

START

Meeting Minutes Transmittal/Approval
 Unit Managers Meeting: SST Operable Unit
 HAP0 Building, Room 404
 Richland, Washington

August 6, 1992

From/ Appvl: *Jim Davis* Date: 9/3/92
 Jim Davis, SST Unit Manager, DOE-RL

Appvl: *Scott E. McKinney* Date: 9/9/92
 Scott McKinney, SST Unit Manager,
 WA Department of Ecology

Appvl: *Doug Sherwood* Date: 9/9/92
 Doug Sherwood, SST Unit Manager,
 EPA Region X

Appvl: *David Pabst* Date: 9/5/92
 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
- Attachment #4 - Handout - Waste Retrieval Overview
- Attachment #5 - Handout - M-06 Status
- Attachment #6 - Handout - Single-Shell Tank Characterization Milestone M-10-00
- Attachment #7 - Extract, Hanford Federal Facility Agreement and Consent Order, Article XXXI, Creation of Danger, pages 54 and 55.



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

August 6, 1992

Introduction: (D. Pabst, WHC). The meeting convened at 7:30 a.m. Introductions were made. WHC provided opening comments and reviewed the agenda.

A schedule for SST Unit Manager Meetings (UMM) for the balance of the calendar year was established. The future meeting dates are:

September 9, 1992
October 7, 1992
November 4, 1992
December 9, 1992

Tank Waste Retrieval: J. M. Henderson, WHC. Initial discussions centered around the tank selection process for milestone M-07-00, in an attempt at defining what the first tank selected for waste retrieval should be. This was succeeded by discussions on priorities for follow-on tanks. It was noted that for follow-on tank selection, economies of scale direct attention towards completing the retrieval of wastes from most, if not all, tanks in a single farm, before moving on to another farm. (Refer to attachment 4)

EPA (Sherwood) made the comment that DST space indicates priority should be given to selecting tanks in the 200 East Area since space is limited in 200 West DSTs. WHC (Henderson) noted that 101-SY retrieval could free up DST space in 200 West.

The next major topic centered on Tank C-106 waste retrieval planning. DOE has directed WHC to pursue studies of accelerated retrieval of this tank. Sluicing the tank appears to be the most probable course for waste retrieval from this tank. A concern is with the destination for retrieved waste. If the waste must go to an aging waste DST, then due to tank space limitations, retrieval is dependent on HWVP start-up schedules. If the waste can go to a non-aging waste DST little impact is seen on DST tank space availability. To allow use of a single non-aging waste tank modifications to operating specifications will need to be obtained.

Action Item 8/06/92-01. Discuss processes for obtaining necessary permits involved in generic, initial waste retrieval. This would involve a discussion by EPA and Ecology on what information is required to allow them to make timely permit decisions.

Due: September 9, 1992 (Next UMM)

Action: Jim Davis, RL

DOE-RL is concerned that the above action item may be premature.

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M-06 Status: (M. Mahaffey, WHC). Technology Development is pursuing efforts in the area of sluicing and barrier technologies in support of SST waste retrieval. (Refer to attachment 5)

The demonstration which will satisfy M-06-02 will be scheduled in September 1992, meeting the milestone due date early. EPA and Ecology will be offered a tour of the 337 High Bay robotics development area at the next UMM.

Single-Shell Tank Characterization, Milestone M-10-00: (P. Hernandez, RL). By the time of this UMM, sixteen (16) of twenty (20) cores have been taken from SSTs in this fiscal year. Three (3) cores from SST S-104 were the most recent taken. There are no projected difficulties in meeting the milestone, scheduled for completion in September 1992. There is a possibility that cores will be taken from SST T-104 en lieu of C-109 due to potential SAR schedule concerns on FeCN sampling. (Refer to attachment 6)

Discussions on the hard saltcake sampler followed. Base assumptions and technical impacts to the schedule were provided. RL has approved additional funding in FY 1992 for this activity. RL has not agreed to the final completion schedule. Impacts to the schedule remain in the area of the modular exhauster.

RL (John Clark) stated that it is the position of RL Tank Farm Project Office that no negotiations on interim milestone M-10-13 will occur, that the milestone will be missed.

WHC (G. Kosiancik and C. Stroup) stated that laboratory upgrade funding is available and being put to use. The Site is pursuing off-site laboratory capacity for low-level rad samples, particularly at the Idaho facility. Data packages for T-111 should be available around October 1, 1992.

WHC (J. Propson) stated that the next release of the Waste Characterization Plan is due out in September 1992 to RL, and that this release will encompass DSTs as well as SSTs. Therefore, this will not be a revision, but a whole new document.

WHC (J. Propson) stated that the next release of the Integrated Sampling and Analysis Plan for Samples Measuring > 10mRem/Hour is due out in the May to June 1993 time frame.

General Discussions.

SST System Closure and Corrective Action Work Plan

WHC (V. Hall) discussed the SST System Closure and Corrective Action Work Plan. Work scope to revise the plan has been deferred until fiscal year 1993. This work was initiated in FY 1992 but delayed because of higher priority TWRS

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work scope, including preparation of the TWRS Systems Engineering Study, Decision Analysis Model, and the NOI Technical Support Document. This action does not impact TPA schedules.

Creation of Danger

WHC (D. Pabst) provided an extract of the TPA (attachment 7) and discussed the Creation of Danger clause. This clause was invoked following the 200 Area Vapor Incident in January 1992. It could be invoked as a result of the existent Criticality Issue in the farms.

EPA (Sherwood) added that the January 1992 incident resulted in EPA granting an extension to the 200-BP-1 milestones.

Employing the concept of "creation of danger" towards a potential delay of milestone M-05-04 was discussed. It is RLs desire to work with EPA and Ecology on this matter, and to not be seen as generating a unilateral modification.

TPA Change Request Protocol

RL (J. Yerxa) discussed the TPA Change Request Protocol being developed by DOE-RL and DOE-HQ. This protocol sets out a process for the development of TPA change packages through the DOE management structure. RL explained that the more formalized process would setup timelines of up to 105 days for the research, development, and approval of change requests. This would mean an additional 5 to 6 weeks to the TPA change process from what is now the norm.

Adjourn. The meeting adjourned at 12:00 p.m.

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

August 6, 1992, 7:30 a.m. to 11:30 a.m.
HAPO Building, Room 404, Richland, Washington

<u>Time</u>	<u>Topic</u>	<u>Discussion Lead</u>
7:30	Opening Remarks	Yerxa/Pabst
7:45	Tank Waste Retrieval To include discussion on accelerated retrieval of 241-C-106	Nicoll/Henderson
9:00	Single-Shell Tank Characterization Core Sampling and Characterization Program Rotary Mode Sampling Update	J. Clark/Propson
10:00	General Group Discussion DOE and WHC Milestone Representatives are requested to attend	McKinney/Yerxa
11:30	Adjourn	

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SINGLE-SHELL TANK
UNIT MANAGER MEETING
AUGUST 6, 1992

<u>NAME</u>	<u>AFFILIATION</u>	<u>PHONE</u>
David Pabst	WHC-TPA	376-9048
Jon Yerxa	DOE-TPA	376-9628
Wendell Wrzesinski	DOE-RL	376-6751
Catherine Louie	SWEC/Support	376-3502
Mike Mahaffey	WHC-TD	376-1120
Ed Smith	WHC-Reg. Analysis	376-0234
Mark Henderson	WHC-SST Retrieval	372-0377
Scott Mckinney	Ecology	(206) 459-6725
Doug Sherwood	EPA	376-9529
Jim Davis	DOE-Retrieval	376-6678
Vernon Hall	WHC-Prog. Integ.	374-0286
Paul Hernandez	DOE-RL	376-2209
Curtis Stroup	WHC-Laboratories	372-0816
Gene Kosiancic	WHC-Laboratories	373-1594
Dale Price	WHC-CST	373-3964
John Clark	DOE-RL	376-2246
Paula Clark	DOE-RL	376-4718
John Propson	WHC	373-1765
Michael Minette	WHC	373-3864
Thomas Rainey	WHC	373-3531

