

Meeting Minutes Transmittal/Approval  
Tri-Party Agreement Milestone Review Meeting  
EPA Conference Room  
Richland, Washington  
November 17, 1993

From/ Appvl.: Steven H. Wisness Date: 12/13/93  
Steven H. Wisness, RL (A5-19)  
Hanford Project Manager

Appvl.: D. R. Sherwood Date: 12/13/93  
D. R. Sherwood, EPA (B5-01)  
Hanford Project Manager

Appvl.: Dave Nylander for Date: 12/13/93  
Roger Stanley, Ecology  
Director, Tri-Party Agreement Implementation

Prepared by Appvl.: Frank T. Calapristi Date: 12/13/93  
Frank T. Calapristi  
Westinghouse Hanford Company

DISTRIBUTION

- |                 |     |         |               |       |         |
|-----------------|-----|---------|---------------|-------|---------|
| Austin, BA      | WHC | B2-35   | Nicoll, BL    | RL    | R3-74   |
| Bishop, GE      | RL  | R3-72   | Pabst, DB     | WHC   | B2-35   |
| Calapristi, FT  | WHC | B2-35   | Rainey, TE    | WHC   | R4-02   |
| Defigh-Price, C | WHC | R2-31   | Sherwood, DR  | EPA   | B5-01   |
| Forehand, GD    | WHC | B2-35   | Soler, L      | MACTC | B1-42   |
| Garner, LA      | WHC | R2-54   | Stanley, R    | ECO   | Olympia |
| Gasper, KA      | WHC | R2-08   | Stevenson, MW | WHC   | B2-35   |
| Hernandez, PR   | RL  | R3-72   | Wisness, SH   | RL    | A5-15   |
| Kendall, BA     | WHC | B4-08   | Wodrich, DD   | WHC   | R2-85   |
| Konzek, GR      | RL  | R3-73   | Yerxa, JK     | RL    | A5-15   |
| McKinney, S     | ECO | Olympia | EPIC          | WHC   | H6-08   |



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

**1. TWRS Overview**

The presentation was made by D. Wodrich (Attachment 1). The opening discussion focused on the TWRS flow diagram which described a proposed Strategy. Roger Stanley stated that comments received at public meetings dealt with the TWRS schedule, but there was no significant discussion on changing the strategy.

During the High Level Waste discussion, Don Wodrich discussed the use of the FLOUR-DANIEL subcontractor for site and facility layouts in order to take advantage of their experience in facility design. When discussing Low Level Waste, Roger Stanley asked about Grout staffing requirements for cold standby. Ken Gasper said WHC is in the process of destaffing and transferring personnel; and they would have to obtain this information.

**Action: Provide Ecology and EPA with staffing plans for Grout cold standby.**

**Resp.: Don Wodrich Due: December 13, 1993**

In reviewing of the TWRS Baseline Development, Roger asked for a status of each milestone, even though some are in transition. Roger was interested in the near term activity and critical path information. Doug Sherwood (EPA) also stressed the need for near term critical path information and suggested the low level waste activity would be a good application. It was reported the FY 1994 Work Plans are due to DOE December 6, 1993 and should provide additional information. This would be followed by a revised baseline, with limited detail, by March 31, 1993.

Management Initiatives underway at DOE and WHC were discussed and it was reported the current capital funding approval cycle may not allow time to obtain funding for the 1997 start of construction of the Low Level Vitrification Plant. This problem is currently being worked by DOE and WHC. This discussion was followed by Roger Stanley stating the need for identifying other out-year issues. There was general agreement on Roger's suggestion, but no proposals were made.

In discussing the FY 1994 Realignment, Don Wodrich reported the TWRS strategy requires more expense and less capital funding; and they were successful in reprogramming IPM and HWVP Capital funds to expense.

Roger asked about the process involved in reprogramming. No information was available at this time but Steve Wisness suggested this would be covered in the upcoming briefing on SMS.

DOE noted there is a problem in holding on to existing line items. This is because the existing scope in the sub-contracts may not agree with the new work scope. The contracts are being reviewed and may include congressional action.

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Tri-Party Agreement Milestone Review  
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2. Tank Safety

The presentation was made by Ken Gasper (Attachment 2). In the opening discussion on the current status of Tank Safety, it was noted there are additional reviews planned to identify all tanks. Roger Stanley asked if the DNFSB was involved? It was stated there was no strong interaction but their activities would be reported in the DNFSB 93-5 report.

There were no additional issues or action items identified.

3. M-10-00 SST Core Sample Analysis

Paul Hernandez made the presentation (Attachment 3) and noted the M-10-00 is transitioning into the M-44-00 milestone.

Under Accomplishments, DOE reported M-44-03 was completed and an Ecology response was requested by January 12, 1994. DOE also reported completion of the Strategy for Tank Historical Data Reports. A summary of recent workshops was distributed (Attachment 3A).

DOE also reported the completion of resource loading for the FY 1994 Integrated Sampling Schedule. Scott McKinney (Ecology) asked for a copy of the schedule, DOE agreed to provide a copy when available.

Under Planned Actions, DOE said it will input data for three High Level Waste tanks into the Tank Characterization Database (TCD). This data will be accessible to the regulators in January 1994 through the Hanford Environmental Information System (HEIS).

Discussion Topics

- DOE informed the regulators they will be having a series of DQO meetings and invited Ecology and EPA to participate. DOE will send meeting invitations, via cc:mail, to Scott McKinney, Megan Lerchen, Dave Einan and Doug Sherwood.
- The response to the DNFSB 93-05 was reviewed and DOE will send a schedule of update meetings to Scott McKinney, Megan Lerchen, Dave Einan and Doug Sherwood.

4. M-05-00 SST Stabilization

The information (Attachment 4) was presented by Guy Bishop.

- Five Issues were discussed and DOE reported the recently negotiated schedules for interim milestones M-41-01 and M-41-09 may be affected by the Stand-Down.
- Under Planned Actions, it was noted not all Tank Farm operators may be qualified by December 1993, however, DOE expects to meet milestone M-41-05.

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Tri-Party Agreement Milestone Review  
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November 17, 1993 (sheet 4 of 4)

DOE also noted they will try to absorb the changes resulting from the administrative hold to the milestone; prior to signing the final agreement.

5. M-31-00 Additional DST's

Glen Konzek made the presentation (Attachment 5) and noted that M-31 will be transitioning to M-42.

Under Special topics, it was reported WHC has received no official direction from DOE on the level of NEPA documentation required for the MWTF (Multi Waste Treatment Facility). DOE-RL has elevated the issue to DOE-HQ and it is currently being reviewed by EH.

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## AGENDA

## TRI-PARTY AGREEMENT MAJOR MILESTONE MANAGEMENT REVIEW

WEDNESDAY, NOVEMBER 17, 1993

EPA CONFERENCE ROOM  
MEDICAL DENTAL CENTER

| <u>TIME</u> | <u>MILESTONE</u> | <u>TITLE</u>             | <u>LEVEL 2/3 MANAGER</u> | <u>PRESENTER</u> |
|-------------|------------------|--------------------------|--------------------------|------------------|
| 9:00 am     |                  | TWRS Overview            | D. D. Wodrich            | K. W. Bracken    |
| 9:30 am     |                  | Tank Safety              | J. C. Fulton             | J. C. Fulton     |
| 10:00 am    |                  | BREAK                    |                          |                  |
| 10:15 am    | M-10-00          | SST Core Sample Analysis | C. Defigh-Price          | P. Hernandez     |
| 10:45 am    | M-05-00          | SST Stabilization        | T. E. Rainey             | G. E. Bishop     |
| 11:00 am    | M-31-00          | Additional DST'S         | R. L. Fritz              | G. R. Konzek     |
| 11:15 am    |                  | ADJOURN                  |                          |                  |

