95-0000022

Department of Energy
Richland Field Office
P.O. Box 550
Richland, Washington 99352

DEC 29 1994

94-CHD-148

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
Suite 700
625 Indiana Avenue, NW
Washington, D.C. 20004

Dear Mr. Conway:

TRANSMITTAL OF WESTINGHOUSE HANFORD COMPANY, CHARACTERIZATION PROGRAM, OCTOBER MONTHLY REPORT, IN ACCORDANCE WITH THE U.S. DEPARTMENT OF ENERGY IMPLEMENTATION PLAN FOR BOARD RECOMMENDATION 93-5.

Enclosed is the Westinghouse Hanford Company (WHC) Characterization Program - October Monthly Report (letter #9458379, with attachment, dated December 16, 1994). This report is being submitted to you to provide information and status on actions associated with the 93-5 Implementation Plan.

Significant accomplishments for the month of October were:

- 20 Tank Characterization Reports were submitted to the U.S. Department of Energy, Richland Operations Office (RL), the Washington State Department of Ecology, and the Environmental Protection Agency; completing the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-44-05. The following tanks were covered by the reports:

  241-AP-101, 241-AP-102, 241-AP-103, 241-AP-105,
  241-AP-106, 241-AP-107, 241-B-110, 241-C-110,
  241-T-104, 241-T-107, 241-BY-107, 241-T-111,
  241-S-104, 241-AW-102, 241-AW-105, 241-AW-107,
  241-T-105, 241-B-111, 241-B-201, 241-T-102.

- The 222-S Laboratory completed and reported analysis work for tank 241-U-106 liquid grab samples, distributed the "136 Day Deliverable for Tank 241-SY-103 Auger Samples; Risers 7A, 14B, and 22A" and submitted the supporting document "95-1 Campaign Evaporator Boildown Results".

- WHC submitted a letter report to RL addressing risk acceptance criteria for the TWRS Characterization Program, an item needed to fulfill the DNFSB 93-5 Implementation Plan Commitment 1.20; further work on this report is being performed.

- The Rotary Mode Core Sampling Truck System (RMCS) has corrected all pre-start punch list items identified from the Operational Readiness Review and has been set up on tank 241-BY-106 to obtain the first scheduled rotary samples.

- A new rotary extruder was installed into the high Level Radiochemistry Facility hot cells at the 325 Laboratory.

- Samples collected and sent to the laboratories for analysis during October include:

  1 auger sample from Tank 241-B-102.
  2 auger samples from Tank 241-BX-105.
  4 liquid grab samples from Tank 241-AN-107.
  4 liquid grab samples from Tank 241-AN-102.
  1 liquid grab sample from Tank 241-AW-104.
  3 grab samples from Tank 241-AW-103.
  3 liquid grab samples from Tank 241-AY-101.
  1 type 3 vapor sample from Tank 241-C-107.

- Tank Characterization Plans (TCPs) approved and released during October include:

  Tank 241-BY-105 (rotary)
  Tank 241-C-105 (push)
  Tank 241-C-103 (push)
  Tank 241-ER-311 (grab)
  Tank 241-BY-106 (rotary)
  Tank 241-BY-103 (vapor)
  Tank 241-BY-107 (vapor)
  Tank 241-BY-108 (vapor)

- TCP revisions released in October included:

  Tank 241-BX-105
  Tank 241-C-108

Problems:

- RL has been informed by WHC that the DNFSB deadline date of October 1995 for completion of sampling and analysis of all watch list tanks; and the DNFSB deadline date of October 1996, for completion of sampling and analysis of all tanks will both be missed, due primarily to difficulties in core sampling delays associated with trucks 2, 3, and 4.

- The 325 Laboratory remains in standdown condition; corrective actions and a walk through are being conducted by 325 Lab Management to address deficiencies identified by the DOE, Independent Review Teams preliminary assessment.

DEC 2 9 1994

- Due to a series of equipment failures the rotary sampling system located in BY Farm has not started taking waste samples.

- The commitment for delivery by September 30, 1994, of the twenty DOE-7A Los Alamos National Laboratories 12B-65 Fiberboard Boxes with Lead Shielded Inner Packaging has been missed; assistance from the U.S. Department of Energy, Headquarters (DOE-HQ) to resolve this issue continues.

If you have any questions please contact me or John M. Clark, Acting Director, Characterization Division, on (509) 376-2246.

Sincerely,

T. R. Sheridan, Acting Assistant Manager
Tank Waste Remediation System

CHD:CAB

Enclosure

cc:
K. T. Lang, EM-362, DOE-HQ, w/encl.
T. J. Kelley, WHC, w/o encl.

Westinghouse
Hanford Company

95:22

P.O. Box 1970 Richland, WA 99352

December 16, 1994

9458379

Mr. J. M. Clark, Acting Director
Characterization Division
Office of Tank Waste Remediation System
U.S. Department of Energy
Richland Operations Office
Richland, Washington 99352

Dear Mr. Clark:

CHARACTERIZATION PROGRAM OCTOBER 1994 MONTHLY REPORT

Attached is the Characterization Program Monthly Report for the month of October 1994. This Monthly Report is to keep you informed of the progress of ongoing activities.

If you need further information, please contact L. L. Holle on 373-9263.

Very truly yours,

T. J. Kelley, Manager
Characterization Program
Tank Waste Remediation System Operations Programs

klh

Attachments (3)

HQ - K. T. Lang
J. Poppiti

RL - C. A. Babel
J. M. Clark
T. Noble
R. O. Puthoff (w/o attachment)

MACTEC - J. P. Haney

PNL - P. G. Eller
P. J. Mellinger

SAIC - H. G. Sutter

Letter # 9458379

Attachment 1

13 Pages

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

November 7, 1994 9453193.10

Mr. J. M. Clark, Acting Director
Characterization Division
Office of Tank Waste Remediation System
U.S. Department of Energy
Richland Operations Office
Richland, Washington 99352

Dear Mr. Clark:

CHARACTERIZATION PROGRAM BIWEEKLY REPORT FOR THE PERIOD ENDING OCTOBER 21, 1994

Attached is the Characterization Program Biweekly Report for the period ending October 21, 1994. This Biweekly Report is to keep you informed of the progress of ongoing activities.

