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Meeting Minutes Transmittal

DOUBLE-SHELL TANK SYSTEM
Unit Managers Meeting (Video Conference)
2440 Stevens Center Place, Room 1600
Richland, Washington

May 18, 1994
9:30 a.m. to 11:30 a.m.

The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated Unit Managers Meeting (UMM).

C. E. Clark, Unit Manager, RL — Date: 6/8/94

G. R. Konzek, Lead Engineer, MWTF Project, RL — Date: 7/20/94

Not Present — Date:
D. L. Duncan, RCRA Program Manager, EPA Region 10

F. Ma, Unit Manager, Washington State Department of Ecology — Date: 6/15/94

Double-Shell Tank System, WHC Concurrence

L. A. Garner, Contractor Representative, WHC — Date: 6/8/94

Purpose: Discuss Permitting Process

Meeting Minutes are attached. The minutes are comprised of the following:
Attachment 1 — Agenda
Attachment 2 — Summary of Discussion and Commitments/Agreements
Attachment 3 — Attendance List
Attachment 4 — Action Item Summary
Attachment 5 — Project W-028/058 Replacement of the Cross-Site Transfer System
Attachment 6 — Federal Facility Agreement and Consent Order Change Control Form No. M-43-94-01

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DOUBLE-SHELL TANK SYSTEM
Unit Managers Meeting Agenda
2440 Stevens Center Place, Room 1600
Telephone Conference with EPA
Richland, Washington

May 18, 1994
9:30 a.m. - 11:30 a.m.

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1. **APPROVAL OF PREVIOUS MEETING MINUTES**
   - *January 11, 1994*
   - *April 12, 1994*

2. **MULTI-FUNCTION WASTE TANK FACILITY PROJECT STATUS**
   - Status of MWTF (Milestone M-42) — *Glenn Konzek, RL*

3. **DOUBLE-SHELL TANK SYSTEM RCRA TOPICS**
   - Status of Project W-028/058, "Replacement of the Cross-Site Transfer System" (Milestone M-43-07) — *Gae Neath, RL*

4. **ACTION ITEMS**
   - Past Actions

12-07-93:1	RL will provide Ecology information in an effort to initiate a project-wide nondisclosure agreement. ACTION: G. Konzek (RL) OPEN
04-12-94:1	RL will initiate correspondence with Ecology requesting a local point of contact to approve the tank characterization plans. ACTION: J. Clark (RL) OPEN

   - New Actions

5. **SCHEDULE OF NEXT MEETING**
   - Tentative dates (?)
   - Proposed topics

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DOUBLE-SHELL TANK SYSTEM
Unit Managers Meeting (Video Conference)
2440 Stevens Center Place, Room 1600
Richland, Washington

May 18, 1994
9:30 a.m. to 11:30 a.m.

Summary of Discussion and Commitments/Agreements

1. APPROVAL OF PREVIOUS MEETING MINUTES

- The January and April 1994 Unit Manager Meeting minutes were approved and signed. The February and March 1994 Unit Manager Meetings were canceled.

2. MULTI-FUNCTION WASTE TANK FACILITY

- Mr. G. Konzek (RL) provided an update on the status of the Multi-Function Waste Tank Facility (MWTF). RL received approval for Key Decision 2 on May 12, 1994. The TPA renegotiations that were signed January 25, 1994, compressed the construction schedule a year, with Title 2 design scheduled to begin March 1, 1994. RL/WHC are in the process of rebaselining the construction schedule based on the May 12, 1994, Key Decision 2 approval. Mr. Konzek indicated that RL/WHC are projecting the target milestones for September 1994 start of construction to be met. WHC will issue a letter June 2, 1994, that will reflect the rebaselined project schedule. This schedule will be made available to Ecology/EPA for information at the next UMM. Mr. Konzek noted that approval for the change from stainless steel tanks to carbon steel tanks is scheduled to be signed off today (5-18-94). The use of carbon steel tanks will reduce welding time in the field, and as a result WHC may be able to make up some time in the schedule.