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Single-Shell Tank Unit Managers Meeting

Waste Retrieval Overview

**J. M. Henderson, Manager
Single-Shell Tank Retrieval**

August 6, 1992

Single-Shell Tank Unit Managers Meeting
Waste Retrieval Overview

- **M-07 Tank Selection**
 - **Draft selection report being prepared**
 - **Selection Criteria**
 - **Resolution of tank safety issues**
 - **Compliance with regulatory requirements**
 - **Regulations**
 - **Tri-Party Agreement commitments**
 - **Proceed with waste disposal**
 - **Tank Space Logistics**

Single-Shell Tank Unit Managers Meeting
Waste Retrieval Overview

- **Selection Criteria Implications**

- **Tank should be on the watch list**
- **Waste retrieval should mitigate or close safety issue**
- **Tank should be 75' diameter tank for adequate demonstration of retrieval technology**
- **Waste should not require long-term storage prior to subsequent processing for disposal**

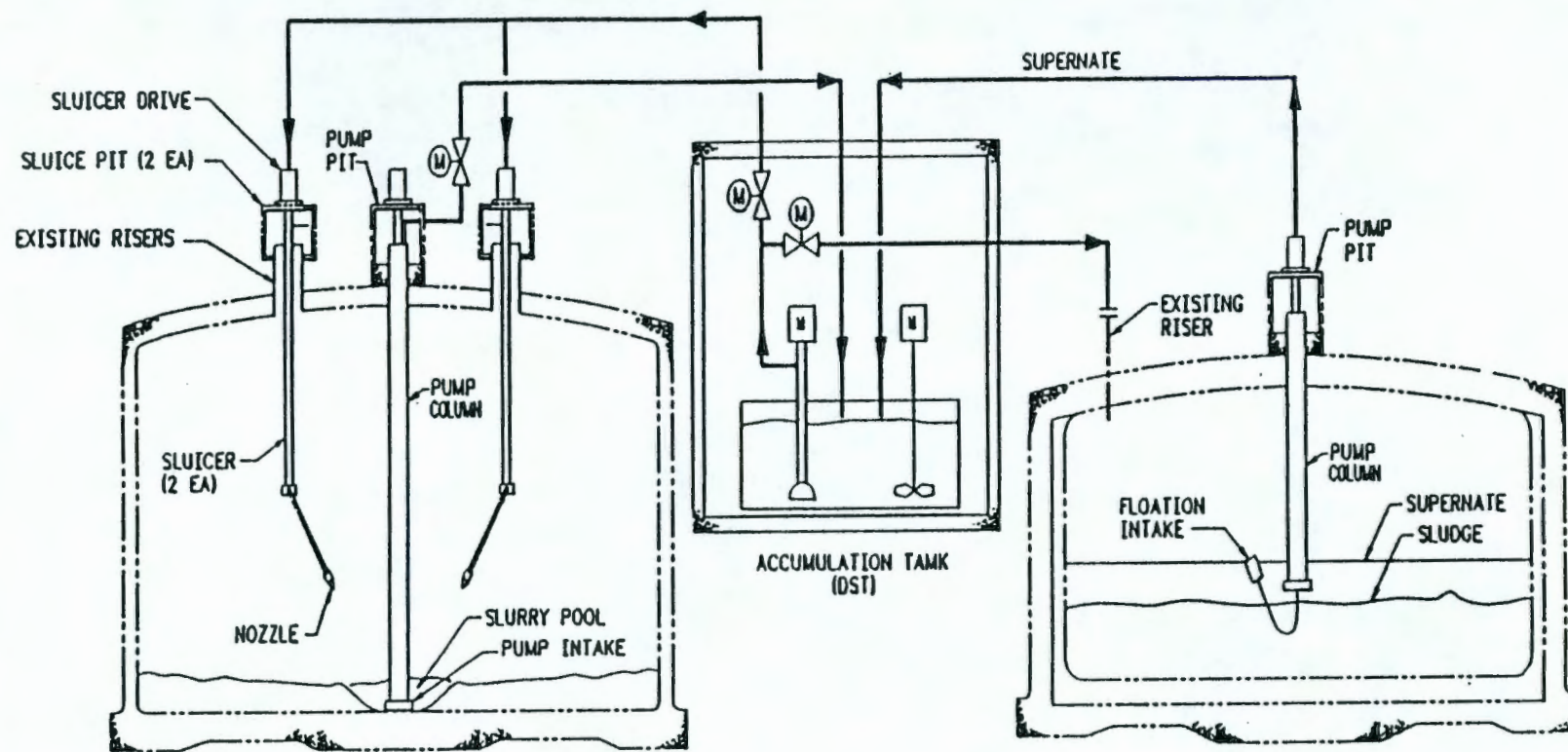
Single-Shell Tank Unit Managers Meeting
Waste Retrieval Overview

- **Selection Criteria Implications (cont)**
 - **WAC 173-303-640 (7): leaking or unfit tank(s): selection should address leaking tanks or those that require continued water addition**
 - **WAC 173-303-960: substantial endangerment: selection should address safety watch list tanks**
- **Tank 241-C-106 is a candidate for M-07**
- **Targeting completion of draft M-07-01 tank selection report for review: 8/28/92**

- **Tank 241-C-106 Sluicing Planning**
 - **DOE directed Westinghouse to develop a plan for early retrieval of waste from Tank 241-C-106**
 - **Past practice sluicing techniques were to be considered**
 - **The plan must address:**
 - **transfer routes**
 - **evaporator operations**
 - **pretreatment options**
 - **impacts to TPA related activities**
 - **technology development activities**
 - **retrieval program activities**
 - **retrieval projects**
 - **receipt tank**
 - **tank space**

Single-Shell Tank Unit Managers Meeting
Waste Retrieval Overview

- **Tank 241-C-106 Sluicing Planning (cont)**
 - **Six options were identified for waste retrieval**
 - **106-C waste heat load may require transfer into one aging waste tank or two standard DSTs**
 - **Tank space availability to receive 106-C waste must address:**
 - **Evaporator restart and operation**
 - **Grout startup**
 - **In-tank sludge washing pretreatment**
 - **HWVP startup**
 - **Early retrieval of 101-SY waste**