If you need further information, please contact Mr. G. T. Frater on 373-1627.

Very truly yours,

T. J. Kelley, Manager
Characterization Program
Tank Waste Remediation System Operations Programs

klh

Attachments (2)

DOE-HQ - K. T. Lang
J. Poppiti

RL - P. K. Clark
T. Noble
J. R. Noble-Dial
R. O. Puthoff (w/o attachment)

MACTEC - J. P. Haney

PNL - P. J. Mellinger
P. G. Eller

SAIC - H. G. Sutter

CHARACTERIZATION PROGRAM
BIWEEKLY REPORT FOR THE PERIOD
ENDING OCTOBER 21, 1994

SIGNIFICANT ACCOMPLISHMENTS

The Rotary Mode Core Sampling Truck System (RMCS) was deployed to tank farms following correction of pre-start punch list items resulting from the Operational Readiness Review. Extensive training was successfully completed while the items were worked off prior to turning the RMCS over to Operations in October 1994. The RMCS was set up on tank 241-BY-106 for the first scheduled rotary samples to be taken. (WBS 1.1.1.4.2)

The 222-S Laboratory completed and reported analysis work for tank 241-U-106 liquid grab samples on October 17, 1994, twenty-eight days ahead of schedule. Also, WHC-SD-WM-DP-073, Rev. 0, "136 Day Deliverable for Tank 241-SY-103 Auger Samples; Risers 7A, 14B, and 22A" was distributed on October 12, 1994, ten days ahead of schedule. WHC-SD-WM-DP-071, Rev. 0, "95-1 Campaign Evaporator Boildown Results" was submitted to Configuration Documentation on October 10, 1994, for release as a Supporting Document (SD). (WBS 1.1.1.4.3)

PROBLEMS/ISSUES

Performance of routine radiological activities remains on hold at the Pacific Northwest Laboratory's (PNL's) 325 Laboratory, but several significant accomplishments toward restart have been completed.

The U.S. Department of Energy (DOE) Review Team initiated their assessment of the 325 Laboratory on October 18, 1994, and completed the initial phase of the assessment on October 21, 1994. Daily close out meetings were held to facilitate communications between the Review Team and PNL management. The meetings also provided PNL management an opportunity to begin addressing the items identified by the Review Team. The Vacuum Pump Repair Demonstration Project and the Extruder Installation Project were both performed as part of the Review. (WBS 1.1.1.4.3)

DETAILED WORK ACTIVITIES

TECHNICAL INTEGRATION AND PLANNING (WBS 1.1.1.4.1)

Westinghouse Hanford Company (WHC) is in the process of finalizing work priorities within Tank Waste Remediation System (TWRS). It is not known what the final characterization budget will be for Fiscal Year (FY) 1995.

Once the budget is finalized, priority will be given to revising the Defense Nuclear Facilities Safety Board (DNFSB) 93-5 Implementation

Plan. The Characterization Program is reexamining alternatives to accelerate schedules, strengthen technical basis, and expedite analyses. Parallel to this, a select group of senior DOE and WHC staff are working with stakeholders to re-evaluate the current 93-5 strategy. They will be canvassing the data needs for safety screening, operational monitoring, and safety resolution.

WASTE TANK SAMPLING (WBS 1.1.1.4.3)

The work packages for grab samples in tank 241-AY-101 and the type 2 vapor sample in tank 241-T-107 were reviewed for completeness prior to the corresponding field walkdowns in each of the farms. The cognizant engineer for tank 241-AY-101 determined that the three grab samples obtained several weeks ago from 241-AY-101 were adequate to meet information needs and canceled the additional three grab samples scheduled for this tank.

Five changes to the Integrated Sampling Schedule have been approved in the second change request 94-02:

1) 241-BX-102 vapor sample from type 2 to type 3.
2) Rotary sample tank 241-BY-104 changes places on the schedule with rotary sample tank 241-BY-108.
3) Shift Liquid Observation Well (LOW) installation for tank 241-SX-104 to early start of March 24, 1997, and early finish of March 26, 1997.
4) Add a note to 241-AY-102 to obtain 200 ml of sludge.
5) Change the feed tank from 241-AP-101 to 241-AP-107 due to transfer pump problems in 241-AP-101.

On October 9, 1994, certification of two operators, one for ground crew and the other as a field sample operator, was completed. Four operators passed the established requirements for sampling truck certification, three as "ground" and one as "field sample" and qualified on October 12, 1994. On October 20, 1994, two additional operators were certified for "ground" support to perform core sampling.

Weld inspection on October 9, 1994, revealed five suspect welds on the rotary mode core sampling (RMCS) truck shielded receiver. This pushed schedule operator training into the weekend while the Non Conformance Report (NCR) was dispositioned. Three of the welds were repaired, and two were accepted "as is" by Engineering.

The contingency work package to remove the level indicator from a riser in tank 241-BY-106 was started. The tape reel was removed from the spool flange but efforts to loosen the spool piece were hampered by an apparent bond between the spool flange and the riser flange. In the interest of safety, work was suspended to further evaluate the condition and develop a solution rather than apply excessive force to separate the flanges.

The temporary cover over pit 6A on tank 241-BY-106 required a modification for a power cable. A small notch in the edge of the plate was necessary to clear the existing cable entering the pit. An Engineering Change Notice (ECN) was prepared for the addition of the notch. The notch was added and the plate installed in the field on October 12, 1994, enabling the exhauster to be connected for field sampling support.