ATTENDEES

TPA MILESTONE MANAGEMENT REVIEW

NOVEMBER 17, 1993

EPA CONFERENCE ROOM  
MEDICAL DENTAL CENTER

| <u>NAME</u>             | <u>ORGANIZATION</u>                   | <u>MAILSTOP</u>   |
|-------------------------|---------------------------------------|-------------------|
| <u>F. T. CALAPRISTI</u> | <u>WHC / TPA</u>                      | <u>B2-35</u>      |
| <u>D. DWODRICK</u>      | <u>WHC</u>                            | <u>R2-74</u>      |
| <u>BRUCE NICOLL</u>     | <u>DOE - RL</u>                       | <u>R3-74</u>      |
| <u>[Faded Name]</u>     | <u>[Faded Org]</u>                    | <u>[Faded MS]</u> |
| <u>USA GARRETT</u>      | <u>WHC - TANK FARM</u>                | <u>R2-54</u>      |
| <u>[Faded Name]</u>     | <u>[Faded Org]</u>                    | <u>[Faded MS]</u> |
| <u>MARC STEVENSON</u>   | <u>WHC / TPA</u>                      | <u>B2-35</u>      |
| <u>[Faded Name]</u>     | <u>[Faded Org]</u>                    | <u>[Faded MS]</u> |
| <u>Doug Sherwood</u>    | <u>EPA</u>                            | <u>B5-C1</u>      |
| <u>Steve Wisness</u>    | <u>DOE</u>                            | <u>A5-15</u>      |
| <u>Luis Sotol</u>       | <u>Dames &amp; Moore / GSSX - TPA</u> | <u>[Faded MS]</u> |
| <u>[Faded Name]</u>     | <u>[Faded Org]</u>                    | <u>[Faded MS]</u> |
| <u>Thomas Raney</u>     | <u>WHC / TWR</u>                      | <u>R4-02</u>      |
| <u>David Forchard</u>   | <u>WHC / TPA</u>                      | <u>B2-35</u>      |

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**TRANSITION TO THE  
PROPOSED TANK WASTE REMEDIATION  
SYSTEM STRATEGY**

**-- OVERVIEW --**

**Presented By**

**B. L. Nicoll, US DOE-RL**

**D. D. Wodrich, WHC**

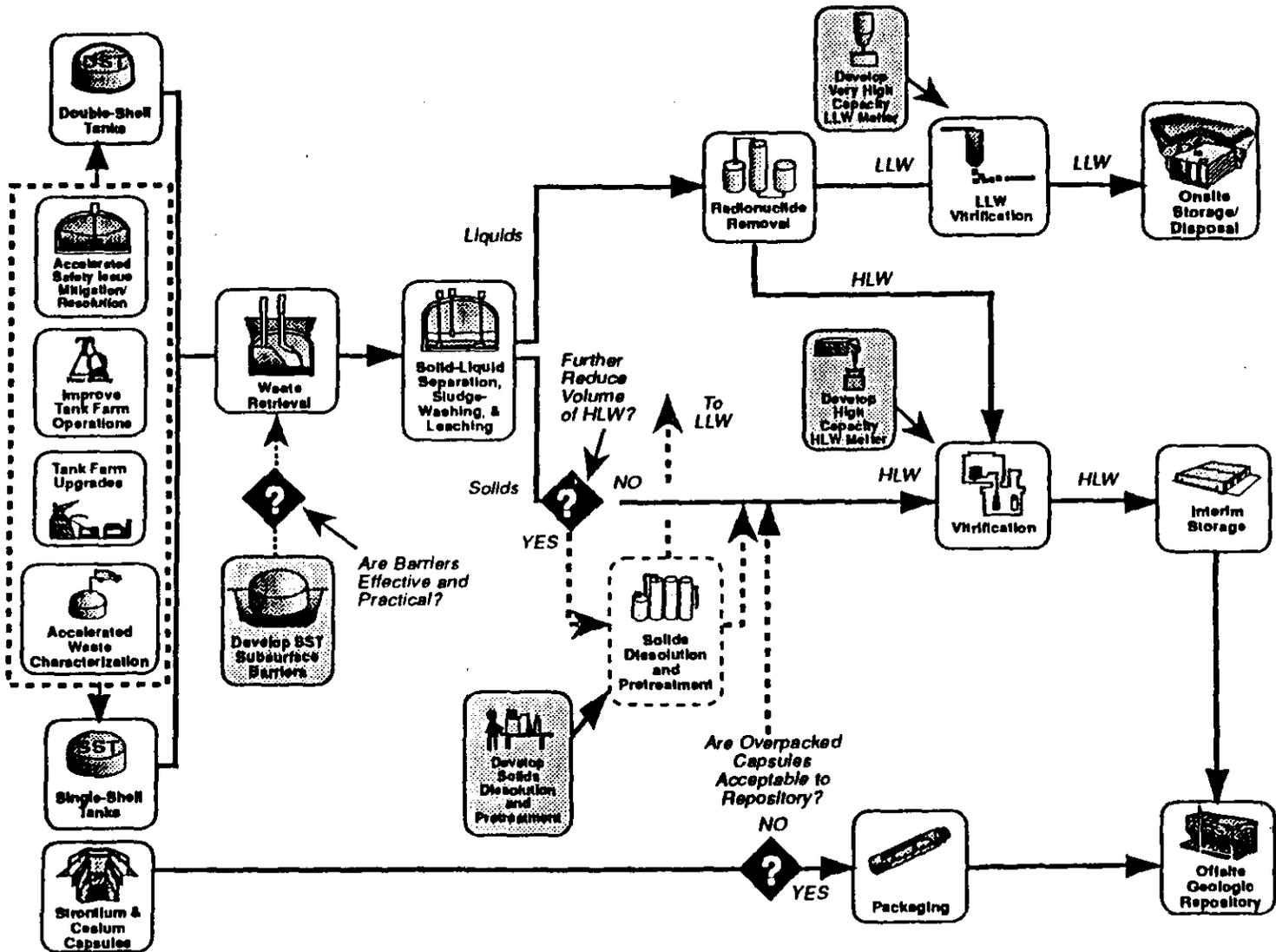
**November 17, 1993**

## **Topics:**

- **Proposed TWRS Strategy, Assumptions and Constraints**
- **Transition Strategy and Status**
- **FY 1994 Budget Realignment**
- **Issues**

# Proposed Hanford Tank Waste Remediation System

DRAFT



## **Assumptions and Constraints**

### **General**

- **Safety initiatives fully funded**  
-Approximately \$32M expense in FY 1994
- **10% productivity challenge commencing in FY 1995**
- **Minimum budget growth through 1997**

### **Pretreatment**

- **Radionuclides will be removed from low-level waste stream to permit construction of low-shielded facility**
- **Enhanced sludge washing primary means to minimize high-level waste volume**
- **Removal process for long-lived mobile radionuclides will be developed**
- **Sludge dissolution and advanced radionuclide removal technology development will continue as contingency**
- **Organic destruction process development will continue**
- **Evaporator to replace 242-A included in pretreatment complex**

## **Assumptions and Constraints (cont)**

### **High-Level Waste**

- **Waste form borosilicate glass**
- **Vitrification facility capacity adequate to vitrify all waste in 20 years**
- **Vitrification facility design to optimize high-level waste containers (e.g., 10 m<sub>3</sub> casks) to reduce cost of repository disposal**
- **High-level waste volume 10,000-20,000 m<sub>3</sub> using enhanced sludge washing pretreatment**

### **Low-Level Waste**

- **Disposed on site; near surface as glass**
- **Grout to cold standby**
- **Vitrification plant will contain two parallel process lines with 100 ton/day capacity**
- **Initial feed double-shell slurry**

## **Assumptions and Constraints (cont)**

### **Retrieval**

- **Waste retrieved from single-shell tanks to extent needed for closure**
- **Sluicing primary single-shell tank retrieval method**
- **Subsurface barriers will be demonstrated and implemented, if practical**
- **Tanks 106-C and 101-SY will be retrieved starting in FY 1998 followed by tank 103-SY in FY 1998/1999**
- **Two new double-shell tanks in December 1997 and four by December 1998**

## **Transition Strategy and Status**

- **Pretreatment**
- **High-level waste**
- **Low-level waste**
- **TWRS Baseline Development**
- **Management initiatives**