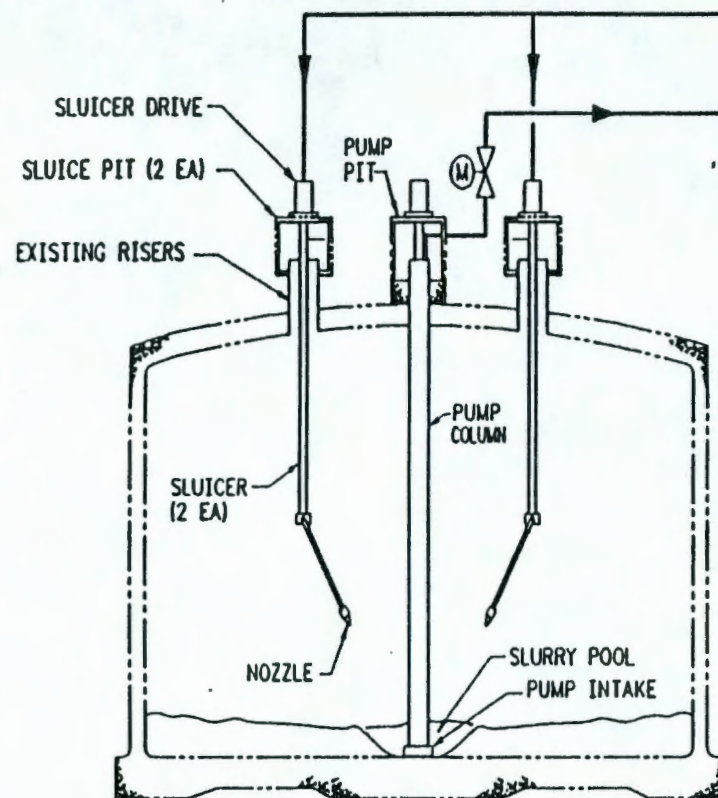


SST

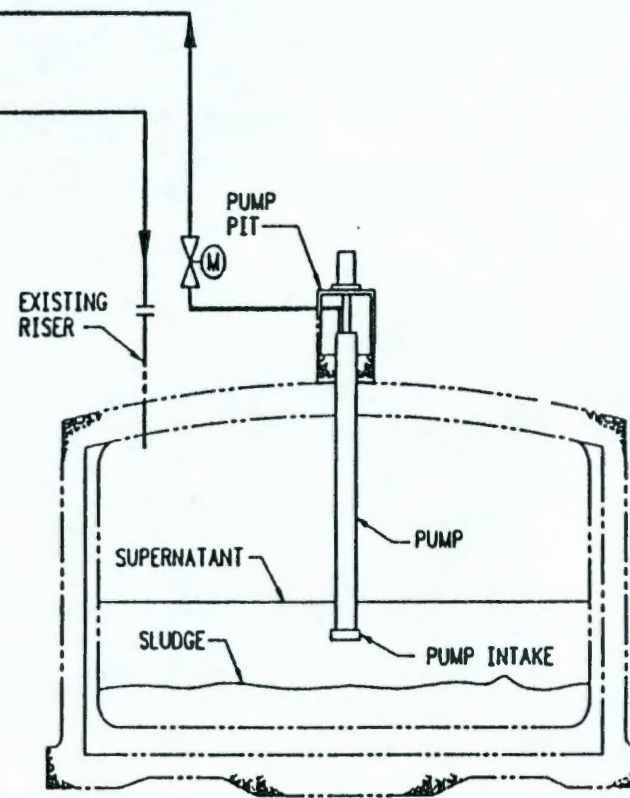
OPTION' #1

BATCH TRANSFER - RECIRCULATE AT
ACCUMULATION TANK

DST



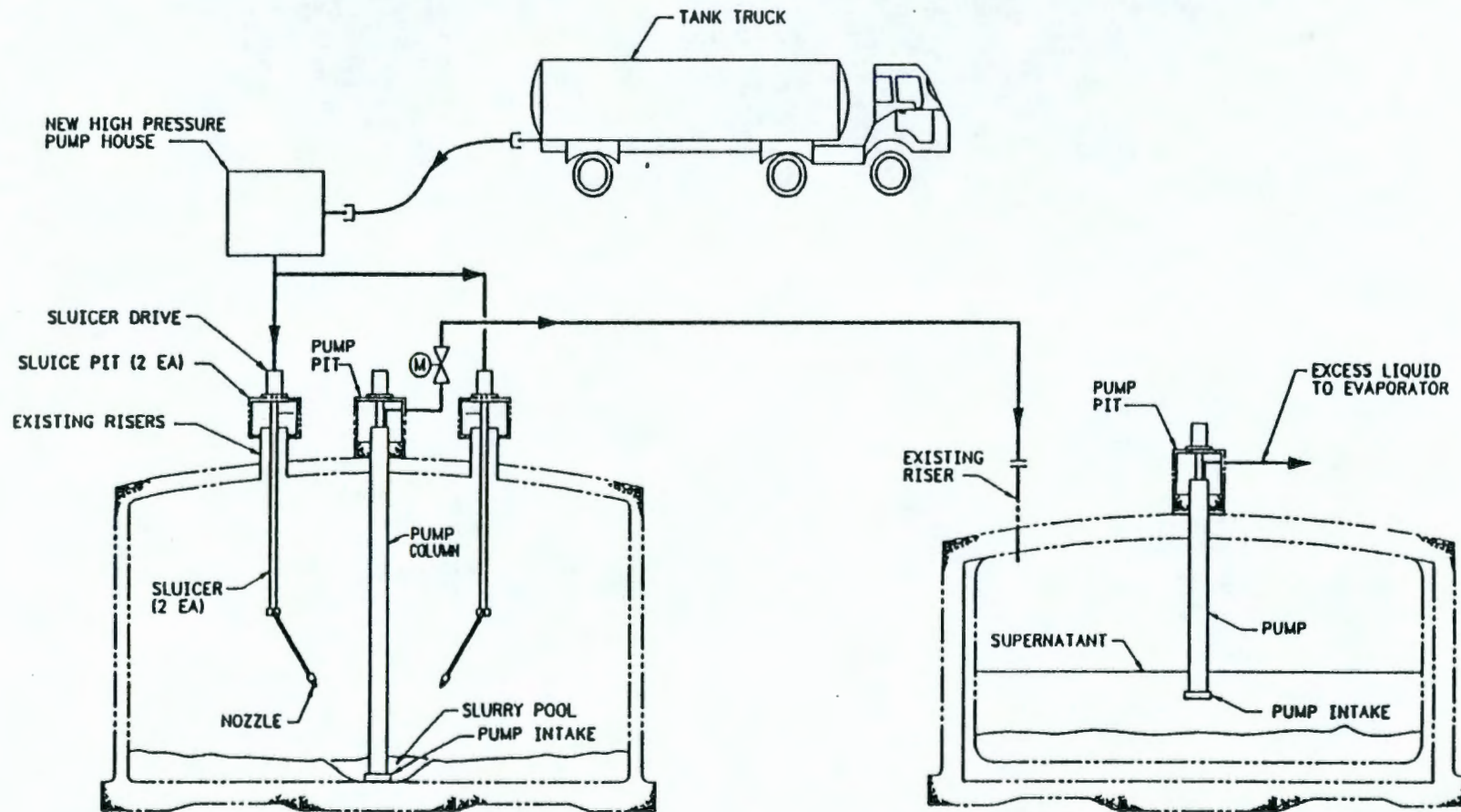
SST



DST