Further examination and evaluation of the first designated riser, #12B, scheduled for rotary sampling in tank 241-BY-106, revealed a probable cutoff and abandoned thermocouple tree inside the riser. The presence of this old equipment will necessitate going to another tank riser to obtain the first sample.

On October 10, 1994, during a training session, the platform on rotary truck #2 was extended which resulted in stretching a hydraulic hose until it was pulled from the fittings. Approximately one to two liters of fluid was spilled and cleaned up. The hydraulic hose break was a result of being misrouted in August 1994 when an upgraded hydraulic pump and fittings were installed in a maintenance activity. Neither the hose nor the fittings were faulty. Replacement hose and fittings were located and installed and functional testing of the replacements parts were performed. The work package to install the replacement parts provided direction for the correct route which was overlooked in the August pump installation work package. Operations will be conducting a critique for lessons learned on this event.

The RCMS truck and equipment was readied for transport into BY farm on October 11, 1994. The RMCS System ownership has been officially transferred to Operations. Documentation closing out Operational Readiness Review items and Westinghouse Hanford Company (WHC) Engineering structural analysis will follow. There are some minor post startup repair items that remain, and they will continue to be scheduled for corrective work. The area in BY farm around tank 241-BY-106 that will be dedicated for the rotary truck and system equipment setup had been radiologically surveyed and cleaned on October 16, 1994, to meet requirement for "clean" status for easier daily personnel access during the planned rotary sampling activity. The rotary truck has been located over the riser on tank 241-BY-106 in preparation for scheduled sampling. Two corrective items requiring attention have been scheduled. Both items are considered post startup for the RMCS system and will not interfere with truck deployment or sampling in tank 241-BY-106:

1) One of the two propane heaters for the nitrogen purge gas supply has not been firing at times. This has been determined to be acceptable and a Procedure Change Authorization (PCA) to the procedure was issued to permit either one or both heaters to operate during normal operation.
2) Trouble shooting of the Breathing Air Filter (BAC) revealed a problem with the controller. The equipment is under

warranty and therefore, a repair visit by the vendor has been scheduled.

Status of the RMCS System, as of October 17, 1994, included four items requiring correction or evaluation before the truck was released for field deployment:

1) The platform rotation switches operated in the reverse direction. Work package form A J3 to correct this was initiated, and the switches were corrected.
2) An unexplained noise inside the propane tank while operating the liquid valve required consultation and suggestions from the vendor.
3) The lack of nitrogen to the truck prevented three other functional tests from being completed including verifying that the Hoffer flow valve on unit #1 is within 5% of the redundant units shown on the Purge Gas Flow display. The other two items were verifying no leaks on the Purge Gas line and no leaks in the Shielded Receiver line.
4) Evaluation of cable fraying on a portion of the Shielded Receiver Hoist steel cable was made on October 17, 1994. While the observed condition was thought to be minor, the cognizant engineer visually inspected the reported condition and determined that all three hoist cables are fully acceptable.

The above four items were accepted as completed and closed out on October 18, 1994, freeing the truck for deployment.

The first designated riser on tank 241-B-102 for auger sampling was opened for sampling. Use of a zipcord, followed by visual confirmation indicated that only a few inches of liquid waste lay directly below the riser, insufficient for auger sampling. The second riser for this sampling effort had surface mounted instrumentation removed, and the auger sample was obtained on October 16, 1994. As of October 19, 1994, three drums of auger equipment from the completed 241-B-102 auger sampling activity were packed and ready for shipment to PNL for decontamination.

On October 17, 1994, set up on double-shell tank 241-AN-107 in preparation for scheduled liquid grab sampling was completed and four grab samples were taken from the tank on October 18, 1994, and shipped to the 222-S Laboratory on October 19, 1994.

Four liquid grab samples were obtained from tank 241-AN-102 on October 21, 1994. They will be shipped to the 222-S Laboratory early next week.

The push mode sampling truck was moved from the riser in tank 241-SY-103 in 200 West to C farm in 200 East. Necessary accessory equipment had to be moved before the truck could be setup over the designated riser on tank 241-C-103 to begin push sampling. The breather filter and the

carbatrol filter will be removed from the riser over the weekend of October 22, 1994, and the push truck located over the riser on tank 241-C-103 in preparation for sampling.

ANALYTICAL INTEGRATION (WBS 1.1.1.4.3)

A study has been initiated that will evaluate the effects of sample extrusion, homogenization, subsampling, and storage on moisture (percent water) determinations by Thermogravimetric Analyses (TGA). Samples of various core material simulants will be analyzed for water content at each stage of typical hot cell and storage operations. As one of the safety screening analyses, the TGA analysis method has been receiving much attention. Questions have arisen about the degree of error in this analysis due to the sample drying while in the hot cell and in storage. The accuracy of TGA testing will be explored further.

The 222-S Laboratory completed analysis on the liquid grab samples from tank 241-U-106 on October 17, 1994, 28 days ahead of schedule.

Two 20" auger samples from tank 241-BX-105 were received and extruded in 222-S Laboratory hot cells. Recovery on the second auger sample was much improved over the first auger sample -- approximately 319 grams were recovered. This is a 40-50% recovery depending on the sample density.

A draft Tank Characterization Plan (TCP) revision for tank 241-C-108 was received for review and comment. Tank 241-C-108 was sampled by push mode in June 1994. About 20 grams of sample were available to the 222-S Laboratory for analysis. The new sample event will be based on the auger technique, which should improve sample recoveries. To process the data most efficiently, results from the previous push mode sampling event in June 1994 will be incorporated into the auger data analysis package.