  Mr. Konzek stated that before construction can start in September 1994, the most critical point of the rebaseline is approval of Key Decision 3 (approval to start construction). Since the design media is projected to be only ten percent complete, RL/WHC may not be in a position to request construction or have an independent cost estimate performed on the whole project. As a result, RL/WHC envision dividing Key Decision 3 into 3A and 3B. Key Decision 3A would include approximately 30 percent of the design media during the summer 1994, for start of construction in September 1994; and Key Decision 3B would include approximately 70 percent of the design media for the support facilities, beginning January 1995. Mr. Konzek noted that the approvals for Key Decisions 3A and 3B may have to be made locally to meet those projected dates rather than the typical process of going through DOE-HQ for approval.

  Mr. Konzek reported that the baseline change proposal for six tanks instead of four was approved and signed.

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Mr. Konzek stated that the workshop for the preliminary draft Environmental Impact Statement (EIS) is taking place today (5-18-94).

Mr. Konzek referred to the TPA-required 25 percent cost reduction goal. A 25 percent cost reduction plan providing target areas for reduction was approved by RL's Tank Waste Projects Division (TWP) on May 11, 1994. The total cost reduction goal for the MWTF project is $109 million.

3. DOUBLE-SHELL TANK SYSTEM RCRA TOPICS

- Ms. G. Neath (RL) provided a status of Project W-028/058, "Replacement of the Cross-Site Transfer System" (Attachment 5). Project W-058 is the replacement of the cross-site transfer line, and Project W-028 consists of the transfer line from B Plant connecting into the DST system.

  Mr. S. McKinney (Ecology) asked if the low point leak detection system would be left in place. Ms. Neath responded that WHC plans to convert over to the continuous cable for leak detection. Mr. C. Haller (WHC) added that there will still be sumps in each one of the diversion boxes and alarms in the sumps to detect leaks within the diversion box.

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4. ACTION ITEMS

- Action item 12-07-93:1, RL will provide Ecology information in an effort to initiate a project-wide nondisclosure agreement. This action item remained open.

  Action item 04-12-94:1, RL will initiate correspondence with Ecology requesting a local point of contact to approve the tank characterization plans. This action item was transferred to the Single-Shell Tanks Facility.

5. SCHEDULE OF NEXT MEETING

- The next meeting was scheduled for June 15, 1994. A status on the Multi-Function Waste Tank Facility, an update on the Replacement of the Cross-Site Transfer System, and a discussion regarding the schedules for revision of the Part B permit application will be included on the agenda at the next unit managers meeting. Status of the Cesium Demonstration Unit was tentatively put on the agenda.

  Ms. M. McLaughlin provided Mr. McKinney and Mr. F. Ma (Ecology) with copies of a federal facility agreement and consent order change control form No. M-43-94-01 (Attachment 6).

Attachment 3

DOUBLE-SHELL TANK SYSTEM
Unit Managers Meeting (Video Conference)
2440 Stevens Center Place, Room 1600
Richland, Washington

May 18, 1994
9:30 a.m. to 11:30 a.m.

Attendance List

NAME	ORGANIZATION	PHONE #	MSIN
Linda Banks	DOE-RL	(509) 376-1465	S7-52
Clifford E. Clark	DOE-RL	(509) 376-9333	A5-15
Mike W. Cline	WHC	(509) 376-7957	H6-24
Ryan A. Dodd	WHC	(509) 373-5629	R1-51
Lisa A. Garner	WHC	(509) 373-1505	R2-86
Carl Haller	WHC	(509) 373-1765	R2-12
Gerry Hendricks	GSSC	(509) 946-3687	B1-42
Carl Van Katwijk	WHC	(509) 376-9385	B4-52
Kathy E. Knox	WHC	(509) 372-3596	H6-24
Glenn R. Konzek	RL	(509) 376-8399	R3-73
Steve J. Lijek	GSSC	(509) 376-2512	S7-70
Fenggang Ma	Ecology	(509) 736-3035	B5-18
Scott E. McKinney	Ecology	(206) 407-7146	Lacey
Mary Ann McLaughlin	WHC	(509) 376-4084	B2-35
Charles Mulkey	WHC	(509) 373-5609	R1-51
Gae M. Neath	DOE-RL	(509) 376-7828	S7-52
Suzette A. Thompson	WHC	(509) 372-0958	H6-24

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Attachment 4

DOUBLE-SHELL TANK SYSTEM
Unit Managers Meeting (Video Conference)
2440 Stevens Center Place, Room 1600
Richland, Washington

May 18, 1994
9:30 a.m. to 11:30 a.m.

