVAILABLE FOR 241-T-101
- DRAFT IN REVIEW

PLANNED ACTIVITIES (cont'd)

MILESTONE M-05-16 (DUE MARCH 15, 1993)
INITIATE FULL SCALE REMOVAL OF TANK 241-T-101 LIQUIDS

MILESTONE M-05-17C (DUE JUNE 1993)

ISSUE SCHEDULE FOR COMPLETING OPERATIONS SUPERVISOR AND SHIFT MANAGERS TRAINING

COMPLETE SAFETY ANALYSIS REPORT ADDENDUM TO ALLOW ALTERNATE METHODS FOR TRANSFER OF RADIOACTIVE WASTE WITHIN SINGLE-SHELL TANK FARMS (ECD SEPTEMBER 1993)

CONTINUE RESTORATION OF 244-U DOUBLE-CONTAINED RECEIVER TANK (ECD DECEMBER 1994)

PLANNED ACTIVITIES (cont'd)

INCORPORATE DOE-HQ COMMENTS IN CSER FOR 5 TANKS IN BY AND C FARMS ISSUE JCO ADDENDUM (ECD JULY 1993)

INITIATE SAFETY STUDY ANALYSIS ON INTERIM STABILIZATION OF REMAINING WATCHLIST TANKS (ECD SEPTEMBER 1994)

RESOLVE CRITICALITY USQ (ECD SEPTEMBER 1994)

COMPLETE INTEGRITY ASSESSMENT OF TRANSFER LINES (ECD SEPTEMBER 1993)

CHANGE REQUEST PROPOSAL PACKAGE FOR MILESTONE M-05 BEING PREPARED BY RL

ENGINEERING EVALUATION OF ALTERNATIVES MANAGING THE ASSUMED LEAK FROM SST 241-T-101

ALTERNATIVES EVALUATED

NO ACTION

1. EXISTING MONITORING
2. ENHANCED MONITORING

IN-TANK STABILIZATION

1. TANK WALL INHIBITORS
2. DIATOMACEOUS EARTH
3. PORTLAND CEMENT
4. DESICCANTS/GELS
5. HEAT EXCHANGERS
6. MICROWAVE
7. AIR DRYING
8. STOP LEAK

EXTERNAL TANK STABILIZATION

1. GEORMEMBRANE WALLS/JET GROUTING
2. SLURRY WALLS/JET GROUTING
3. SHEET PILING
4. GROUND FREEZING

LIQUID RETRIEVAL

1. EXISTING PIPELINE
2. NEW PIPELINE (BELOW OR ABOVE GRADE)
3. TANK TRUCK/RAILCAR
4. INTERNAL BLADDER

TOTAL RETRIEVAL

1. UNLIMITED SLUICE (HIGH PRESSURE - LOW VOLUME)
2. LIMITED SLUICE (HIGH PRESSURE - LOW VOLUME)
3. ARTICULATED ARM SCARIFIER

ALTERNATIVES WORTHY OF FURTHER EVALUATION

1. LIQUID RETRIEVAL ALTERNATIVE
   - OPTION 1, PUMP OUT - USING EXISTING PIPING
   - OPTION 2, PUMP OUT - USING NEW PIPING
   - OPTION 3, PUMP OUT - TANK TRUCK/RAILCAR
   - OPTION 4, PUMP OUT - INTERNAL BLADDER

2. TOTAL RETRIEVAL ALTERNATIVE
   - OPTION 1, UNLIMITED SLUICING
   - OPTION 2, LIMITED SLUICING

3. IN-TANK STABILIZATION ALTERNATIVE
   - OPTION 4, GELS

4. EXTERNAL TANK STABILIZATION ALTERNATIVE
   - OPTION 1, GEOMEMBRANE WALLS/JET GROUTING
   - OPTION 2, SLURRY WALLS/JET GROUTING
   - OPTION 3, SHEET PILING
   - OPTION 4, GROUND FREEZING

THE EXTERNAL TANK STABILIZATION ALTERNATIVE IS INCLUDED BECAUSE IT OFFERS A WAY TO CONTROL/CONTAIN THE SPREAD OF CONTAMINATION THROUGH SOILS FROM EITHER PAST TANK LEAKS OR FUTURE LEAKS FROM WASTE RETRIEVAL ACTIONS. IT WAS NOT FOUND TO BE A VIABLE ALTERNATIVE IN THIS EVALUATION.