OPTION #2

TANK TO TANK - RECIRCULATE AT DST



SST

DST

OPTION #3
ONCE THROUGH - NO RECYCLE

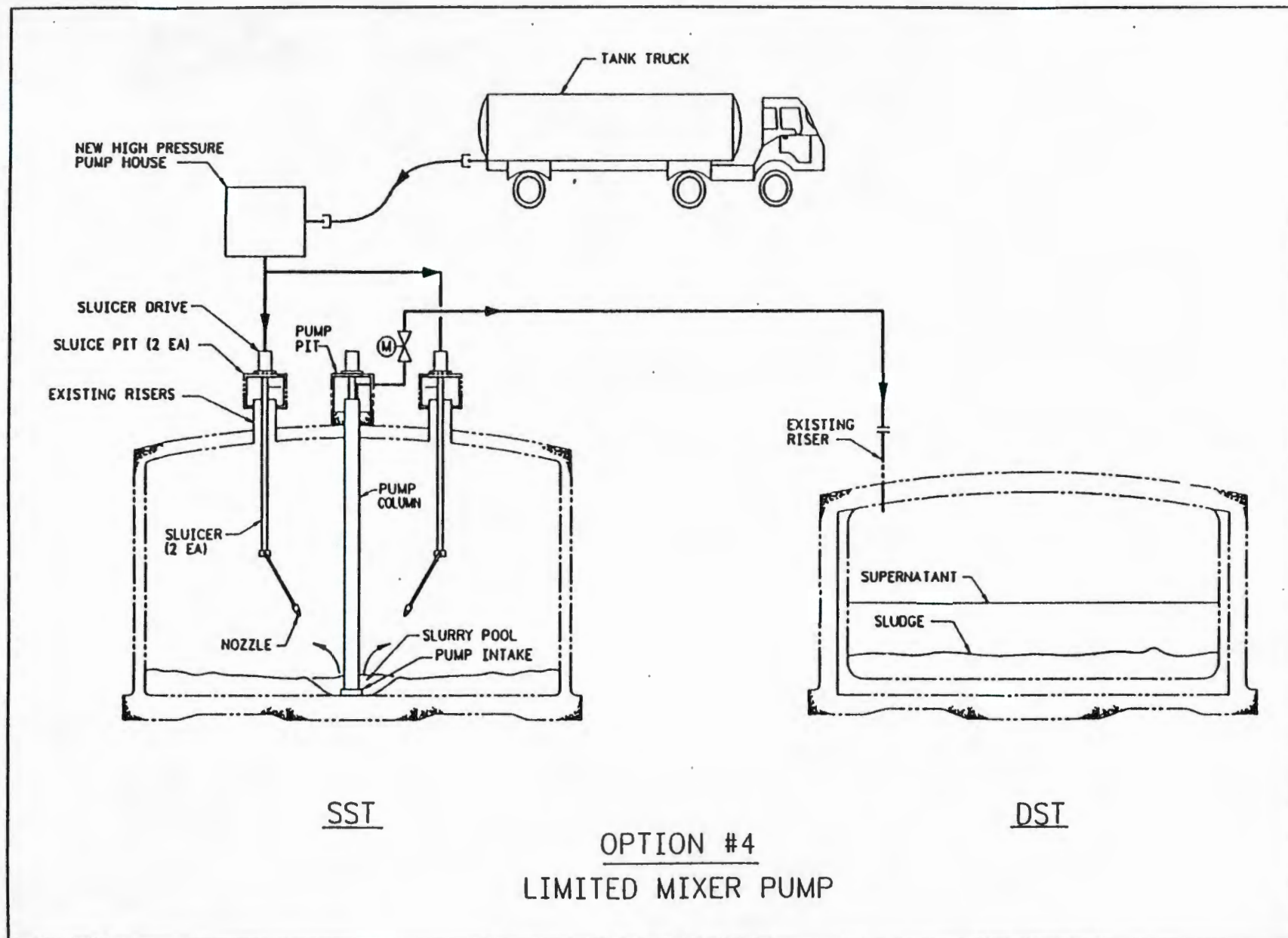
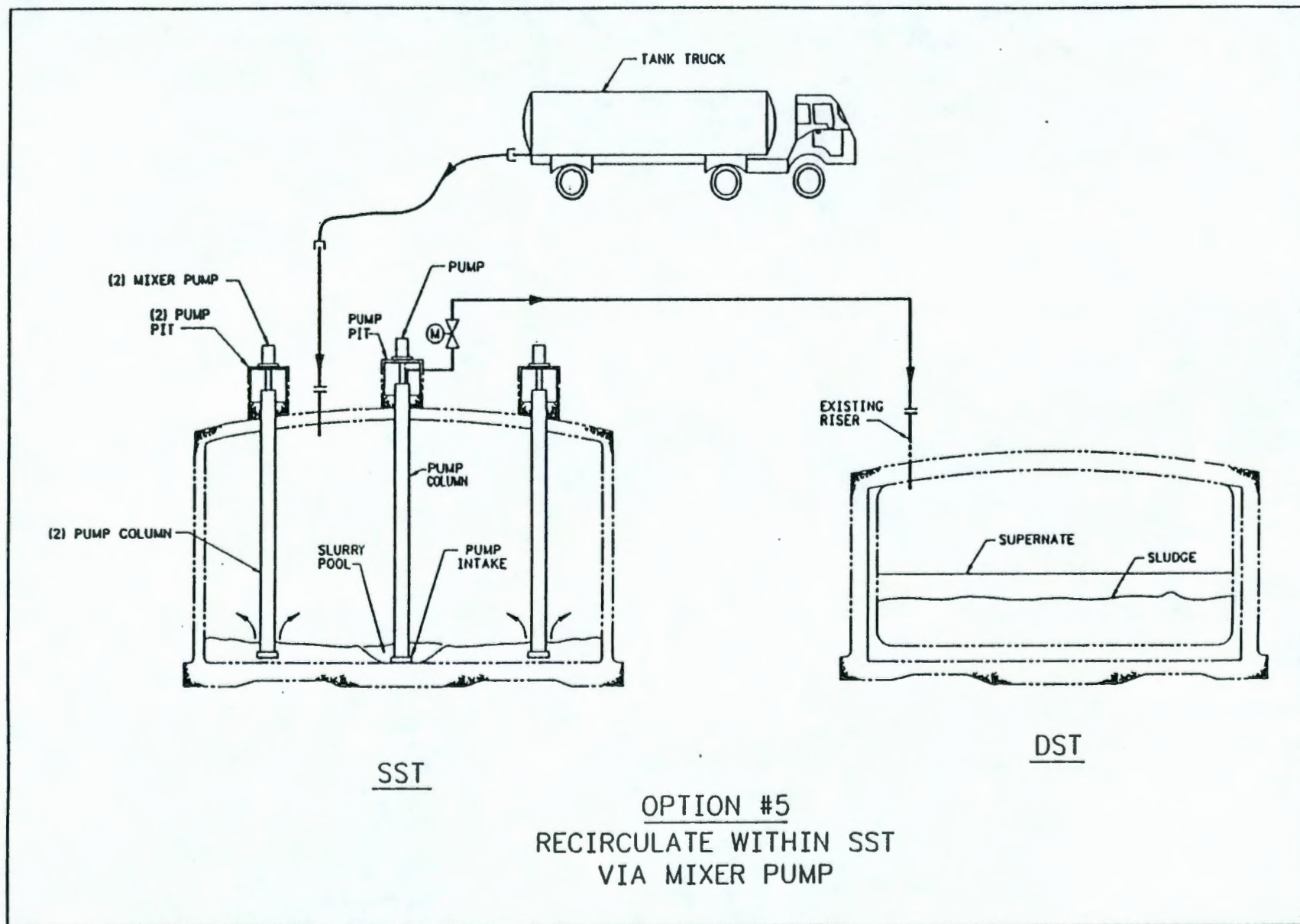
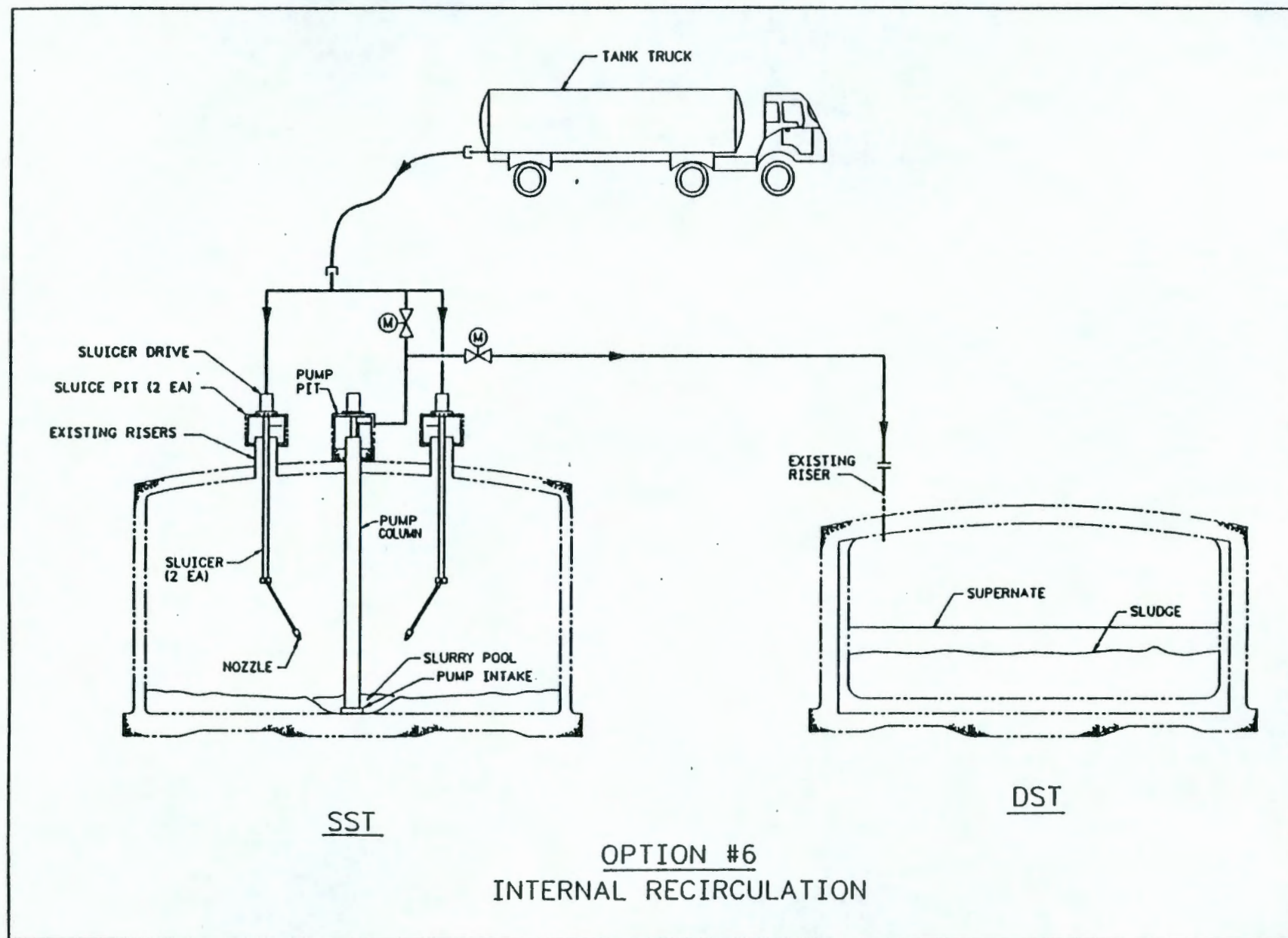