Action Item Summary

Past Item #	Description
12-07-93:1	RL will provide Ecology information in an effort to initiate a project-wide nondisclosure agreement. ACTION: G. Konzek (RL) OPEN
12-07-93:2	Ecology to determine repository location (Lacey, WA vs. Kennewick, WA) would be the most beneficial to Ecology. ACTION: S. McKinney (Ecology) CLOSED
04-12-94:1	RL will initiate correspondence with Ecology requesting a local point of contact to approve the tank characterization plans. ACTION: J. Clark (RL) CLOSED

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Attachment 5

DOUBLE-SHELL TANK SYSTEM
Unit Managers Meeting (Video Conference)
2440 Stevens Center Place, Room 1600
Richland, Washington

May 18, 1994
9:30 a.m. to 11:30 a.m.

Project W-028/058
Replacement of the Cross-Site Transfer System

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PROJECT W-028/058
Replacement of the Cross-Site Transfer System

Gae M. Neath
Tank Waste Projects
U.S. Department of Energy
Richland Operations Office

May 18, 1994

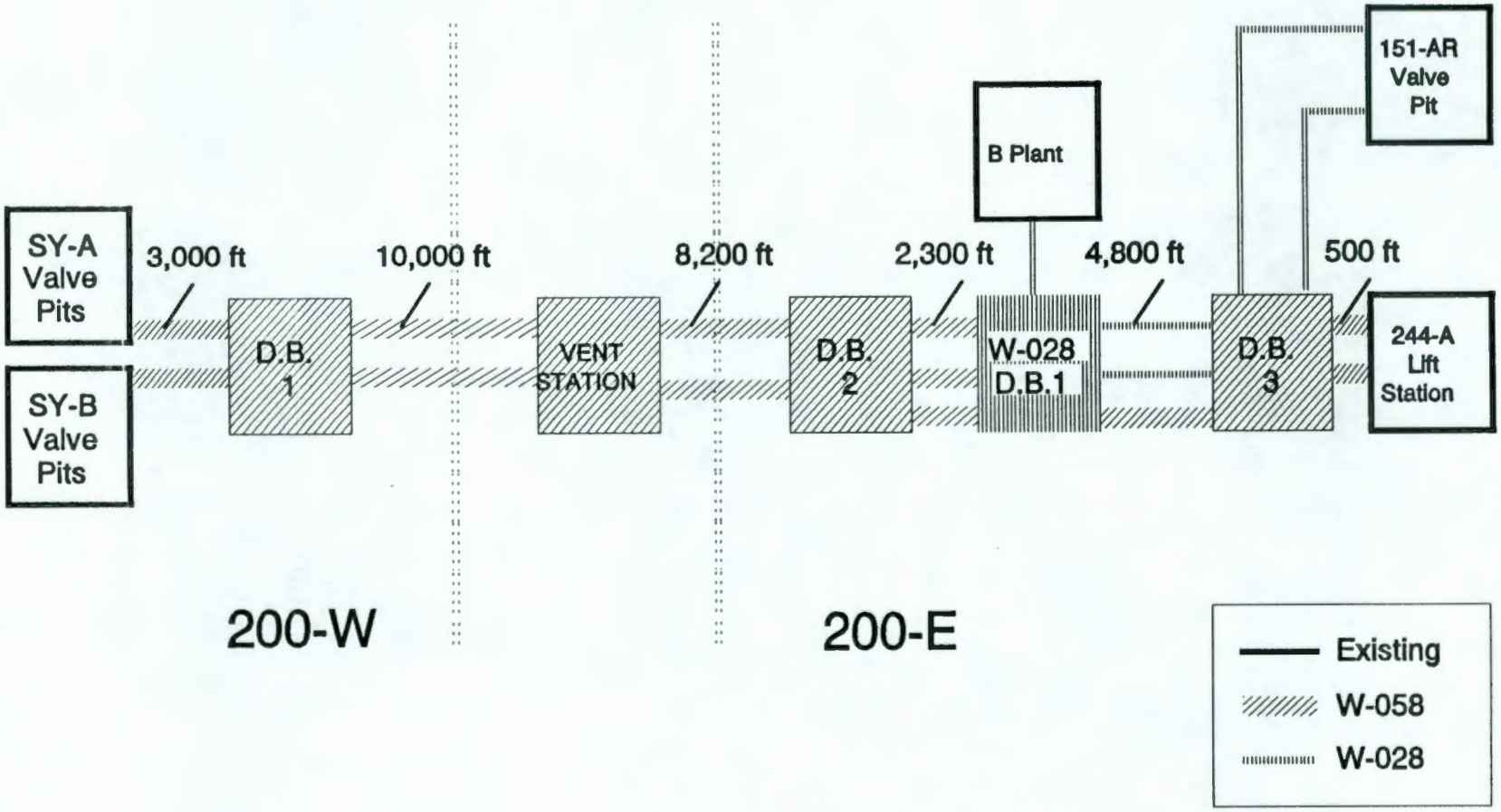
AGENDA

- Status of Project W-028/058
- Configuration of Cross-Site Transfer System
- Number of Cross-Site Transfer Lines
- Number of Diversion Boxes and Distance Between
- Leak Detection System

STATUS OF PROJECT W-028/058

- Functional Design Criteria (FDC), Conceptual Design Report (CDR), and Title I design have been completed
- Key Decision 2 (KD-2) decision has been granted to authorize the start of Title II design
- Title II design is in progress
  - Tri-Party Agreement (TPA) Milestone M-43-07-T01, Complete Definitive Design for W-058, August 31, 1995
- Early procurement of Slurry Pump, and Process Monitor and Control System
  - TPA Milestone M-43-07-A, Start Construction for W-058, November 31, 1995

Cross-Site Transfer System Configuration



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NUMBER OF CROSS-SITE TRANSFER LINES

- Cross-Site Transfer Lines Capacity Analysis
- Cross-Site Transfer Lines Reliability Analysis