FEBRUARY 1993 SST INTERIM STABILIZATION/ISOLATION

ISSUES/CONCERNS	CORRECTIVE/ACTION
CRITICALITY USQ HAS STOPPED ALL SINGLE-SHELL TANK TRANSFERS	APPROVAL OF JCO ADDENDUM FOR 6 TANKS. USQ RESOLUTION FOR REMAINING TANKS.
CONCERNS OF SAFETY PROBLEMS DEVELOPING AS RESULT OF REMOVING LIQUID	COMPLETE SAFETY STUDIES FOR WATCHLIST TANKS. RESOLVE CORROSION CONCERNS
FAILURE OF UNDERGROUND TRANSFER LINES IN S FARM	DETERMINE REASON FOR FAILURE AND PLAN OF ACTION.
M-05 MILESTONES CANNOT BE MET AS CURRENTLY WRITTEN	NEGOTIATE MILESTONE CHANGES.

SPECTRAL GAMMA LOGGING OF C-105 AND C-106 DRYWELLS

March 10, 1993

BACKGROUND

On July 22, 1992, RL and Ecology jointly agreed to technical commitments (milestone number M-05-13-T2) that by end of March 1993 the 14 drywells (there are actually 15 drywells) around waste tanks C-105 and C-106 would be logged using the Spectral Gamma probe. On January 21, 1993, this task was changed to a TPA milestone and the schedule extended to April 30, 1993 (based on delays caused by ice and snow in C Farm) and approved by RL, EPA and Ecology.

PLAN

The strategy developed to log the C drywells is the same as that used for T-101 wherein we parked the RLS van outside the tank farm fence, carried the probe to the drywells and utilized the Cask Sampling Truck boom to position the probe in the well. Each well around C-105/6 will be logged once and the data compared to the gross gamma logs. If good agreement is obtained, the spectral logging will be considered adequate for baselining. If any differences are noted, a second logging will be performed on that well.

SCHEDULE

We were scheduled to start logging in December, 92, upon availability of the RLS, but heavy snows and ice prevented entry into C Farm. A new schedule was developed on January 20, 1993 (revised on Feb. 18, 1993). This schedule was predicated upon near term entry into the farm.

February 1, 1993 - Start Logging
March 12, 1993 - RLS System Recalibration
April 5, 1993 - Resume Logging
April 30, 1993 - Complete Logging

We are logging at 0.4ft/min. which for the deepest wells (135 ft.) requires six hours logging time. Setup, takedown and survey requires another hour so seven hours per well or one well per shift is production time.

STATUS

Logging was started on January 26, 1993. Nine drywells have been logged to date. There is one well, (30-05-03) that we may not be able to log due to obstructions. Since Jan. 4, 1993 there has been 56 days available for logging (excluding sundays and 1 holiday). We have been precluded from entry into C-Farm on 31 of these days due to ice and snow. 1 day was for used for setup and 9 days lost due to the unavailability of the cask sampling truck. In addition, we lost 5 days due to damage to the cable and 1 day due to a minor accident to the RLS truck.