The DOE Independent Review Assessment of the 325 Laboratory was initiated on October 18, 1994, and completed the initial phase of the assessment on October 21, 1994. The schedule of the DOE Independent Review Team called for completing the field work by October 24, 1994, after the team members observes the Yttrium-90 activities. The DOE Independent Review Team aligned the completion of their review with the completion of the demonstration project. Daily close out meetings provided a mechanism to facilitate communications and allow 325 Laboratory management an opportunity to address items of concern.

The 222-S Laboratory completed extrusion of the auger sample from tank 241-B-102 (riser #1), received on October 18, 1994, on October 19, 1994. This was the second of two planned 10" auger samples from this tank. Recovery was 45 grams out of a possible approximate 345 grams, depending on the sample density. The auger sampling attempt of tank 241-B-102 was

stopped when it was realized that there was only approximately one-half inch of waste below riser #7.

At the 325 Laboratory, final preparations were made for installation of the new extruder into the high Level Radiochemistry Facility hot cells. Activities included finalization of the installation test instructions, completing the subfloor, positioning the forklift, and performing a dry run of the installation. After successfully completing the dry run exercise and conducting the pre-job meeting, the extruder was installed on October 21, 1994. Installation operations were observed by the DOE Independent Review.

DOE approval was given for the Training and Qualification sessions for laboratory staff to begin before restart at the 325 Laboratory. This will allow staff to be trained and their qualifications demonstrated and approved prior to restart of the laboratory. By initiating this activity now, many, if not all of the 325 Building staff, will be authorized to perform work upon restart.

Between October 12 and October 18, 1994, four new procedures were added to the Analytical Laboratory Procedures (ALP) database, three procedures were updated, and six procedures were inactivated.

Samples from tank 241-BX-105 and tank 241-B-102 were logged into the LABCORE system. These represent the second and third tanks, respectively, for which LABCORE is being used to track the analysis of samples and download the analytical results into a spreadsheet ready for direct incorporation into the final data report.

A review of changes to the tank 241-BX-105 TCP was completed. An ECN is awaiting approval pending identification of laboratory funding to support sample handling, analysis, and shipment for Pretreatment Development. Tank Characterization Plans for 241-BY-105 rotary mode and tank 241-C-105 push mode samples were reviewed.

Two test plans describing the tank sample requirements and the sludge washing procedures for pretreatment development were reviewed and approved by the 222-S Laboratory Program Support. The test plans will allow archived tank samples to be delivered to PNL and Los Alamos National Laboratory (LANL) for studies to aid in tank waste pretreatment development.

Validation is continuing on HC-SD-WM-DP-067, Rev. 0, "222-S Characterization of the Evaporator Slurry Campaign 94-1."

Action to upgrade INEL (now LITCO) to the ready-to-serve mode to support the TWRS tank characterization activities by October 31, 1994, is on target. A draft letter for anticipated completion of this milestone was prepared by WHC Analytical Services for the TWRS Characterization Analytical Integration transmittal to the U.S. Department of Energy,

Richland Operation Office (RL). Completion of this milestone will meet the DNFSB Commitment 5.12.

WHC chemical and radioactive standards were shipped to Lockheed Idaho Technologies Company (LITCO), formerly Idaho National Engineering Laboratory (INEL). Analysis of the standards will signify the start of analytical operations at Idaho in support of the Characterization Program.

The tank 241-AX-102 and tank 241-AX-104 laboratory schedules were signed off late during the week of October 17, 1994. The samples these schedules represent are both auger samples to be submitted for safety screening analysis. A first draft of the tank 241-BY-106 rotary mode sampling schedule has been completed. Activity durations and flow logic must still be provided.

The 222-S Laboratory inorganic group received a 90.5 (out of 100 possible) score for performance on EPA OB4FY94; the organic group received 93.8. This represents the first time both groups have received above a 90% score in the same quarter. No corrective action is required. Samples for both inorganic and organic QB1FY95 have been received. Results for Water Pollution Performance Evaluation were mailed to the U.S. Environmental Protection Agency (EPA) on October 20, 1994.

Quality Control has finished reviewing available data for tank 241-C-108 and tank 241-C-111. Review of tank 241-SY-103 data has begun. To date 20 batches of data have been reviewed.

A meeting was held on October 13, 1994, to discuss issues associated with LABCORE and the Tank Characterization Database (TCD). Several issues that impact the 222-S Laboratory were discussed, including the need to identify which tank data will be sent to TCD through LABCORE and which data will be entered through the EXCEL macro and secondly, whether comments entered into LABCORE should be formal since they will be entered into TCD and will therefore be high profile.

EVALUATION, DOCUMENTATION, AND REPORTING (WBS 1.1.1.4.4)

The Characterization Program transmitted to RL a letter report on the technical basis for characterization of waste. This report, "Characterization Technical Basis," summarized the key elements of the technical basis, provided status on the current level of confidence in each element, and outline the plan for improving the confidence.

A series of meetings among the Characterization Program, Vapor Safety Program, and Quality Assurance resulted in a policy for ensuring that vapor sampling and analysis meets the necessary quality requirements. With this plan established, it was possible to complete the first Tank Characterization Plans for vapor sampling.

Authors of the Tank Characterization Reports (TCRs) met with key technical personnel and stakeholders to review the format and content of the TCRs. The review process will ensure that the future TCRs achieve a consistent high level of quality that meets the needs of the various stakeholders and end users.

Five Tank Characterization Plans (TCPs) were approved and released on October 21, 1994:

Tank 241-ER-311 TCP, Rev 0 (grab)
Tank 241-BY-106 TCP, Rev 0B (rotary)
Tank 241-BY-103 TCP, Rev 0 (vapor)
Tank 241-BY-107 TCP, Rev 0 (vapor)
Tank 241-BY-108 TCP, Rev 0 (vapor)

WHC-SD-WM-DQO-104, "242-A Evaporator/Liquid Effluent Retention Facility Data Quality Objectives" has been released to facilitate decisions to support successful operation of the facility. Characterization program is reviewing the document and will provide concurrence for those sections dealing specifically with candidate feed tanks.