CROSS-SITE TRANSFER LINES CAPACITY ANALYSIS

DESIGN PARAMETERS:

- Current design requires 2 lines
- Maximum usage during 15 year retrieval = 30% capacity of 1 line
- Average usage = 9%
- Waste will be pumped at 140 gpm
- Redundancy provided via a second line

CROSS-SITE TRANSFER LINES CAPACITY ANALYSIS
Operating Efficiency of the Transfer System

Total volume of retrieved waste	≈	196,000,000 gallons
Specific gravity of waste	≈	1.0 to 1.5
Waste to be transferred through Cross-Site Transfer System (200W to 200E)	≈	98,000,000 gallons
Number of retrieval years as agreed to in the TPA	≈	15 years
Average waste to be transferred per year	≈	6,530,000 gal/yr
Design capacity of the transfer system	≈	70,600,000 gal/yr (140 gpm, 350 operating days)
Operating efficiency required to meet TPA milestones	≈	9.3%
Maximum waste expected to be transferred in a year	≈	20,000,000 gal/yr
Maximum yearly usage	≈	30%

CROSS-SITE TRANSFER LINES RELIABILITY ANALYSIS

- **Failure Mode Effect and Criticality Analysis (FMECA) Performed**

- **FMECA considered:**
  - Component failure
  - Human error
  - Plugging (10 times higher than the generic estimate)
  - Leakage
  - Earthquake
  - Electrical power interruption
  - Accidents

- **FMECA results**
  - Calculations showed that reliability would be 0.61, 0.95, and 0.98 for 1, 2, and 3 lines respectively

NUMBER OF CROSS-SITE TRANSFER LINES CONCLUSION

- One slurry transfer line adequately supports the retrieved Single-Shell Tank (SST) and Double-Shell Tank (DST) waste volumes
- Two transfer lines have sufficient redundancy for the Cross-Site Transfer System to fulfill its intended long term mission

LEAK DETECTION SYSTEM

TITLE I DESIGN:

- Evaluated several systems for operability and cost
- Low point leak detection at diversion boxes was recommended
- Compliance with Washington State Administrative Code (WAC) was in question
- CH_2M Hill contracted to review system and recommend leak detection method

LEAK DETECTION SYSTEM (cont.)