9 3 1 0 9 0 0 7 0 9 2

WESTINGHOUSE HANFORD COMPANY

DATE 2/ 9/93

DRYWELL SUMMARY REPORT

UNALIGNED DATA

WELL NUMBER	DATE	VAN	PROBE TYPE	* * * PEAK READING	EXCLUDING THE TOP 20 FEET OF THE WELL * * * PEAK DEPTH	CRITERIA EXCEEDED			TOTAL COUNTS WELL	TOTAL COUNTS BASELINE	TOTAL COUNTS OF TOP 20 FEET WELL	TOTAL COUNTS OF TOP 20 FEET BASELINE	BASELINE DATE
300101	2- 8-93	4-A	4	37.	40	0	0	0	1954.	2141.	413.	597.	7-15-77
300106	2- 8-93	4-A	4	91.	38		NA		2079.	2174.	435.	573.	10-15-76
300109	2- 8-93	4-A	4	11202.	29	6	28	65	30930.	45473.	455.	589.	10-15-76
300112	2- 8-93	4-A	4	810.	92	2	80	92	4167.	1857.	1238.	1641.	3-17-77
300301	2- 8-93	4-A	4	362.	28	0	0	0	5288.	5992.	5270.	8043.	10-10-84
300307	2- 8-93	4-A	4	46.	47	0	0	0	1981.	2229.	839.	839.	1-24-75
300502	2- 8-93	4-A	4	82.	22	0	0	0	2771.	2930.	807.	1821.	10- 6-78
300503	2- 8-93	4-A	4	177.	33	0	0	0	2867.	3044.	2723.	4098.	7-15-77
300504	2- 8-93	4-A	4	32.	82	0	0	0	2451.	2608.	555.	1735.	10-10-75
300505	2- 8-93	4-A	4	200.	64	0	0	0	3549.	4432.	2179.	8034.	3-12-76
300505	2- 8-93	4-A	4	210.	64	0	0	0	3637.	4432.	2206.	8034.	3-12-76
300506	2- 8-93	4-A	4	28.	50	0	0	0	824.	825.	647.	984.	9-15-78
300508	2- 8-93	4-A	4	72.	21	0	0	0	899.	1668.	5695.	9743.	11- 8-78
300509	2- 8-93	4-A	4	33.	76	0	0	0	1924.	2091.	487.	780.	1-24-75
300510	2- 8-93	4-A	4	29.	100	0	0	0	2683.	2817.	437.	669.	3-10-82
300612	2- 8-93	4-A	4	35.	23	0	0	0	1858.	2197.	593.	917.	1-24-75
300701	2- 8-93	4-A	4	37.	90	0	0	0	1946.	2214.	512.	930.	1-24-75
300702	2- 8-93	4-A	4	241.	94	0	0	0	2313.	2049.	656.	912.	1-24-75
300705	2- 8-93	4-A	4	53.	88	0	0	0	1855.	1905.	495.	848.	1-24-75
300707	2- 8-93	4-A	4	472.	85	1	85	0	3674.	1988.	503.	612.	1-24-75
300708	2- 8-93	4-A	4	255.	94	0	0	0	1978.	1811.	559.	543.	8-15-79
300710	2- 8-93	4-A	4	47.	80	0	0	0	1953.	2085.	409.	679.	1-24-75
300711	2- 8-93	4-A	4	36.	27	0	0	0	1907.	1977.	66636.	704.	1-24-75