## **Pretreatment**

- **The Initial Pretreatment Module mission will shed organic destruction for safety issue resolution, and focus instead on low-level waste pretreatment**
- **Plan to utilize Ebasco/BNFL for low-level waste pretreatment plant design, work is in transition**
- **Near-term emphasis of technology development is on cesium removal and strontium removal for low-level waste pretreatment plant**
- **Emphasis of technology development for high-level waste pretreatment is on water washing, caustic washing, and selective leaching as candidate processes**
- **To minimize program risk, selected backup technologies will be developed for supernatant and sludge treatment (e.g., technetium removal, organic destruction, acid dissolution/solvent extraction)**

## High-Level Waste

- **Stop all HWVP design/construction**
  - complete construction of office facility and supporting utilities
  - received ramp down letter from W/DOE
  - canister storage building construction has been stopped
  - Fluor design team to be down to 50 by January
  
- **Plan to retain Fluor to perform site layouts for new facilities -- need to develop site plan to minimize cost of construction and operations**
  
- **HLW high-capacity melter and process development and engineering**
  - Provide TWRS baseline planning consistent with TPA
  - Provide TWRS Systems Engineering definition for HLW processing and disposal
  - Proceed with technology development on higher capacity melters and process features

## **Low-Level Waste**

- **Grout to cold standby by March 1994**
  - **Performance Assessment has been submitted to DOE, plan to complete**
  - **Safety Analysis Report will be issued to file for future use, if required**
  
- **Development of high capacity vitrification system**
  - **FY-94 planning has been developed**
  - **Facility and storage/disposal concept development underway**
  - **Low-level waste glass workshop held October 1993**
  - **Draft waste feed specification in preparation**
  - **NEPA strategy being developed**

## **TWRS Baseline Development**

- **FY-94 Work Plans**
  - **Resource loaded schedules being rolled up**
  - **Due to DOE December 6, 1993**
  
- **Revised Baseline**
  - **Systems Engineering Based**
  - **Top down logic diagram being developed**
  - **Baseline documents due March 31, 1993**

## **Management Initiatives**

- **DOE & WHC organization changes in work**
- **Contracting methods for new facilities: Evaluating ECA proposal**
  - privatization
  - design/build
- **Reinvent government; specifics not yet defined**
  - streamline procurement
  - NEPA and permitting
  - capital funding approval cycle

# **FY 1994 Budget Realignment**

## **FY 1994 Budget**

- **Proposed TWRS strategy requires more expense and less capital funding**
- **Successful in reprogramming:**
  - **IPM: 16.9M LI plus \$1M CE to expense (\$17.9M)**
  - **HWVP: \$36.6 of LI to \$30.6 expense and \$6M CE**

### **Current Budget**

|                              |                     |
|------------------------------|---------------------|
| <b>Expense</b>               | <b>\$481.3M</b>     |
| <b>Capital Equipment</b>     | <b>50.5M</b>        |
| <b>General Plant Project</b> | <b>2.0M</b>         |
| <b>Line Items</b>            | <b><u>89.8M</u></b> |
|                              | <b>\$623.6M</b>     |

# Tank Waste Remediation System

## Case Beta Estimated FY 1994 Cost Profile

| WBS     | ADS  | Description                          | Operating<br>Funding | Operating<br>Budget (1) | NEW B/A     |            | Line<br>Item | Total        |
|---------|------|--------------------------------------|----------------------|-------------------------|-------------|------------|--------------|--------------|
|         |      |                                      |                      |                         | CENRTC      | G.P.P.     |              |              |
| 1.1.1.1 | 1100 | Tank Farm Operations & Maint.        | 139.4                | 145.0                   | 10.1        | 0.0        | 0.0          | 155.1        |
| 1.1.1.2 | 1110 | Waste Tank Safety                    | 54.5                 | 56.7                    | 19.3        | 0.0        | 0.0          | 76.0         |
| 1.1.1.3 | 1120 | Tank Farm Upgrades                   | 41.3                 | 43.0                    | 6.7         | 2.0        | 15.1         | 66.8         |
| 1.1.1.4 | 1130 | Waste Characterization               | 62.6                 | 65.1                    | 10.8        | 0.0        | 0.0          | 75.9         |
|         |      | <b>Subtotal – W.T.S.&amp;O.</b>      | <b>297.8</b>         | <b>309.8</b>            | <b>46.9</b> | <b>2.0</b> | <b>15.1</b>  | <b>373.8</b> |
| 1.1.2.1 | 1200 | Program Management and Admin.        | 46.6                 | 48.4                    | 0.0         | 0.0        | 0.0          | 48.4         |
| 1.1.2.2 | 1210 | Retrieval                            | 37.5                 | 39.0                    | 3.2         | 0.0        | 9.0          | 51.2         |
| 1.1.2.3 | 1220 | Waste Pretreatment (Incl'g IPM Team) | 41.8                 | 43.5                    | 0.4         | 0.0        | 0.0          | 43.9         |
| 1.1.2.4 | 1230 | L.L.W. Disposal – Grout              | 36.2                 | 37.6                    | 0.0         | 0.0        | 0.0          | 37.6         |
| 1.1.2.5 | 1240 | H.L.W. Disposal – H.W.V.P.           | 20.1                 | 20.9                    | 0.0         | 0.0        | 40.0         | 60.9         |
| 1.1.2.6 | 1260 | Facilities Operations                | 0.0                  | 0.0                     | 0.0         | 0.0        | 0.0          | 0.0          |
| 1.1.2.7 | 1270 | Multi-Purpose Storage Complex        | 0.2                  | 0.2                     | 0.0         | 0.0        | 0.0          | 0.2          |
| 1.1.2.8 | 1280 | New Tanks                            | 1.1                  | 1.1                     | 0.0         | 0.0        | 25.7         | 26.8         |
| 1.1.2.8 | 1280 | Initial Pretreat't Module (Shutdown) | 0.0                  | 0.0                     | 0.0         | 0.0        | 0.0          | 0.0          |
|         |      | <b>Subtotal – Disposal</b>           | <b>183.5</b>         | <b>190.7</b>            | <b>3.6</b>  | <b>0.0</b> | <b>74.7</b>  | <b>269.0</b> |
|         |      | <b>● Total – T.W.R.S.</b>            | <b>481.3</b>         | <b>500.5 *</b>          | <b>50.5</b> | <b>2.0</b> | <b>89.8</b>  | <b>642.8</b> |
|         |      | <b>● Estimated FY 94 Funding</b>     |                      | <b>481.3 *</b>          | <b>50.5</b> | <b>2.0</b> | <b>89.8</b>  | <b>623.6</b> |
|         |      | <b>● Shortfall</b>                   |                      | <b>19.2</b>             | <b>0.0</b>  | <b>0.0</b> | <b>(0.0)</b> | <b>19.2</b>  |

\* ~ 3.8 % Productivity Challenge of \$19.2M Assumed. \$500.5M of Scope performed for \$481.3M.  
 Programs Funding will be 96.2 % of the above referenced budgets

11/09/93

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TWRBMB: BETA94.WK3: REV. 6

1) PNL Technology Development Requirements under Review

## Major FY 1994 Cost Increases/Decreases Resulting from Proposed TWRS Strategy

|  |         |
|--|---------|
| • Grout to Cold Standby                        | -5.0M   |
| • Delay HLW Vitrification Plant                | -49.0M  |
| • Eliminate IPM                                | -41.0M  |
| • Eliminate Multi Purpose Storage Complex      | -5.0M   |
| • LLW Vitrification Melter Development         | + 15.0M |
| • LLW Facility Conceptual Design & Site Layout | + 13.0M |
| • HLW Vitrification Melter Development         | + 15.0M |
| • Pretreatment Plant Conceptual Design         | + 17.0M |
| • Accelerate Safety Initiatives                | + 13.0M |
| • Accelerate 106-C Sluicing                    | + 19.0M |
| • Accelerate Tank Farms                        | + 8.0M  |