Figure 5
Page 15





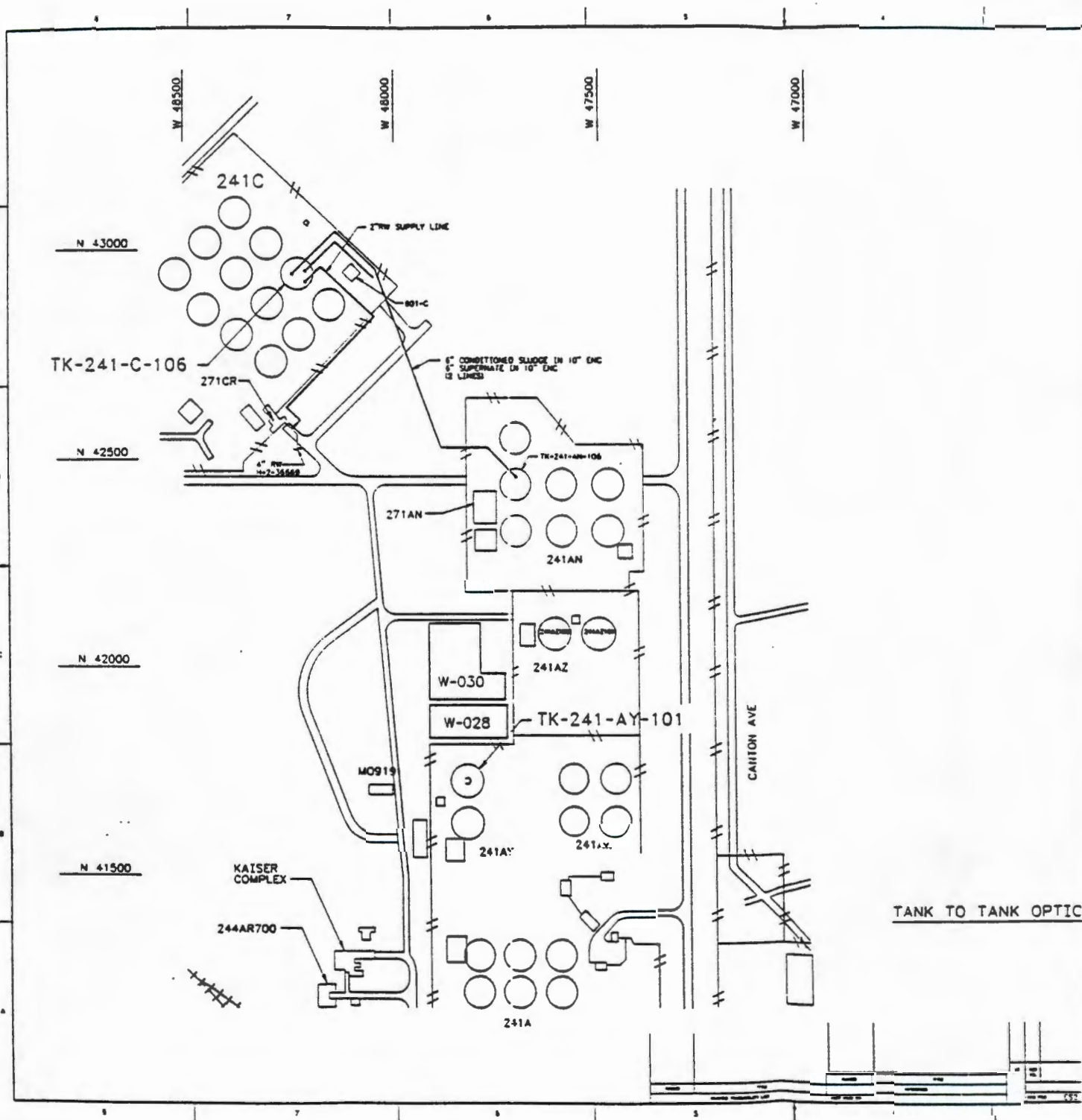
Single-Shell Tank Unit Managers Meeting
Waste Retrieval Overview

- **Tank 241-C-106 Sluicing Planning (cont)**
 - **Three receipt tanks were identified**
 - **241-AY-101 or AY-102**
 - **Receipt space available in 1999 with a 12/99 HWVP startup**
 - **Receipt space available in 1994-95 with a 2002 HWVP startup**
 - **Sludge wash pretreatment of HWVP feed must precede HWVP startup by 2 years**