A team from PNL and WHC met on October 11, 1994, to finalize the plan for quantitative integration of historical waste tank information with recent waste tank sample data. Resulting actions are to generate confidence values for the historic contents estimates, implement the data integration process for a few tanks, and then test the output of the process by comparison to a different tank.

ANALYTICAL TECHNOLOGY DEVELOPMENT (WBS 1.1.1.4.6)

A two-day workshop on high level waste analytical methods was held on October 18-19, 1994. The focus of the workshop was to identify potential improvements in the tank waste characterization analytical process at Hanford. Representatives of the U.S. Department of Energy-Headquarters, Westinghouse Savannah River, Martin Marietta Energy Systems (Oak Ridge National Laboratory), Los Alamos National Laboratory, Lockheed Idaho Technologies Company, Center for Process Analytical Chemistry, Argonne National Laboratory, and Westinghouse Hanford Company (WHC) participated. WHC described current analytical techniques and identified apparent shortcomings and potential future needs. The other participants made suggestions to address these problems based on their experience. The Technology Development Office will prepare a summary of the meeting to be used in developing the next revision of the Integrated Technology Plan.

INFORMATION MANAGEMENT (WBS 1.1.1.4.7)

None to report.

TWRS Characterization Program
Defense Nuclear Facilities Board 93-5 Commitments

10/25/94

DNFSB #	Title of Commitment	Due Date	Status (WHC to DOE)
DNFSB 3.1	Init. Construction of 2nd/3rd Rotary Mode trucks	11/30/93	Submitted on 11/1/93
DNFSB 1.21	Ferrocyanide Safety Issue DQO Report	12/15/93	Submitted on 12/31/93
DNFSB 1.21	Vapor Rotary Core DQO Final Draft Report	1/20/94	Submitted on 2/14/94
DNFSB 1.13	Char. Functions/Reqmts in Functional Anal	1/31/94	Submitted on 1/20/94
DNFSB 6.6	Eval. 12 Validated Data Reports for Safety	1/31/94	Submitted on 4/25/94
DNFSB 5.9	Plan to Upgrade INEL Lab	1/31/94	Submitted on 1/31/94
DNFSB 6.3	Initial On-Line Capability (LABCORE-1)	1/31/94	Submitted on 1/31/94
DNFSB 2.2	Safety Screening Module DQO Report	1/31/94	Submitted on 2/23/94
DNFSB 1.21	C-103 Vapor DQO Draft Report	1/31/94	Submitted on 3/25/94
DNFSB 1.21	Organic Safety Issue DQO Report (PNL)	1/31/94	Submitted on 4/29/94
DNFSB 1.7	Streamline DQO Process	1/31/94	Submitted on 12/31/93
DNFSB 6.4	Demon. Offsite Access to TCD/3 HLW Tanks/TCD	1/31/94	Submitted on 1/28/94
DNFSB 1.21	Safety Screening Module DQO	1/31/94	Submitted on 2/32/94
DNFSB 4.2	DOE-RL to Submit a request for DOA to DOE-HQ	1/31/94	Submitted on 1/10/94
DNFSB 3.2	Review Char. Field Proc's/DOE Conduct of Ops	1/31/94	Submitted on 2/28/94
DNFSB 1.8	Release TWRS Characterization QA Plan	2/28/94	Submitted on 2/28/94
DNFSB 1.1	Enhance WHC Char. Program Mgmt Staff	2/28/94	Submitted on 2/28/94
DNFSB 5.11	Dev. Min/Max Lab Capacity Strategy	2/28/94	Submitted on 2/28/94
DNFSB 1.21	Waste Compatibility DQO Report	2/28/94	Submitted on 3/4/94
DNFSB 1.22	Update FY94 Field Schedule to Incorp. New Techn's	2/28/94	Submitted on 2/3/94
DNFSB 3.3	Complete Qualification of First Push-mode Crew	2/28/94	Submitted on 1/26/94
DNFSB 3.5	Complete Training & Qual Reqmts for Sampling Cog	2/28/94	Submitted on 2/24/94
DNFSB 4.1	Issue Approved Broad-based Envir. Assessment	2/28/94	Submitted on 2/28/94
DNFSB 1.21	In-tank Generic Vapor DQO Final	3/03/94	Submitted on 3/7/94
DNFSB 5.10	Plan to Upgrade LANL Lab	3/29/94	Submitted on 3/28/94
DNFSB 1.2	Reduce Number of Mgmt Layers in WHC TWRS	3/31/94	Submitted on 3/24/94
DNFSB 1.6	Define Responsibilities of Key WHC Managers/Char.	3/31/94	Submitted on 3/31/94
DNFSB 5.3	Letter Assessing New Extruder	3/31/94	Submitted on 3/28/94
DNFSB 5.5	Issue Results of Sampler Exchange Phase II	3/31/94	Submitted on 3/31/94
DNFSB 3.7	Complete Qual of First Rotary Mode Crews	3/31/94	Submitted on 3/31/94
DNFSB 3.4	Redeploy PM Core Sampling	3/31/94	Submitted on 3/31/94
DNFSB 3.6	Restore Rotary Mode Sampling (TPA)	3/31/94	Submitted on 10/26/94
DNFSB 1.10	Issue Quarterly Progress Reports (DNFSB/DOE)	4/29/94	Submitted on 5/3/94
DNFSB 1.4	Improve WHC Char Technical Staff Competencies	4/29/94	Submitted on 4/29/94