## Issues

- **Need a NEPA and regulatory strategy that will meet facility construction milestone commitments**
- **To what extent do radionuclides have to be removed from the low-level waste stream to:**
  - **Assure it is not high-level or TRU waste**
  - **Meet DOE ALARA principles**
  - **Allow low-level waste vitrification facility to be "low shielding"**
- **What degree of retrievability must be maintained in low-level waste storage/disposal?**
- **Cost estimates assume efficiencies based on pretreatment, high-level and low-level waste vitrification facilities in a central complex. Is this practical?**
- **Significant incremental funding required above escalation commencing in FY 1998**
- **Use of Ebasco/BNFL for pretreatment plant design and Fluor Daniel for site and facility layout**

# **Waste Tank Safety Programs Status Proposed M-40 Milestone**

**Presented to  
TPA Milestone Review Meeting**

**Presented by  
K. A. (Ken) Gasper  
Waste Tank Safety Programs  
Westinghouse Hanford Company**

**November 17, 1993**

## **Current Situation**

- **Tank Safety Issues [M-40-00]**
  - **Unreviewed Safety Questions (USQs) declared [M-40-09]**
    - **Flammable gases (USQ)**
    - **Toxic vapor emissions**
    - **Unstable organic and ferrocyanide compounds (USQs)**
    - **Nuclear criticality concern (USQ)**
    - **High heat generation**
  - **Additional reviews to identify all tanks**
  - **Work authorization process cumbersome**

# Secretary of Energy Safety Initiatives

## Improving Tank Farm Worker Safety and Conduct of Operations

- Initiate action that will create lasting and continuous improvements
- Establish plan for recovery from Administrative Hold
- Deploy "hand-picked" teams for key work evaluations
  - Use these teams as models for new standards
- Completed new Tank Farm supervisor training, September 1993 [M-05-17-C]
- Enhance training for subcontractor field personnel
- Complete recertification of Tank Farms operators using new training materials, December 1994 [M-05-17-B]

## **Secretary of Energy Safety Initiatives (cont.)**

### **Streamline Safety Tank Authorization Process**

- **Use safety envelope defined by Interim Safety Basis**
- **Develop a broad-based environmental assessment**
- **Delegate authority to Richland Operations Office**
- **Complete accelerated hazards analysis**

# Secretary of Energy Safety Initiatives (cont.)

## Accelerate Resolution of Tank Safety Issues

- **Flammable Gas**
  - **Complete mixer pump test for tanks 101-SY [M-40-01]**
    - **Evaluate contingency options**
  - **Deploy monitoring equipment in other tanks [M-40-10]\***
  - **Replace vent fan in SY Farm**
  - **Close USQ on SY Farm hydrogen Watch List tanks by March 1995 [M-40-09]\***
  - **Close USQ on tank 103-C flammable liquid organic layer by March 1994 [M-40-09]\***

\* Impacted by Administrative Hold

## **Secretary of Energy Safety Initiatives (cont.)**

- **Tank Vapors**
  - **Proceed rapidly with vapor sampling [M-40-03 & 08]\***
  - **Refine personnel protective equipment needs\***
  - **Deploy monitoring and alarm system, if needed\***
  - **Complete engineering evaluation of alternatives for treatment of 241-C-103 vapors [M-40-07]**
  
- **Organic and ferrocyanide mixtures**
  - **Utilize waste samples and laboratory tests to better define problem\***
  - **Upgrade temperature monitoring systems [M-40-02]\***
  - **Close ferrocyanide USQ by January 1994 [M-40-09]**
  - **Remove liquid organic material from worst case tank (103-C) [M-40-04]\***

**\* Impacted by Administrative Hold**

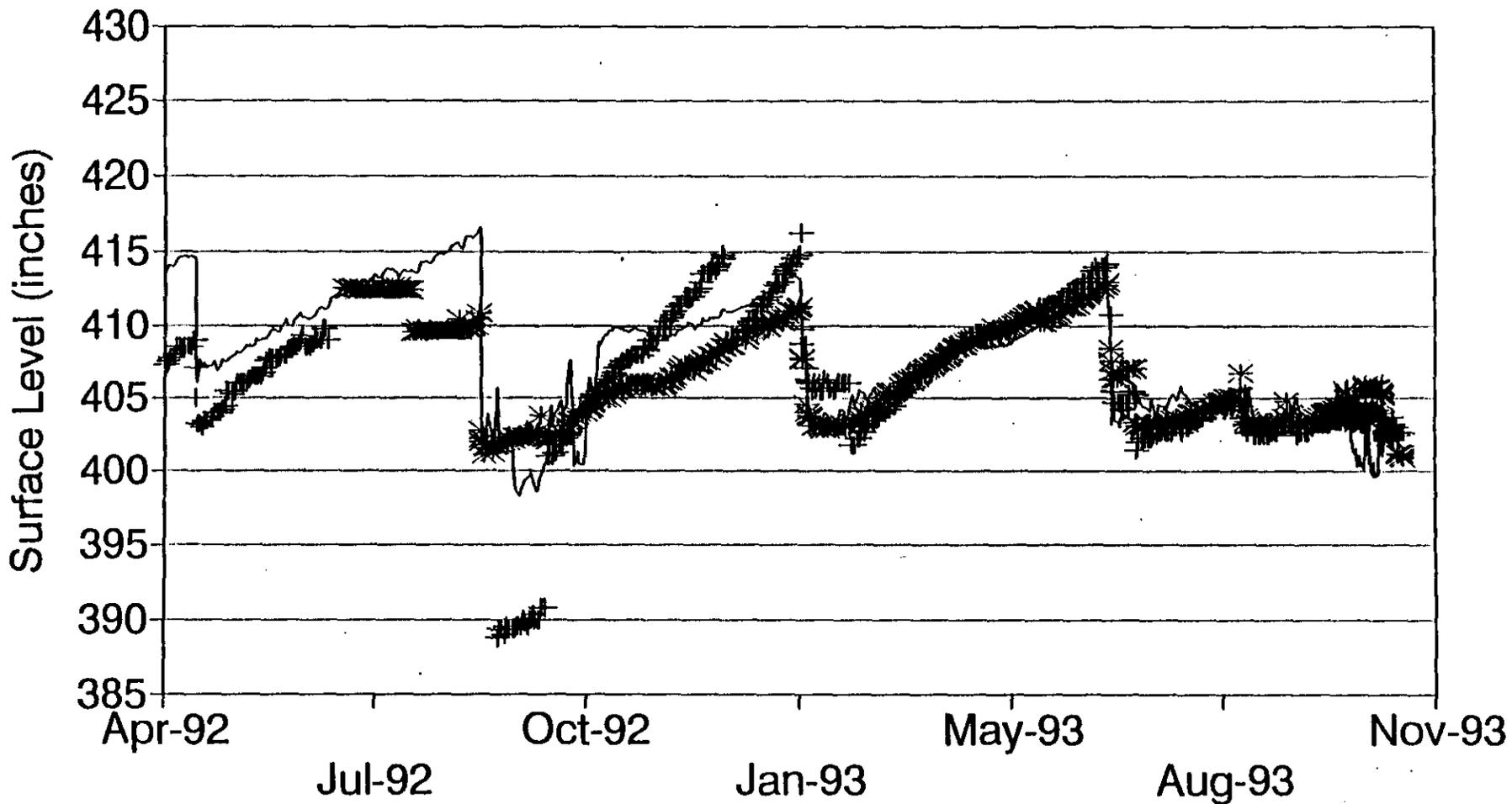
## Secretary of Energy Safety Initiatives (cont.)