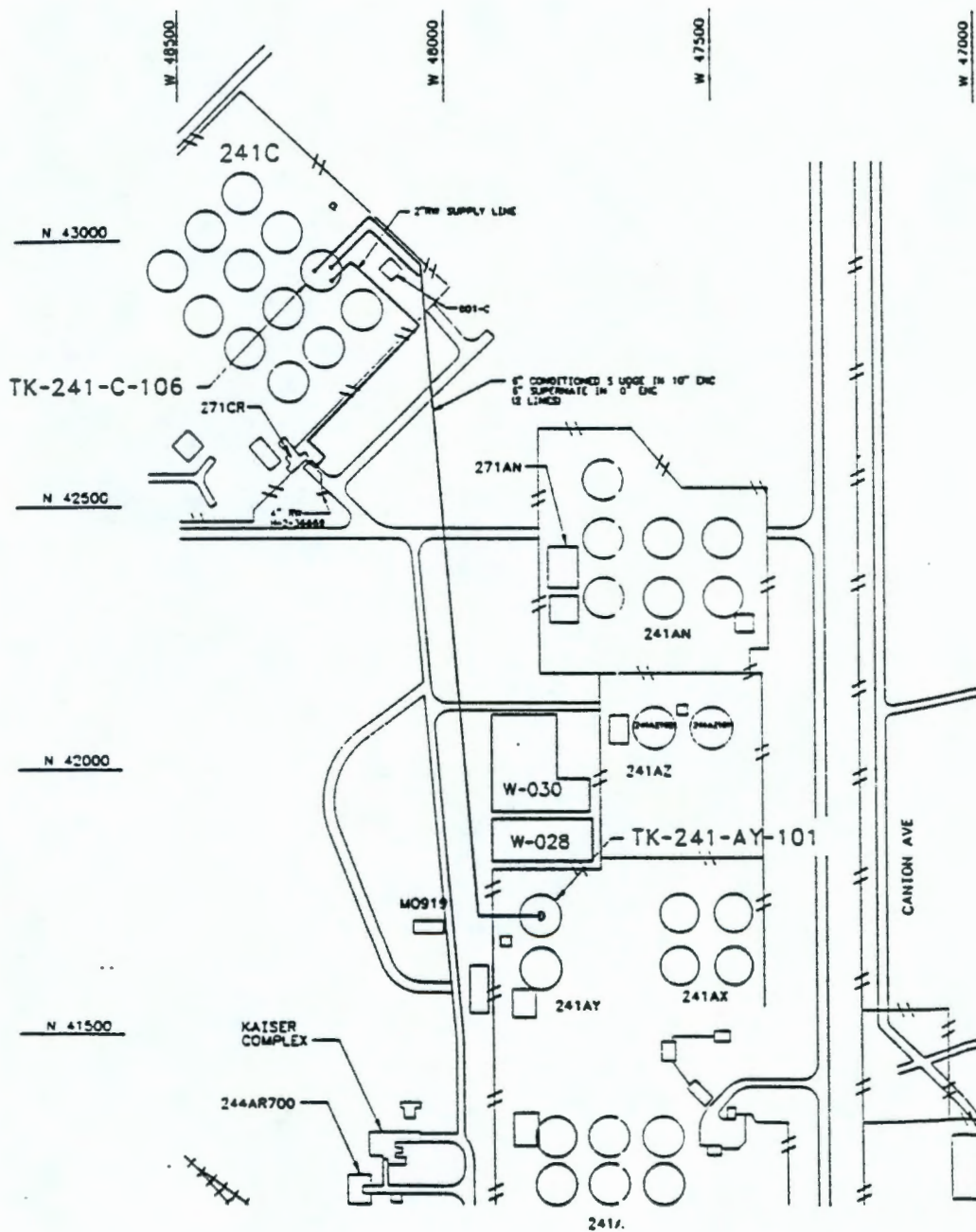
Single-Shell Tank Unit Managers Meeting
Waste Retrieval Overview

- **Tank 241-C-106 Sluicing Planning (cont)**
 - **241-AN-106**
 - **106-AN waste will be transferred to Grout feed tanks in 1992**
 - **Additional dilute waste to be stored in 106-AN can be used as the slurry water for 106-C waste**
 - **Retrieval any time after 1992 if OSD limits on waste heat load can be raised**

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TANK TO TANK OPTION #1

PRC

Single-Shell Tank Unit Managers Meeting
Waste Retrieval Overview

- **Tank 241-C-106 Sluicing Planning (cont)**
 - **Rapid retrieval will require authorization to proceed with fast track design and construction in parallel with environmental documentation and safety documentation preparation**
 - **A range of schedule completion dates and costs were included in the plan**
 - **Initial phase to select retrieval option, receipt tank, and routings, and complete detailed plans could start in FY 1993**

Single-Shell Tank Unit Managers Meeting
Waste Retrieval Overview

- **Tank 241-C-106 Sluicing Planning (cont)**
 - **Design and procurement actions could start immediately after phase 1 studies, pending funding and agreements on fast track design/construction**
 - **Draft retrieval plan completed and transmitted to DOE on 7/29/92**

M-06 STATUS

M. K. Mahaffey

August 6, 1992

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M-06 STATUS

Support Provided to TWRS Retrieval Technology Development Plan

- **Retrieval Technology Workshop**

WHC M-06 Retrieval Technology Demonstration Planning Updated per TWRS Workshop

- **Broadened to Include Development of Non-Robotic Alternatives**
 - **Sluicing**
 - **Barriers Technology**

M-06 STATUS

M-06 FY 92 Tests in 337 High Bay

End Effector for Sludge

- Water Jets for Mobilization
- Air Conveyance System
- Sludge Bed

Robotics Technology Demonstration

- Sludge End Effector in 1/8 Sector Mockup
- Saltcake Water Cannon
- End Effector for Pipe Cutter
- SPAR and Schilling Arms

M-06 STATUS

M-06-02 Definition

Initiate End Effector Tests with Simulated Sludge in 337 High Bay

- Water Jets
- Air Conveyance System
- Move End Effector Through Bed of Sludge

M-06 STATUS

**Fabrication of End Effector for Sludge Retrieval Testing
Completed by WHC**

- **Delays Encountered in Test Fixture Fabrication**
 - **SY-101 mitigation work temporarily pre-empted shop resources**
- **No M-06-02 Impact Expected**
- **Parts of Air Conveyance System Have Arrived**