TWRS Characterization Program
Defense Nuclear Facilities Board 93-5 Commitments

10/25/94

DNFSB #	Title of Commitment	Due Date	Status (WHC to DOE)
DNFSB 6.1	Prepare a Customer Needs Analysis	4/29/94	Submitted on 5/2/94
DNFSB 1.21	Hydrogen Generating DQO Final Report	4/29/94	Submitted on 5/13/94
DNFSB 2.1	DQOs for all 6 Safety Issues	4/29/94	Submitted on 5/13/94
DNFSB 4.3	Delegation of Authority for RL/Safety & Env'l	4/29/94	Submitted on 8/15/94
DNFSB 3.9	Detailed Plans for Acquiring/Training Add'l Crews	4/29/94	Submitted on 4/29/94
DNFSB 1.12	Mgmt Staff Complete Systems Engineering Training	5/31/94	Submitted on 2/15/94
DNFSB 1.9	Plan for Blind Samples	5/31/94	Submitted on 5/24/94
DNFSB 6.2	Issue a Data Mgmt Improvement Plan	5/31/94	Submitted on 5/26/94
DNFSB 1.3	Improve RL Oversight	5/31/94	Submitted on 5/27/94
DNFSB 1.14	Char Portion of Initial Sys Eng Analysis Results	6/30/94	Submitted on 6/30/94
DNFSB 5.6	Evaluate Lab Staff Training	6/30/94	Submitted on 6/30/94
DNFSB 3.15	EEA for In Situ Moisture Monitoring	6/30/94	Submitted on 6/28/94
DNFSB 1.11	Field Schedule for Sampling All Activ's FY95-6	6/30/94	Submitted on 9/26/94
DNFSB 3.10	Qual of 2 Additional Crews/Push & Rotary Trucks	6/30/94	Expected by 11/15/94
DNFSB 3.17	Review Procedures w/Outside Drilling Experts	6/30/94	Submitted on 6/30/94
DNFSB 1.17	Historical Tank Content Estimate Reports/NE/SW	6/30/94	Submitted on 6/28/94
DNFSB 1.10	Issue Quarterly Progress Reports (DNFSB/DOE)	7/25/94	Submitted on 7/21/94
DNFSB 1.21	Pretreatment DQO Draft Report	8/22/94	Submitted on 8/3/94
DNFSB 3.19	Eng'g Eval. of Installing New Risers in SSTs	8/31/94	Submitted on 8/31/94
DNFSB 1.20	TWRS Risk Acceptance Criteria	8/31/94	Submitted on 9/30/94
DNFSB 5.7	Dev. & Implement Training for Laboratory Staff	8/31/94	Submitted on 6/30/94
DNFSB 1.21	HLW Immobilization DQO Draft Report	9/06/94	Submitted on 8/22/94
DNFSB 1.21	LLW Immobilization DQO Draft Report	9/21/94	Submitted on 8/22/94
DNFSB 5.1	Install Core Scanning in Hot Cell	9/30/94	Change Request/delete
DNFSB 5.4	Cyanide Speciation Tech Transfer (PNL)	9/30/94	Change Request/delete
DNFSB 5.8	Procure & Receive 2 PAS-1 Casks (DOE-RL)	9/30/94	Submitted on 8/10/94
DNFSB 3.11	Additional Rotary Mode Core Systems (DOE-RL)	9/30/94	Expected: June 1995
DNFSB 1.16	Historical Tank Layering Models	9/30/94	Submitted on 9/30/94
DNFSB 6.5	Data Loading of 20 Tanks into TCD/(M-44-06)	9/30/94	Submitted on 9/30/94
DNFSB 1.10	Issue Quarterly Progress Reports	10/21/94	Submitted on 10/24/94
DNFSB 5.12	Upgrade INEL Lab to Ready to Serve Mode	10/31/94	Submitted on 10/31/94
DNFSB 3.12	Hire/Train/Qualify 4 Add'l Rotary Mode Crews	10/31/94	Expected: June 1996
DNFSB 1.15	Integrate Vapor Sampling Program into Char. Prgm	10/31/94	Expected: 11/7/94
DNFSB 1.23	Identify 'Bounding Tanks' for Disposal	11/30/94	On schedule

TWRS Characterization Program
Defense Nuclear Facilities Board 93-5 Commitments

10/25/94

DNFSB #	Title of Commitment	Due Date	Status (WHC to DOE)
DNFSB 1.23	Identify 'Bounding Tanks' for Disposal	11/30/94	On schedule
DNFSB 1.21	C-103 Dip Sample DQO	12/16/94	Submitted on 8/31/93
DNFSB 1.21	C-106 High Heat DQO Final Report	12/20/94	Submitted on 1/20/94
DNFSB 1.19	Dev. Stat Tools Necessary/Amnt Samples Need	12/30/94	On schedule
DNFSB 1.10	Issue Quarterly Progress Reports	1/20/95	On schedule
DNFSB 3.16	Direct Drill Bit Temperature Monitoring	1/31/95	On schedule
DNFSB 3.18	Dev. Means for Measuring Complete Sample Recovery	1/31/95	Expected date: TBD
DNFSB 5.14	Two PAS-1 Casks will be ready for use Jan. 1995	1/31/95	On schedule
DNFSB 5.13	Upgrade LANL Lab to Ready To Serve Mode	2/28/95	Proposed to delete
DNFSB 1.18	Historical Tank Content Estimate Reports/NW/SE	3/31/95	On schedule
DNFSB 1.10	Quarterly Progress Reports	4/21/95	On schedule
DNFSB 3.14	Installation of Flammable Gas Monitors	4/28/95	On schedule
DNFSB 3.13	Deploy Prototype Cone Penetrometer	5/31/95	Expected date: TBD
DNFSB 1.5	Implem. Char Program Plan to Improve Staff Compet	5/31/95	On schedule
DNFSB 1.10	Quarterly Progress Reports	7/25/95	On schedule
DNFSB 5.2	Complete Renovation of 325 'A' Hot Cell	9/29/95	Expected date: 4/30/96
DNFSB 1.10	Quarterly Progress Reports	10/20/95	On schedule
DNFSB 2.3	Complete Sampling & Analysis of All Watch List	10/31/95	Expected date: 4/8/98
DNFSB 1.10	Quarterly Progress Reports	1/23/96	On schedule
DNFSB 1.10	Quarterly Progress Reports	4/22/96	On schedule
DNFSB 1.10	Quarterly Progress Reports	7/22/96	On schedule
DNFSB 1.10	Quarterly Progress Reports	10/22/96	On schedule
DNFSB 7.1	Formally Submit Changes to Commitments	As required	As required
DNFSB 7.2	Address Changes to Milestones in Quarterly	As required	As required