- **Criticality**
  - Upgrade tank contents database
  - Issue safety analysis and controls to close USQ by March 1994 [M-40-09]
  
- **High heat**
  - Test contingency cooling methods in tank 106-C [M-40-05]\*

\* Impacted by Administrative Hold

# SY-101

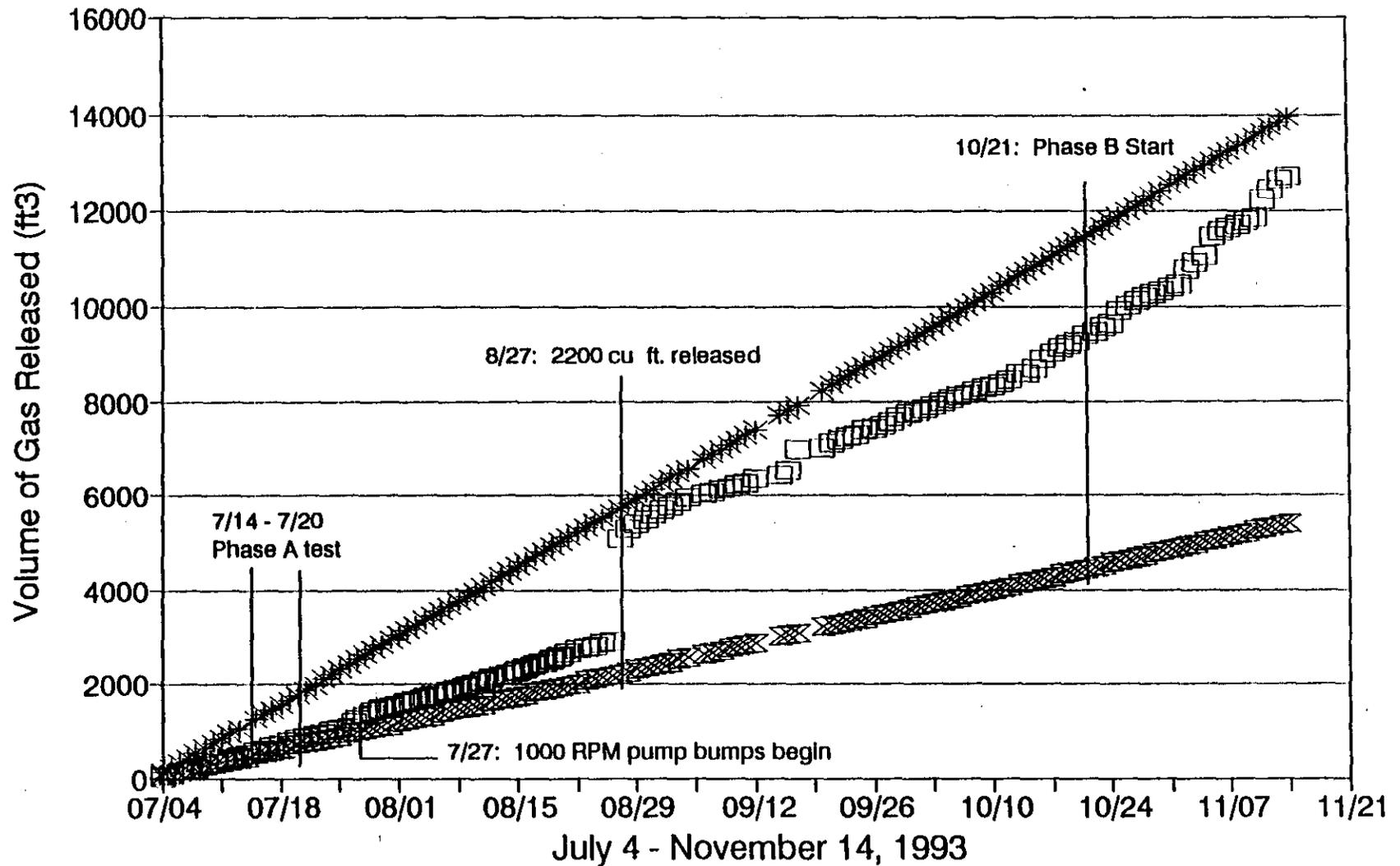
## Surface Level



— Radar      + Manual Tape      \* FIC

# Tank 241-SY-101

## Total Gas Release Since Pump Operation



□ Release Since Pump Operation
 ⊗ Baseline Release (19 ppm H<sub>2</sub>)
 \* Historical Generation Rate

# **SINGLE-SHELL TANK CHARACTERIZATION**

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

**Paul Hernandez - USDOE/RL**

**Cherri DeFigh-Price - WHC**

**Waste Characterization Program**

**November 17, 1993**

## Milestone Description

o M-10-00

The programmatic and regulatory description of Characterization deliverables is currently transitioning from a "Number of Cores per Single Shell Tank" orientation to one of a "Tank Characterization Report" for all tanks. Briefly, the re-orientation of the Program will require the characterization of all waste phases (solids, liquids, and gases) of the Hanford Single Shell (SST) and Double Shell Tanks (DST). The design of the characterization process is directed toward support of the full retrieval of all tank waste.

As a first step in re-orienting the direction of the Program, three of the new Tank Characterization Reports were completed and forwarded to the Regulators for initial evaluation and review on October 29, 1993. This action completed Milestone M-44-03 as scheduled in the pending TPA Change Control Request.

## **Accomplishments (Last three months)**

- **Completed Milestone M-10-07, "Retrieve 7 Core Samples from 3 SSTs and 5 Liquid Grab Samples from 5 DSTs," on Schedule - September 30, 1993.**
- **Completed Proposed Milestone M-44-03, "Submit 3 Tank Characterization Reports for Initial Evaluation and Approval," on Schedule - October 29, 1993. Ecology response needed by January 12, 1994.**
- **Completed resource loading of a FY 1994 Integrated Sampling Schedule which covers Push Mode, Rotary Mode, Auger, and Liquid Grab Sampling as well as the precursory Vapor Sampling of the tank atmospheres.**
- **The Rotary Mode Sampling truck has been relocated from the 620 test pit to the 337 building on October 15, 1993, for modifications, upgrades, and testing.**
- **The specifications and design for the PSA1 Sample Shipping Cask have been completed.**
- **A specific strategy for development of Tank Historical Data Reports has been completed. Detailed workscope has been assigned to LANL for quantitative analysis and LATA/KEH for qualitative data gathering.**

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

- **Other non-field activities supporting tank characterization have continued during the "administrative hold" in preparation for a resumption of Push-Mode Core Sampling. Non-field activities include work package preparation, historical data reviews, Tank Characterization Report preparation, drill bit and sampler fabrication, and other planning activities.**
- **Waste Characterization and Safety Technology hosted an interactive in-depth review of the new characterization strategy with invited stakeholders early in August. Several new initiatives were discussed such as the impact of the "full retrieval" decision, upcoming changes in the renegotiated Tri-Party Agreement, and promising developments in characterization technology.**

## Planned Actions

- **Complete input of Characterization information for 3 HLW tanks to electronic database(s) (TPA M-44-04) - January 31, 1994.**
- **Resume push mode core sampling in both single shell and double shell tanks - February 1, 1994.**
- **Restore Rotary mode Sampling capability to the Hanford Site. (TPA M-10-13) - March 31, 1994.**
- **Complete Historical Tank Content Estimates (HTCE) for 112 waste tanks - March 31, 1994. Note: The 112 tanks represent 2 full quadrants of a geographical distribution of tanks based on process/historical commonalities.**
- **Complete all FY 1992 and 1993 Core Sample Analyses and complete validation of the resulting data (TPA M-44-07) - March 31, 1994.**