M-06 STATUS

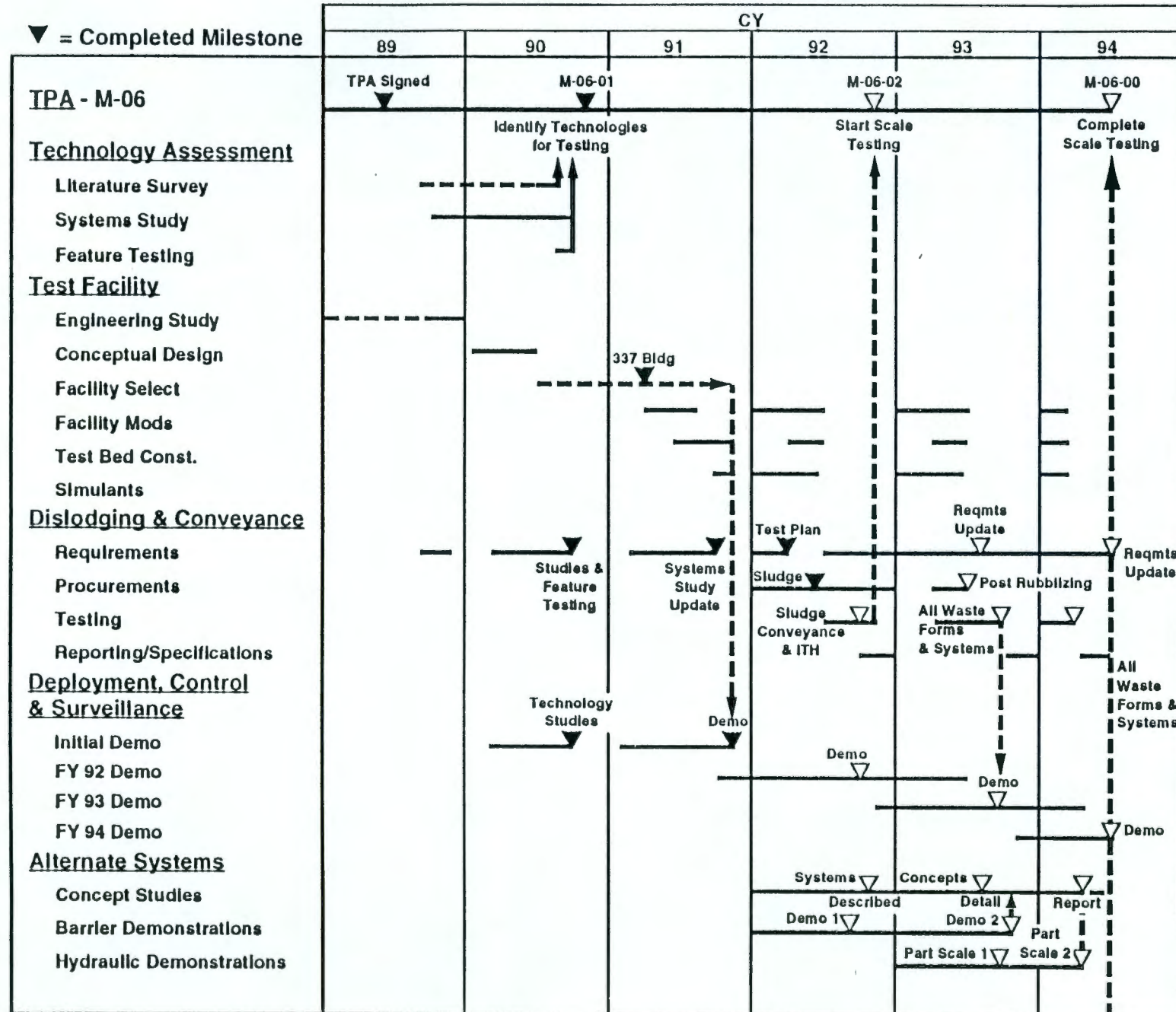
Robotics Technology Development Program Test Plan
Prepared for September 24 Start

- Sequence Developed for Other Lab Demonstrations
 - Robotics (Schilling arm) Upgrade
 - Salt Cake (water cannon testing at QUEST completed) - Livermore
 - In-Tank Hardware (2" pipe cutter) - Sandia

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M-06-00 Schedule

▼ = Completed Milestone



SINGLE-SHELL TANK CHARACTERIZATION

MILESTONE M-10-00

Paul Hernandez - USDOE/RL

John Propson - WHC

Single-Shell Tanks Unit Managers Meeting

**August 6, 1992
Richland, Washington**

SINGLE-SHELL TANK CHARACTERIZATION MILESTONE M-10-00

TOPICS

- **Accomplishments**
- **Near-Term TPA Milestones**
- **Hard Salt Cake Sampling Capability - Update**
- **Near-Term Sampling Schedule**
- **Issues and Concerns**
- **Cost Status, M-10-00**

ACCOMPLISHMENTS

- **Initiated envelope testing of hard salt cake sampler**
- **Started installation of equipment and instrumentation on second core sampling truck**
- **Completed core sampling of SST 241-BX-107**
- **TPA Milestone M-10-06 progressing toward successful completion (Potential impact from SY-101 Window "G")**
- **Issued technical reports documenting NPH cleanup development**

NEAR-TERM TPA MILESTONES

NUMBER	MILESTONE	DUE DATE
M-10-06	Obtain 20 core samples from SSTs	September 1992
M-10-13	Restore rotary mode sampling capability at the Hanford Site	September 1992

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HARD SALT CAKE SAMPLING CAPABILITY

UPDATE

HARD SALT CAKE SAMPLING CAPABILITY

- **Completion of R & D and installation of both the hard salt cake sampler and the improved hydrostatic balance system (Milestone M-10-13-T2) has been delayed by additional R & D and design requirements, additional scope, and procurement complexities.**

^{9 2 1 2 6 6 2 1 5 2 7} **HARD SALT CAKE SAMPLING CAPABILITY**

1992 SCHEDULE BASE ASSUMPTIONS

- **Envelope Operation would be Sufficient**
- **Nitrogen Purge would be Small Portable Bottles**
- **Purge Gas Impact to Tank Vapor Space would be Minimal**
- **Universal Bit and Sampler would be a "Design and Build" Activity (no R&D)**
- **Training/Operation for Universal Sampler System would be Similar to Push Mode Sampler - Shortened Training Time**
- **Instrumentation would be Limited to Alarms and Relays (no PLC's or Interlocks)**

^{9 2 1 2 6 5 2 1 5 2 8} **HARD SALT CAKE SAMPLING CAPABILITY**

MID-COURSE SCHEDULE AND SCOPE CHANGERS

- **Envelope Operation Method Questioned**
 - Added Scope to Review Direct Temperature Monitoring of Drill Bit
 - Expanded Envelope Testing - Gain Statistical Support
- **Additional Research and Development**
 - Sampler Design Change in Springs, Seals, and Latches
 - Extensive Bit Testing w/Purge Gas Concept
 - Centering Device
- **Additional Design Requirements**
 - Purge Gas
 - Grapple Box - ASME (Code 8)
 - Shielded Receiver - ASME (Code 8)
 - Ventilation
 - PLC and Emergency Interlocks
- **Vendor Dates - Unforeseen Long Lead Tasks**

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HARD SALT CAKE SAMPLING CAPABILITY

EXPEDITING ACTIONS

ITEM	ACTIONS
SHIELDED RECEIVER	<ul style="list-style-type: none">● EMERGENCY PROCUREMENT● PART-TIME ENGINEER AT VENDOR
ENVELOPE TESTS	<ul style="list-style-type: none">● REVIEWING TO STREAM LINING TEST PROCEDURE● CONSIDERING SECOND SHIFT (MANPOWER)
SYSTEMS TESTS (ATP)	<ul style="list-style-type: none">● CONSULTANT TO ASSIST IN ATP AND OTP PROC
GRAPPLE BOX	<ul style="list-style-type: none">● OVERTIME DESIGN WORK● EMERGENCY PROCUREMENT● ENGINEER AT VENDOR
UNIVERSAL SAMPLERS	<ul style="list-style-type: none">● CHANGING TUBING MATERIAL TO REDUCE PROCUREMENT TIME● VENDOR ENGINEERING/FABRICATION SUPPORT, ADDITIONAL SUPPORT ON SPECIFICATIONS
MODULAR EXHAUSTER	<ul style="list-style-type: none">● ACCELERATED SCHEDULED REFLECTED REVIEWING BY-104 WORK AROUND EXAMINING PERMIT NEEDS● ACCELERATING VAPOR SPACE SAMPLING DEVELOPMENT
INSTRUMENTATION	<ul style="list-style-type: none">● ADDED ENGINEERING AND DRAFTING SUPPORT FOR PLC
ISOLATION VALVES	<ul style="list-style-type: none">● INITIAL INSTALLATION AT TEST FACILITY
PURGE GAS SUPPLY	<ul style="list-style-type: none">● EMERGENCY PROCUREMENT CARBON STEEL ALTERNATIVES