Letter # 9458379

Attachment 2

11 Pages

Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

October 21, 1994 9453193.9

Mr. J. M. Clark, Acting Director
Characterization Division
Office of Tank Waste Remediation System
U.S. Department of Energy
Richland Operations Office
Richland, Washington 99352

Dear Mr. Clark:

CHARACTERIZATION PROGRAM BIWEEKLY REPORT FOR THE PERIOD ENDING OCTOBER 7, 1994

Attached is the Characterization Program Biweekly Report for the period ending October 7, 1994. This Biweekly Report is to keep you informed of the progress of ongoing activities.

If you need further information, please contact Mr. G. T. Frater on 373-1627.

Very truly yours,

T. J. Kelley, Manager
Characterization Program
Tank Waste Remediation System Operations Programs

klh

Attachments (2)

DOE-HQ - K. T. Lang
J. Poppiti

RL - P. K. Clark
T. Noble
J. R. Noble-Dial
R. O. Puthoff (w/o attachment)

MACTEC - J. P. Haney

PNL - P. J. Mellinger
P. G. Eller

SAIC - H. G. Sutter

CHARACTERIZATION PROGRAM BIWEEKLY REPORT FOR THE PERIOD ENDING OCTOBER 7, 1994

SIGNIFICANT ACCOMPLISHMENTS

The Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-44-05 was completed on September 29, 1994, with the transmittal of 20 Tank Characterization Reports to the U.S. Department of Energy, Richland Operations Office (RL), for forwarding to the Washington State Department of Ecology and the Environmental Protection Agency. The following tanks were covered by the reports:

241-AP-101, 241-AP-102, 241-AP-103, 241-AP-105, 241-AP-106, 241-AP-107, 241-B-110, 241-C-110, 241-T-104, 241-T-107, 241-BY-107, 241-T-111, 241-S-104, 241-AW-102, 241-AW-105, 241-AW-107, 241-T-105, 241-B-111, 241-B-201, and 241-T-102. (WBS 1.1.1.4.1)

On September 26, 1994, the 222-S Laboratory received letters of instruction and requests for special analysis for the corrosion testing and compatibility analysis of emergency grab samples from tanks 241-AW-104, 241-AW-103, and 241-AY-101. These analyses were requested to resolve any waste compatibility issues associated with the tanks in order to prevent the formation of an unreviewed safety question as a result of improper waste management. The analyses results were requested within fifteen days of receipt of the grab sample. Tank 241-AW-104 grab samples were received on September 28, 1994, and analyses results transmitted to Tank Waste Remediation System (TWRS) on October 3, 1994. Tank 241-AW-103 grab samples were received on September 30, 1994, and three of six 241-AY-101 grab samples were received on October 3, 1994. Analyses of these samples are in process and are expected to be completed within the required fifteen day window. (WBS 1.1.1.4.3)

PROBLEMS/ISSUES

Efforts to obtain twenty DOE-7A LANL 12 B-65 Fiberboard Boxes with Lead Shielded Inner Packaging for transfer from Los Alamos National Laboratory (LANL) to Hanford continue to be unsuccessful. Assistance from the U.S. Department of Energy-Headquarters (DOE-HQ) in resolving this issues continues. The commitment for delivery by September 30, 1994, has been missed. RL issued a memorandum to the U.S. Department of Energy, Albuquerque Operations Office (DOE-AL) requesting expedited transfer of the containers to Hanford. (WBS 1.1.1.4.3)

DETAILED WORK ACTIVITIES

TECHNICAL INTEGRATION AND PLANNING (WBS 1.1.1.4.1)

Mr. Ken Lang representing DOE-HQ met with RL and WHC at Hanford on September 26, 1994, to receive status on 93-5 Implementation Plan commitments. DOE-HQ along with RL counterparts reviewed Tank Characterization Plans and commitments for Fiscal Year 1994 and 1995. Discussion centered around the Data Quality Objective (DQO) capacity. Productivity improvements for sampling, staffing, and laboratory availability were key concerns.

A dedicated Characterization Engineering organization was established to centralize responsibility and responsiveness. Also, realignments and management changes were made in the Operations support area to improve timeliness of work packages and increase efficiency.

WHC informed DOE formally on September 20, 1994, that the two major DNFSB dates (October 1995, Sample/Analyze all watch list tanks and October 1996, Sample/Analyze all tanks) will be missed. This is due primarily to the difficulties in core sampling delays associated with trucks 2, 3, and 4. DOE has directed WHC to prepare a 93-5 Implementation Plan update. A revision is underway; many questions need to be addressed regarding resources available and new strategy.