CURRENT DESIGN CONCEPT:

- Use either cable technology to detect leaks from the primary pipe into the annular space
- Annular space to be purged dry and sealed
- Annual pressure testing of the annular space to verify integrity of the secondary containment pipe

Attachment 6

DOUBLE-SHELL TANK SYSTEM
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Richland, Washington

May 18, 1994
9:30 a.m. to 11:30 a.m.

Federal Facility Agreement and Consent Order
Change Control Form
No. M-43-94-01

9413281.2164

Change Number	Federal Facility Agreement and Consent Order Change Control Form	Date
M-43-94-01	Do not use blue ink. Type or print using black ink.	May 17, 1994

Originator J. L. Homan Phone 373-0556

Class of Change

[ ] I - Signatories [ ] II - Project Manager [X] III - Unit Manager

Change Title

Align Tank Farm Upgrades Program Documentation Milestones with Current Systems Engineering Documentation Requirements

Description/Justification of Change

DESCRIPTION

Revise all Tank Farm Upgrades Program milestones relating to Conceptual Design Criteria (CDC) and Conceptual Design Statements of Work. The target dates affected are M-43-02-T03, M-43-04-T03, M-43-05-T03 and M-43-06-T03. The current target dates read as follows:

M-43-02-T03 & M-43-04-T03 "Provide the Washington State Department of Ecology and Department of Health the project Conceptual Design Statement of Work and Conceptual Design Criteria..."

M-43-05-T03 & M-43-06-T03 "Provide the Washington State Department of Ecology the project Conceptual Design Statement of Work and Conceptual Design Criteria..."

(continued on page 2)

Impact of Change

No schedule or cost impacts will result from this change request.

Affected Documents

Hanford Federal Facility Agreement and Consent Order Action Plan, Appendix D.

Approvals

DOE	Date	___ Approved	___ Disapproved
EPA	Date	___ Approved	___ Disapproved
Ecology	Date	___ Approved	___ Disapproved

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Description (continued)

Revise these target dates to read as follows:

M-43-02-T03 & M-43-04-T03	"Provide the Washington State Department of Ecology and Department of Health the project Conceptual Design Statement of Work..."
M-43-05-T03 & M-43-06-T03	"Provide the Washington State Department of Ecology the project Conceptual Design Statement of Work..."

The dates of the milestones are not changed.

Eliminate all target dates related to Project Design Criteria (PDC) Documentation. The target dates affected are M-43-02-T05, M-43-04-T05, M-43-05-T05 and M-43-06-T05.

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JUSTIFICATION

During the 1993 renegotiation of the Hanford Federal Facility Agreement and Consent Order, The United States Department of Energy (DOE), the United States Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) agreed to Tank Farms Upgrade milestones based on the expected project documentation sequence of: Engineering Study; Functions and Requirements Document; Conceptual Design Criteria; Conceptual Design Report; Project Design Criteria; Definitive Design and Construction. Subsequent to the negotiations and concurrent with the Functions and Requirements (F & R) document preparation for Projects W-314A and W-314B, a "Systems Engineering" approach to project management has been developed which changes the project documentation sequence. This Change Request is intended to align the project milestones with the current project documentation sequence.

The current sequence of project documentation will be as follows: Engineering Study; Functions and Requirements Document; Conceptual Design Report; Definitive Design; and Construction. Conceptual Design Criteria and Project Design Criteria (PDC) will no longer be prepared as discrete documents. The technical baseline for a project will be developed in the Functions and Requirements (F & R) Document. The F & R will evolve through the Conceptual Design phase of a project and will ultimately encompass much of what was previously intended for the PDC.

The project F & R documents are to be provided under targets M-43-02-T-02, M-43-04-T02, M-43-05-T02, and M-43-06-T02. M-43-02-T02 was completed on April 30, 1994.