# MILESTONE ASSESSMENT

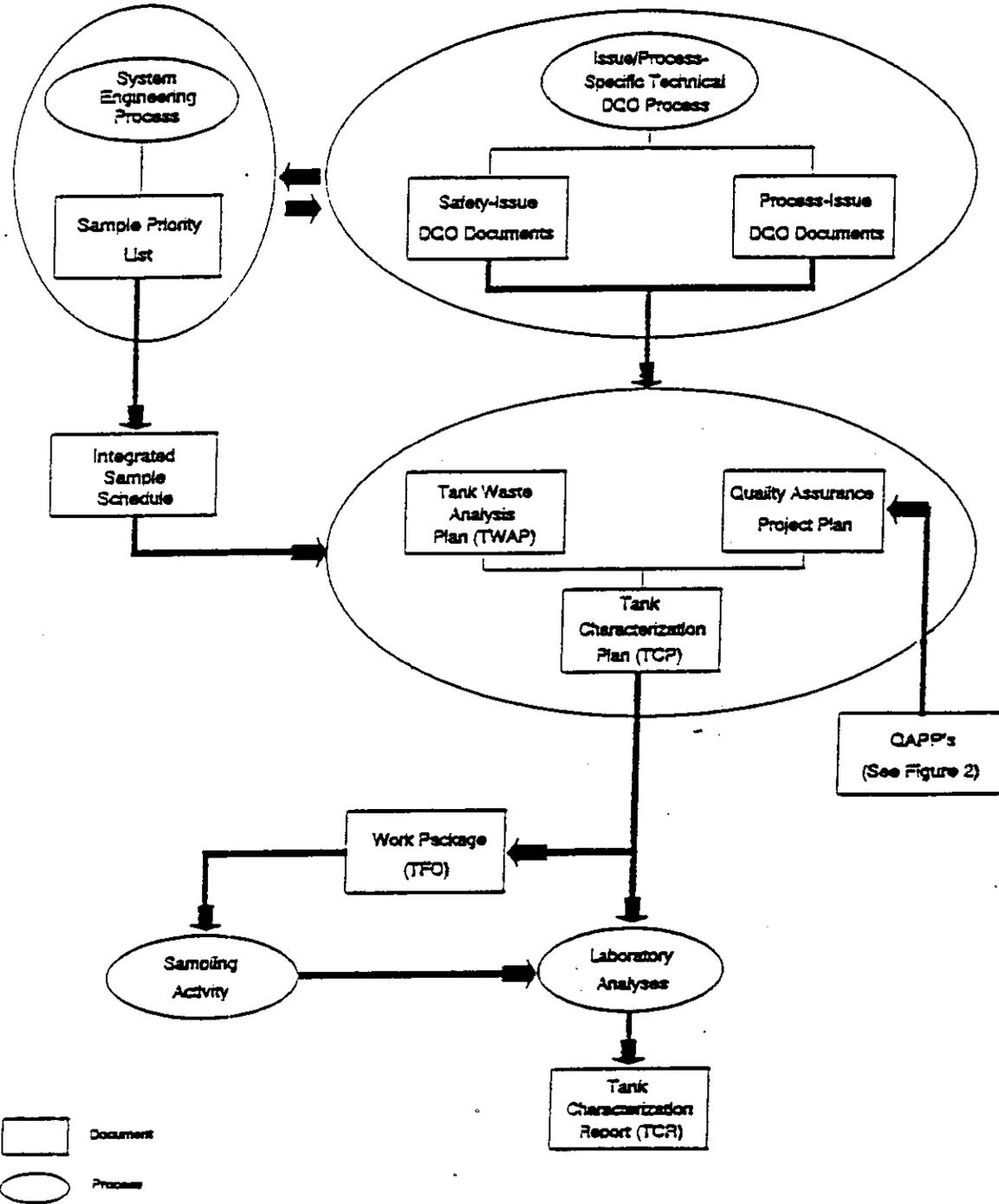
## ● Schedule Performance

- **M-10-07 Retrieve 7 Core Samples from 3 SSTs and 5 Liquid Grab Samples from 5 DSTs - Completed September 30, 1993.**
- **M-44-03 Submit 3 Tank Characterization Reports for Initial Evaluation and Approval - Completed October 29, 1993.**
- **M-44-04 Complete input of Characterization Information for 3 HLW tanks to electronic database(s). Presently on schedule - January 31, 1994.**
- **M-10-13 Restore Rotary Mode Core Sampling capability to the Hanford Site - Presently on schedule - March 31, 1994.**

## **DISCUSSION TOPICS**

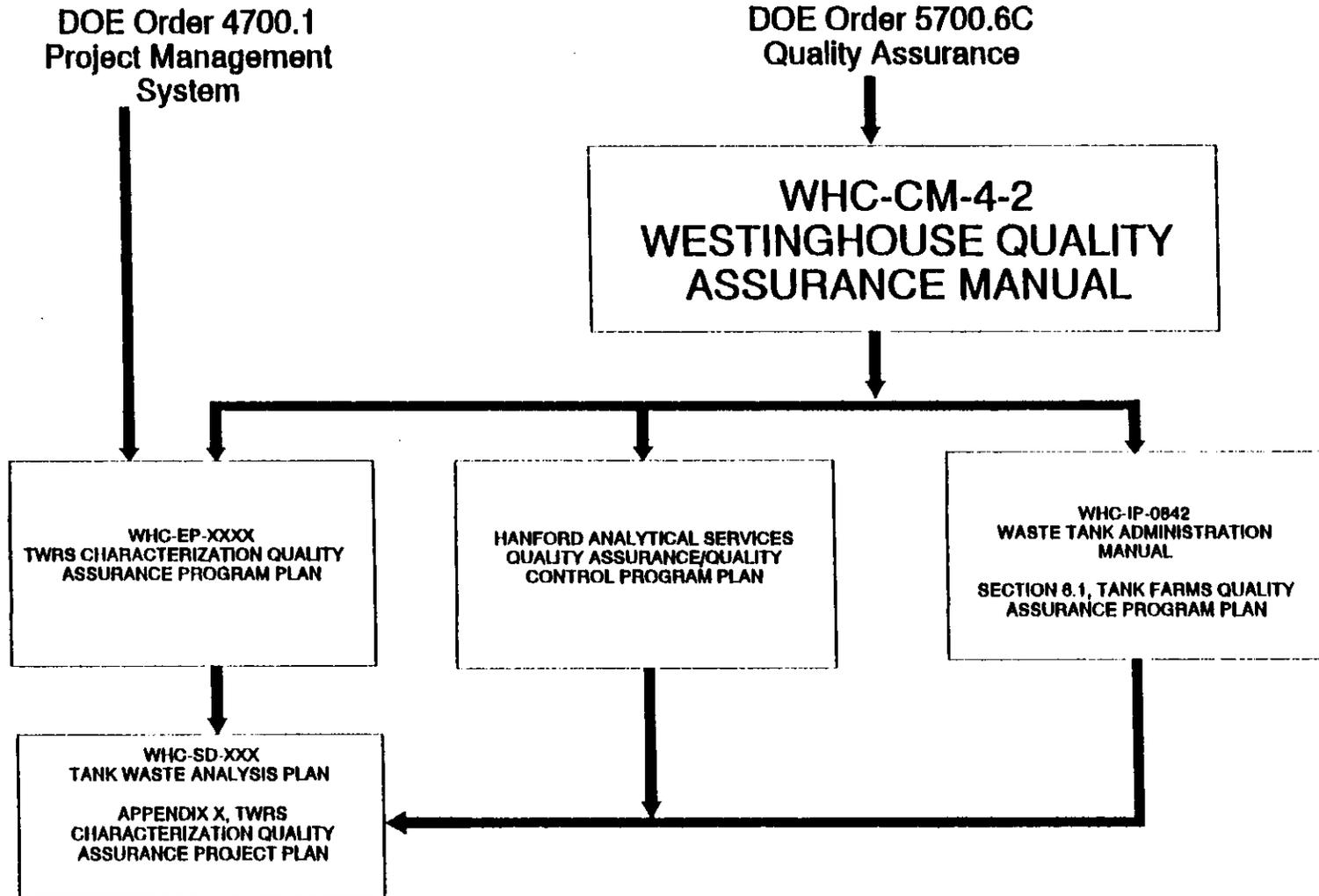
- **DQO Protocol**
- **Update on DNFSB 93-05 response.**

# CHARACTERIZATION DOCUMENT IMPLEMENTATION PROCESS



163074002416

# CHARACTERIZATION QA DOCUMENT HIERARCHY



**DON'T SAY IT --- Write It!**

DATE: November 3, 1993

TO: Utilization of Historical  
Characterization Data Participants:

FROM: Todd M. Brown

R2-12

Telephone: 373-4437

|                    |       |
|--------------------|-------|
| Julian Hill        | R2-12 |
| Bill Cowley        | H4-61 |
| Steve Agnew        | LANL  |
| Ted Noble          | R3-72 |
| Will Pickett       | E6-31 |
| Larry Gaddis       | E6-33 |
| Gloria Bennett     | LANL  |
| Chris Brevick      | G7-01 |
| Louis Jensen       | T6-07 |
| Dan Reynolds       | R2-11 |
| David DeLorenzo    | LATA  |
| Brett Simpson      | R2-12 |
| Jim Toth           | K7-94 |
| Phyllis Baca       | LANL  |
| Anndee Huegel      | E6-31 |
| Pat Heasler        | K7-34 |
| Pat Sathyanarayana | R2-12 |

|                     |       |
|---------------------|-------|
| CC: C. Defigh-Price | R2-31 |
| A. F. Noonan        | R2-12 |
| J. M. Clark         | R3-72 |
| K. Lang             | R3-73 |

**SUBJECT: HISTORICAL CHARACTERIZATION DATA WORKSHOP - SUMMARY**

This letter is intended to summarize the results of the October 26-27 workshop for historical characterization data. The objective of the workshop was to develop a consensus for the outline and approach for writing Historical Tank Content Estimates (HTCE), formally called Historical Characterization Reports. This objective was accomplished in this meeting and a sound approach for producing these HTCEs for all Hanford waste tanks by the end of fiscal year 1994 (FY94) was developed. Minutes from this meeting are attached (see attachment 1).

It was decided that four HTCEs will be produced in FY94. For these HTCEs, all of the Hanford waste tanks will be grouped into four quadrants. These quadrants approximately represent a geographical division of the 200 east and west areas of the Hanford site. These divisions will be made as follows:

- NE Quadrant: A, AX, B, BX, BY, C (66 Tanks)
- SE Quadrant: AN, AZ, AP, AW, AY (25 Tanks)
- SW Quadrant: S, SX, U, SY (46 Tanks)
- NW Quadrant: T, TY, TX (40 Tanks)

6890 1608115

These HTCEs will be produced by a multi-contractor team. These include Westinghouse Hanford Company (WHC), Los Alamos National Laboratory (LANL), Los Alamos Technical Associates (LATA), and Kaiser Engineers Hanford (KEH).

The HTCEs will be divided into two volumes. Volume one is intended to be an executive summary report of the historical tank content estimates and the historical background of the tank. It will be targeted to an audience of regulators, monitors, senior management, and the public. Volume two will provide the detailed information used to support volume one. Corroborating documentation containing the historical data will also be established.

The approach to producing these four quadrant HTCEs involves a concerted group effort from the four contractor teams. A graphical representation of this approach is given in attachment 2. Westinghouse Hanford Company will take a role in coordinating this effort. Los Alamos National Laboratory will supply tank layering information as well as waste type compositions so that the inventory estimates of the tanks may be calculated. The tank layering information will be developed at LANL from the quantitative transaction analysis and from a sedimentation model. The waste type compositions will be compiled by LANL as a separate document. Los Alamos Technical Associates and Kaiser Engineers Hanford will both take a direct role in gathering historical information and data and in writing the final versions of the HTCEs. This will be accomplished by first compiling historical information into a draft report. The tank layering estimate and waste compositions provided by LANL will be used to arrive at an inventory estimate of the tank. A final version of the HTCE reports representing volume two will then be produced by LATA and KEH. Volume one of the HTCE reports will be produced based upon the conclusions of volume two. The current recommended outline for producing HTCEs is given in attachment 3.

Kaiser Engineers Hanford will produce the NE and NW quadrant HTCE reports and LATA will produce the SW and SE quadrant HTCE reports. The NE and SW quadrant HTCE reports will be completed by March 31, 1994 and the NW and SE quadrant HTCE reports will be completed by September 30, 1994.

Other attachments to this letter include:

4. Agenda from Meeting.
5. Meeting Attendance Lists (10/26/93 and 10/27/93).
6. Key Questions to be Resolved at Meeting - list.
7. 241-BY-104 Waste Tank - Riser configuration diagram/tank profile diagram (discussed at meeting).
8. Layout of 241-C Farm on Hanford Site - diagram (discussed at meeting).

A teleconference meeting will be held between representatives from WHC, LATA, KEH and representatives from LANL to further discuss the key issues of historical characterization data and the HTCE reports. The date, time, and location of this teleconference meeting is:

Utilization of Historical Characterization Data - Videoteleconference  
November 19, 1993.

Richland Participants:

8:00 - 12:00

Federal Building - Room 784B

Los Alamos National Laboratory Participants:

9:00 - 1:00

Puye Drive - Building 33 - Room 107

Please send any recommended issues for discussion at this videoteleconference or related document material to me. If you have any questions or concerns regarding this letter, please call me at 373-4437.

T. M. Brown, Engineer  
Analytical Evaluation and Reporting.

TMB

Attachments (8)

9413091.0535

# APPROACH

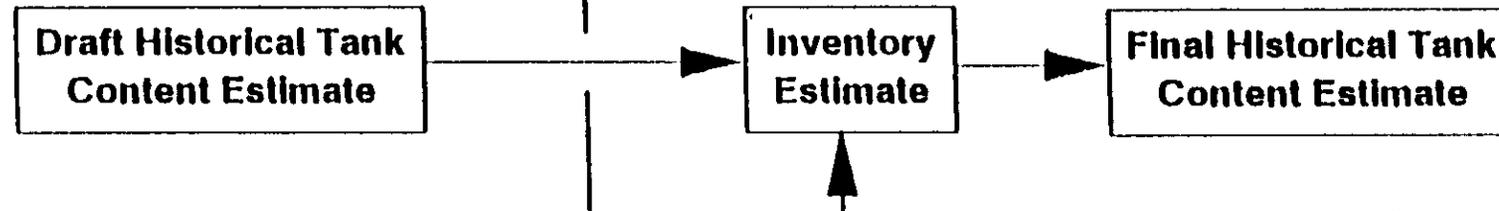
## Westinghouse Hanford Company

Coordination of Historical Tank Content Estimates

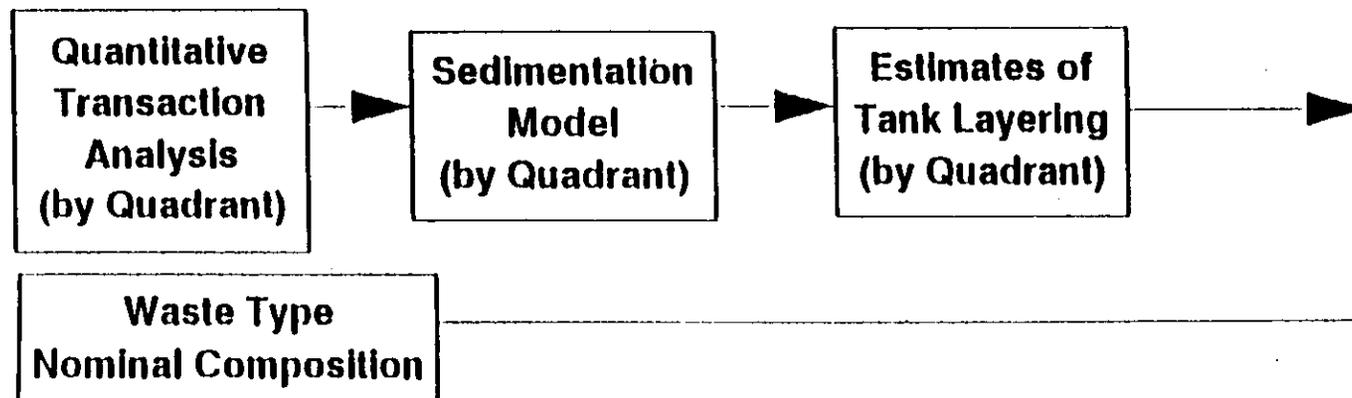
## Los Alamos Technical Associates



## Kaiser Engineers Hanford



## Los Alamos National Laboratories



# Complete Single-Shell Tank Interim Stabilization

Milestone M-05  
(Now M-41)

**G. E. Bishop**  
**Tank Waste Storage Office**

**November, 1993**

9413094.0532

- M-05 (Now M-41) Complete single-shell tank interim stabilization on all tanks except tank C-106 by September, 2000.
- Deliverable Interim stabilization will be considered complete when as much liquid as practical has been removed from the tank. This occurs when the pumping rate drops to .05 GPM. This will leave no more than 5K GAL of supernatant and 50K GAL of interstitial liquid in the tank.