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HARD SALT CAKE SAMPLING CAPABILITY

DEVELOPMENT STATUS

- **Critical Procurements 70% Complete**
 - **Shielded Receiver**
 - **Nitrogen Purge**
 - **Instrumentation**
- **Critical Procurements Remaining**
 - **Grapple Box**
 - **Ventilation System**
- **Drill bit and Sampler Prototype Testing Successfully Completed**
- **Operating Envelope Concept Tested Successfully**
- **Operational Safety Review Initiated**

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NEAR TERM SAMPLING SCHEDULE

FY 1992 Core Sampling Milestone (M-10-06) 20 cores

Sampling actions completed through June 30, 1992 13 cores

Scheduled sampling actions*

○ **July 1992 241-S-104 3 cores**

○ **August 1992 241-C-109 3 cores**

○ **September 1992 241-T-107** 1 core**

TOTAL through September 30, 1992 20 cores
=====

***Possible conflict with Window "G"**

****Sampling plan includes 3 cores**

ISSUES AND CONCERNS

ISSUE / CONCERN

Hard Salt Cake Sampling Milestone M-10-13-T2 (6-92) has been missed and M-10-13 (9-92) is not achievable due to expanded scope of the development.

CORRECTIVE ACTION

WHC has submitted a milestone schedule and funding change request to DOE-RL for further action. Formal TPA change procedures are required.

ISSUE / CONCERN

Vapor space sample data rejection has jeopardized modular exhauster development, a necessary element of rotary mode, hard salt cake, sampling operation.

CORRECTIVE ACTION

Re-establish and expedite exhauster development to a criteria based on the information currently available.

ISSUES AND CONCERNS

ISSUE / CONCERN

Current laboratory throughput is unable to keep pace with the TPA sampling schedule.

CORRECTIVE ACTION

Procedural and processing problems have been identified. The necessary personnel and equipment requirements have been determined to enable the laboratories to maintain schedule.

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COST STATUS M-10-00

(\$ X 1000)

	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>COST VAR</u>	<u>SCHEDULE VAR</u>	<u>BAC</u>	<u>EAC</u>
FYTD	15,773.3	13,279.5	16,253.3	(2,493.7)	(2,973.7)	21,801	23.7

Cost Variance Explanation

Costs associated with the hard salt cake sampler development efforts have been greater than originally estimated due to the emphasis on direct drill bit temperature monitoring, expanded testing on proof of concept, and the review of alternative sampling methods. Further, an increased emphasis on core analysis has accelerated associated costing.

Schedule Variance Explanation

Multiple changes to the 101-SY Analytical Chemistry Plan caused a severe core analysis schedule slippage. The required changes were due to uncertainty of tank contents. Hard salt cake sampler development schedule variance has been caused by extended procurement and manufacturing times for critical equipment, and the need for additional testing work on the sampler and drill bit.

necessary, a qualified engineer, hydrogeologist, or other expert, with experience and expertise in hazardous waste management, hazardous waste site investigation, cleanup, and monitoring.

94. Throughout all sample collection, preservation, transportation, and analyses activities required to implement this Agreement, DOE shall use procedures for quality assurance, and for quality control, in accordance with approved EPA methods, including subsequent amendments to such procedures. The DOE shall comply with the "Data Quality Strategy for Hanford Site Characterization" (as listed in Appendix F of the Action Plan) and Sections 6.5 and 7.8 of the Action Plan. For special circumstances, other procedures approved by the lead regulatory agency may be used. The DOE shall use methods and analytical protocols for the parameters of concern in the media of interest within detection and quantification limits in accordance with both QA/QC procedures and data quality objectives approved in the work plan, RCRA closure plan or RCRA permit. The EPA or Ecology may require that DOE submit detailed information to demonstrate that any of its laboratories are qualified to conduct the work. The DOE shall assure that EPA and Ecology (including contractor personnel) have access to laboratory personnel, equipment and records related to sample collection, transportation, and analysis.

ARTICLE XXXI. CREATION OF DANGER

95. If any Party determines that activities conducted pursuant to this Agreement are creating a danger to the health or welfare of the people on the Hanford Site or in the surrounding area or to the

environment, that Party may require or order the work to stop. Any such work stoppage or stop work order shall be expeditiously reviewed by all Parties after its initiation. Any dispute or nonconcurrence shall be immediately referred to the DRC level of the appropriate Dispute Resolution process.

96. If the other Parties concur in the work stoppage, DOE's obligations shall be suspended and the time periods for performance of that work, as well as the time period for any other work dependent upon the work which was stopped, shall be extended, pursuant to Article XL (Extensions) of this Agreement, for such period of time equivalent to the time in which work was stopped, or as agreed to by the Parties.

ARTICLE XXXII. REPORTING

97. DOE agrees it shall submit to Ecology and EPA quarterly written progress reports which describe the actions which DOE has taken during the previous quarter to implement the requirements of this Agreement. Progress reports shall also describe the activities scheduled to be taken during the upcoming quarter. Progress reports shall be submitted by the forty-fifth (45th) day of each quarter following the effective date of this Agreement. The progress reports shall also include a detailed statement of how the requirements and time schedules set out in the attachments to this Agreement are being met, identify any anticipated delays in meeting time schedules, include the reason(s) for the delay and actions taken to prevent or mitigate the delay, and identify any potential problems that may result in a departure from the requirements and time schedules.

Distribution

9 2 1 2 6 6 2 1 5 3 7

Guy E. Bishop, RL, R2-62
John M. Clark, RL, A4-02
Paula Clark, RL, A5-21
Jim Davis, RL, A5-21
Carolyn Haass, SWEC, A4-35
Vernon Hall, WHC, L4-88
J. Mark Henderson, WHC, S4-55
Paul Hernandez, RL, A4-02
Mike Hughes, WHC, L4-88
Gene Kosiancik, WHC, T6-16
Jake Laws, WHC, H4-57
Toby Michelena, Ecology
Catherine Louie, SWE, A4-35
Mike Mahaffey, WHC, L4-73
Scott McKinney, Ecology
Robert L. Miller, WHC, L4-88
Richard T. Miller, WHC, H4-57
W. (Bill) C. Miller, WHC, S4-55
Mike Minette, WHC, R2-14
Bruce Nicoll, RL, A5-10
Al Noonan, WHC, R2-18
David B. Pabst, WHC, B2-35
Dale Price, WHC, R2-18
John Propson, WHC, R2-18
Thomas E. Rainey, WHC, R1-49
Richard E. Raymond, WHC, R1-80
Al Sampson, WHC, R2-18
Gene Senat, RL, R2-62
Douglas R. Sherwood, EPA, B5-01
Ed Smith, WHC, B2-19
Curtis Stroup, WHC, H1-61
Sandra Trine, RL, A5-21
George Wilson, WHC, R2-31
Wendell Wrzesinski, RL, A5-16
Jon Yerxa, RL, A5-15
EDMC H4-22

cc: John H. Anttonen, RL A5-10
Paul Day, EPA Region X, B5-01
Ronald Gerton, RL, A4-02
Roger Freeberg, RL, A5-19
Ronald Izatt, RL, A5-19
David Jansen, Ecology
Steven Wisness, RL, A5-19
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