WESTINGHOUSE HANFORD COMPANY

DATE 3/ 2/93

DRYWELL SUMMARY REPORT

UNALIGNED DATA

WELL NUMBER	DATE	VAN	PROBE TYPE	* * * EXCLUDING THE TOP 20 FEET OF THE WELL * * * PEAK READING	PEAK DEPTH	CRITERIA EXCEEDED			TOTAL COUNTS WELL	TOTAL COUNTS BASELINE	TOTAL COUNTS OF TOP 20 FEET WELL	TOTAL COUNTS OF TOP 20 FEET BASELINE	BASELINE DATE
300101	3- 2-93	7-A	4	35.	95	0	0	0	1804.	2141.	387.	597.	7-15-77
300106	3- 2-93	7-A	4	85.	38		NA		1909.	2174.	333.	573.	10-15-76
300109	3- 2-93	7-A	4	10675.	30	4	28	31	29888.	45473.	418.	589.	10-15-76
300112	3- 2-93	7-A	4	42.	95	0	0	0	1957.	1857.	1397.	1641.	3-17-77
300301	3- 2-93	7-A	4	421.	28	0	0	0	5777.	5992.	5640.	8043.	10-10-84
300303	3- 2-93	7-A	4	139.	34	0	0	0	3079.	3555.	3032.	4506.	5- 9-79
300305	3- 2-93	7-A	4	33.	94	0	0	0	1796.	2051.	497.	1212.	1-24-75
300309	3- 2-93	7-A	4	74.	80	0	0	0	2300.	2259.	918.	700.	8-14-79
300602	3- 2-93	7-A	4	31.	108	0	0	0	2362.	2575.	497.	782.	1-24-75
300603	3- 2-93	7-A	4	32.	28	0	0	0	1877.	2101.	655.	1000.	7-15-77
300604	3- 2-93	7-A	4	119.	27	0	0	0	3100.	3467.	1153.	1966.	1-24-75
300609	3- 2-93	7-A	4	30.	89	0	0	0	1821.	1963.	634.	1019.	1-24-75
300610	3- 2-93	7-A	4	40.	108	0	0	0	2662.	2736.	580.	767.	1-24-75
300612	3- 2-93	7-A	4	36.	22	0	0	0	1886.	2197.	609.	917.	1-24-75
300701	3- 2-93	7-A	4	41.	91	0	0	0	2066.	2214.	558.	930.	1-24-75
300702	3- 2-93	7-A	4	35.	95	0	0	0	1834.	2049.	468.	912.	1-24-75
300705	3- 2-93	7-A	4	35.	64	0	0	0	1839.	1905.	449.	848.	1-24-75
300705	3- 2-93	7-A	4	68.	37	0	0	0	2008.	1905.	590.	848.	1-24-75
300708	3- 2-93	7-A	4	72.	46	0	0	0	2024.	1811.	419.	543.	8-15-79
300710	3- 2-93	7-A	4	61.	49	0	0	0	2017.	2085.	424.	679.	1-24-75
300711	3- 2-93	7-A	4	39.	73	0	0	0	1907.	1977.	68039.	704.	1-24-75

SSTs
Interim Stabilization/Isolation

Proposed Modifications to Milestone M-05

G. E. Bishop

Single-Shell Tank Unit Managers Meeting

March 10, 1993

MILESTONE M-05-03

- INTERIM STABILIZE AN ADDITIONAL 4 SSTs,
  DUE DATE: SEPTEMBER 1991

  - ISSUE CRITICALITY CSER AND JCO FOR 241-BY-102, 241-C-102, C-107, AND C-110.

  - ESTIMATE COMPLETE PUMPING JULY 1994

M-05 PROPOSED MODIFICATIONS

- ADD MILESTONE FOR COMPLETION OF PUMPING BY-109

- IMPROVE EMERGENCY LEAK RESPONSE

  - COMPLETE SAR ADDENDUM FOR OVERGROUND TRANSFER
  - COMPLETE DESIGN AND PROCUREMENT OF OVERGROUND TRANSFER EQUIPMENT
  - ISSUE DETAILED PROCEDURES FOR EMERGENCY PUMPING
  - COMPLETE RESTORATION OF 244-U DCRT
  - COMPLETE ENGINEERING ANALYSIS AND SAFETY ASSESSMENT TO DETERMINE ACTION TO BE TAKEN IF A WATCH LIST TANK LEAKS

M-05 PROPOSED MODIFICATIONS (CONT'D)

- RESOLVE CRITICALITY USQ
- PREPARE FOR INTERIM STABILIZATION OF 11 NON-WATCH LIST TANKS
- ADD MILESTONE FOR START OF PUMPING FOR:

  - 7 S-FARM TANKS
  - 2 U-FARM TANKS
  - 2 T-FARM TANKS

- ADD TARGET MILESTONES FOR COMPLETION OF INTERIM STABILIZATION
- COMPLETE SAFETY STUDY ANALYSIS ON INTERIM STABILIZATION OF REMAINING WATCH LIST TANKS

  - FECN TANKS
  - HYDROGEN/FLAMMABLE GAS TANKS
  - ORGANIC TANKS

M-05 PROPOSED MODIFICATIONS (CONT'D)

- CEASE WATER ADDITIONS TO TANK 241-C-105

  - COMPLETE THERMODYNAMIC STUDIES FOR 241-C-105 TO EVALUATE THE SAFETY OF CEASING WATER ADDITIONS

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