8930-1602115

# ISSUES:

- "Stand-down" imposed on tank farm activities. "Stand-down" will have an impact on the stabilization program.
- PRESENT PROPOSED TPA M-41 MILESTONE STATES:  
This change request identifies an end date of September, 2000 for the major milestone. This is dependent on.... 2) Work commences in the tank farms on October 1, 1993, for interim stabilization preparations, as required by the milestone schedule. During the stand down, in tank farms, schedules for the following interim milestones may be affected: M-41-01, M-41-02, M-41-10, M-41-15, and M-41-16. Every effort will be made to recover the original schedule as specified below.
- SIGNING OF THE RENEGOTIATED TPA SHOULD OCCUR BY JANUARY, 1994. AGREEMENT ON INTERIM STABILIZATION COULD EITHER BE REACHED BEFORE THE SIGNING, OR IMMEDIATELY AFTER IT. BUT,

690760846  
9413094.0039

AGREEMENT MUST BE REACHED BY THE END OF JANUARY. RE-NEGOTIATION OF THE MILESTONES IS NOT REQUIRED FOR THIS.

- PROPOSED TPA MILESTONE M-41-04 STATES: The USDOE shall provide to EPA and Ecology a detailed schedule showing positive and negative impacts of the 1993 tank farms stand down on the interim stabilization program, by November 30, 1993.
- AGREEMENT WAS REACHED DURING THE FINAL PHASE OF NEGOTIATIONS TO THE TPA THAT PARTICULARS OF THE STABILIZATION PROGRAM WOULD BE RE-EXAMINED FOLLOWING DELIVERY OF THIS SCHEDULE.

0450 160E116

# ACCOMPLISHMENTS, LAST 3 MONTHS:

- Obtained agreement in principle for new milestones for the interim stabilization program.
- AGREEMENT HAS BEEN REACHED WITH PARTIES (CHANGE FORM M-05-93-02A) TO EXTEND THE COMPLETION DATE FOR M-05-05 UNTIL JANUARY 31, 1994 (FROM SEPTEMBER 30, 1993.) THUS, AGREEMENT ON DETAILS OF INTERIM STABILIZATION SCHEDULE MUST BE REACHED BY THIS DATE.
- Commenced pumping Tank 241-BX-111 on October 22, 1993.

1457-1608-16

## PLANNED ACTIONS:

- DOE-RL will act as if the agreement in principle for M-41 is now in force.
- Agreement will be reached with regulators on adjustments to the stabilization schedule. MAJOR MILESTONE DATE (SEPT, 2000) WILL NOT BE ALLOWED TO SLIP.
- Complete proposed milestone M-41-04 (November, 1993): Provide to EPA and Ecology a detailed schedule showing positive and negative impacts of the "stand-down" on the stabilization program.
- Complete proposed milestone M-41-05 (December, 1993). Not all tank farm operators may be qualified by end of December, 1993. However, all operators for routines or liquid level monitoring will be fully trained and qualified by this date. RL's position is that this will complete the milestone.
- Complete proposed milestone M-41-02-T1 (December, 1993). Safety Analysis Report currently undergoing approval process at DOE-HQ.

2450-1608146

**PROVIDE ADDITIONAL DOUBLE-SHELL  
TANK CAPACITY**

**MILESTONE M-31-00**

**G. R. KONZEK  
RL, MULTI-FUNCTION WASTE REMEDIATION FACILITY  
PROJECT BRANCH**

**NOVEMBER 17, 1993**

**TPA Milestone M-31-00**

**Provide additional double-shell tank capacity**

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**Open Commitments**

- **None**

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

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**Milestone Description (Current)**

- **M-31-00**      **Provide additional double-shell tank capacity. Construction complete.  
Due 1999**
- **M-31-01**      **Complete Conceptual Design Report -  
for up to four tanks  
Due 09/30/92 (Completed)**
- **M-31-01T**      **Initiate permitting strategy between  
Tri-Party Agreement Signatories  
Due 03/91 (Completed)**
- **M-31-02**      **Recommend additional double-shell tank  
milestone(s)  
Due 09/30/92 (Dispute Resolution)**

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

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**Milestone Description (Current continued)**

- **M-31-02-T1**      **Complete detailed design for first new tanks  
Due 02/95**
  
- **M-31-02-T2**      **Construction start of first new tanks  
Due 10/95**
  
- **M-31-02-T3**      **Provide additional double-shell tank capacity. Construction complete for first new tanks.  
Due 06/99**
  
- **M-31-03**          **Initiate Definitive Design (Complete)**

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

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**Milestone Description (Proposed)****M-31 to be replaced by M-42-00**

- **M-42-00**            **Provide additional double-shell tank capacity. Initiate of "Hot" Operations of the MWTF 200E Area tanks. 12/98**
  
- **M-42-04**            **Initiation "Hot" Operations of the MWTF 200W Area tanks. 02/98**
  
- **M-42-04-T1**        **Initiate Detailed Design of the MWTF 200W Area tanks. 03/94**
  
- **M-42-04-T2**        **Initiate construction of the MWTF 200W Area tanks. 09/94**

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

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**Milestone Description (Proposed continued)**

- **M-42-05**            **Complete construction of the MWTF 200E Area tanks. 09/98**
- **M-42-05-T1**        **Complete the Detailed Design of MWTF 200E Area tanks. 01/96**
- **M-42-05-T2**        **Initiate construction of the MWTF 200E Area tanks. 02/95**

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

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**Accomplishments (Last three months)**

- **Field work for the geotechnical soils investigation was completed for the 200 East Area. The 200 West Area geotechnical work package has been released for bid.**
- **Rebaselining activities to incorporate the 200 West Area tanks, and delete HWVP activities were completed.**
- **The functional review of the Preliminary Safety Analysis Report (PSAR) has been initiated on six chapters.**
- **Reported the overall Material Testing status to the DOE-HQ Tank Structural Integrity Panel (TSIP).**

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

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**Accomplishments (Last three months) (continued)**

- **Initiated an independent review of project functions, design implementations of these functions, project organization to accomplish these functions, and national standards applicable to the project.**
- **The final draft of the System Design Requirements Document (SDRD) was completed. Upon approval of the revised Functional Design Criteria (FDC), the SDRD will be approved.**
- **The draft Plant Acquisition Plan was issued for internal preliminary review.**

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

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

- **Obtain approval on Level 0 Change Request for project rescoping & acceleration**
- **Issue FDC Compliance Report**
- **Issue Fire Hazards Analysis Report**
- **Issue Reliability, Availability, and Maintainability Report**

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

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

- **Complete Draft PSAR**
- **Complete Title I Design\***
- **Initiate Title II Design**

\* Based on proposed rebaseline milestones

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

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**Special Topics****● Concerns**

- **Timely receipt of the HQ approved Baseline Change Proposal has not been forthcoming.**
- **WHC has received no official direction on the level of NEPA Documentation appropriate for the MWTF from DOE.**

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

- **Schedule**

- **M-31-01, Conceptual Design has been completed**

~~03/31/93~~

9/30/92

- **Cost -vs- Budget**

**(Actuals through end of September)**

| Cumulative        | Inception -<br>Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. |
|-------------------|----------------------|------|------|------|------|------|------|
| Cumulative Budget | 15.6                 | 16.9 | 19.4 | 21.6 | 23.7 | 26.1 | 27.3 |
| Cumulative Cost   | 14.4                 | 15.4 |      |      |      |      |      |
| Spending Variance | 1.2                  | 1.5  |      |      |      |      |      |

**Variance Explanation: Result of Title I work**

- KEH did not ramp up as fast as was anticipated.
- Subsurface investigation running behind schedule.