WASTE TANK SAMPLING (WBS 1.1.1.4.2)

Preparation of riser #7B in tank 241-103-SY, including electrical bonding, was completed on September 23, 1994. This action completed the essential activity before moving the push mode truck over the riser to begin the remaining core sampling on September 26, 1994 swing-shift. On September 26, 1994, upon opening the valve on the sampler containing tank 241-SY-103, core 62, segment #15, approximately 20 ml of liquid squirted out of the sampler, traveled approximately 10-12 in. beyond the end of the sampler and impacted the wall of the 222-S Laboratory hot cell where the extrusion was taking place. TWRS declared an off normal event. Initial research indicated that the Safety Analysis Report for Packaging (SARP) for the cask for transportation of the sample to the 222-S Laboratory limits the gas composition to a maximum of 5% hydrogen. The estimated gas volume in the segment was 33%. WHC Analytical Services evaluated the event in the hot cell and concluded that the event was covered by their existing safety documentation. On September 29, 1994, the work package was suspended halting further sampling from this tank until the issues resulting from the gas pressure within the last extruded push sample from 241-SY-103 have been resolved. Additional sampling of any flammable gas tanks is on hold until the cask safety issues are resolved.

Riser adapter work was performed on tank 241-C-107 in preparation for the heated vapor probe (HVP) installation. The HVP was installed and

the type 3 vapor sample was obtained from tank 241-C-107 on September 29, 1994.

The scheduled liquid grab sample from tank 241-AW-104 was obtained on September 27, 1994.

Three grab samples were collected from tank 241-AW-103 on September 29, 1994, and were shipped to the laboratories on September 30, 1994.

Three of the six planned grab samples from tank 241-AY-101 were obtained on September 30, 1994, and were shipped to the laboratories on October 3, 1994.

The shielded receiver was decontaminated in preparation for the auger sampling from tank 241-BX-105 on September 30, 1994. An auger sample was obtained from tank 241-BX-105 on September 30, 1994, and was shipped to the 222-S Laboratory on October 3, 1994. High winds on October 3, 1994, forced suspension of auger sampling work on this tank. The second of two scheduled auger samples from tank 241-BX-105 was obtained on October 5, 1994, and shipped to the Laboratory on October 6, 1994.

On October 7, 1994, equipment cleanup was performed in the area of tank 241-BX-105 and decontamination of the auger was performed in preparation for the next planned auger sample in tank 241-B-102 during the week of October 10, 1994.

During the walkdown in tank 241-B-102 in preparation for auger sampling, it was discovered that the planned riser showed a 30mr radiation reading. In keeping with ALARA (As Low As Reasonably Achievable), activity was suspended and plans to evaluate an alternate riser or other provisions for safe sampling were initiated.

Further training of individuals on the rotary truck continues in order to establish another full crew trained for sampling truck operations.

Preparation to inspect 22 welds on the shielded receiver frame was completed on October 7, 1994. A non-conformance report (NCR) on five of the welds was written and disposition of the NCR was completed on October 7, 1994. Disposition included repairing three of the welds and accepting as is two of the five welds.

Preparation of tank 241-BY-106 for scheduled rotary mode core sampling is in progress. Two work packages were prepared and ready to work. The primary package will remove the central pit cover blocks and the second work package will remove the level instrument from the riser. The second package is available as a contingency in case wind in the field prevents work on the primary package.

The scheduled riser for rotary sampling in tank 241-BY-106 is suspected to have a plastic sleeve on the inside. Plans to remove and modify the

work package for removal and disposal of the sleeve were initiated. After further evaluation, it appears it was an abandoned thermocouple. Additional risers for sampling are being investigated.

Rotary truck systems #3 and #4, being fabricated in the 300 Area, are continuing. Additional engineering staff, increased from two to five engineers, has been assigned to the team in order to accelerate completion of the two systems. Weekly status meetings are held every Thursday. A preliminary estimate for overall cost and a rebaselined completion schedule is being developed and expected to be available by October 14, 1994.

A sample of the head fluid used in the push mode core sampling process to maintain hydrostatic head in the waste after withdrawing the sampler was sent to the laboratory for analysis.

The review of the On-Job-Training (OJT) checklist for core sampling ground certification was completed. This new certification will make it possible to expedite training of crews on the push and rotary trucks.

ANALYTICAL INTEGRATION (WBS 1.1.1.4.3)

Another in a series of Double-Shell Tank (DST) Waste Analysis Plan (WAP) information meetings was held on October 5, 1994, by TWRS personnel. The meeting was attended by Analytical Services representatives. Progress was made on finalizing the Waste Stream Profile Sheet that waste generators must complete before transferring waste to the DST system. The information required by the form may impact the laboratories since the waste generators would most likely look to the on-site laboratories to provide the missing information.

Two 20" auger samples from tank 241-BX-105 were extruded on October 6, and October 7, 1994. Although the TCP for this tank indicates that four augers were to be taken, only two 20" augers were taken, received, broken down, and analyzed. The TCP for tank 241-BX-105 is being revised to reflect only two auger samples required from this tank. Waste inventory records suggested a waste depth to justify four core samples (2 per riser) but when the tank riser was first opened pre-sampling level measurements showed less waste and only one auger sample could be taken from each riser location. Adequate sample material for analysis was collected, however, recovery was poor, based on the total auger volume. This appears to be due to the nature of the waste material in the tank, which is apparently a thin slurry that fails to adhere to the auger device.

Liquid grab samples from tank 241-AW-104 arrived on September 28, 1994, and were analyzed and the results were submitted to TWRS on October 3, 1994, eleven days ahead of schedule.

A recently installed transformer in the 325 Building basement has been overheating. This issue has been raised to the #1 Priority and whatever resources are necessary will be utilized to address and correct this problem.

The remaining push mode samples (segments #14 and #15) from tank 241-SY-103, riser #14A, were extruded by 222-S Laboratory personnel. Segment #14 was similar in color (grayish brown) and retained its shape after extrusion as did segments #11-#13. Segment #15 consisted of approximately 125 milliliters of dark brown drainable fluid and 10 grams of wet runny solid. During the extrusion of segment #15, when the sampler valve was opened, a portion (approximately 20 milliliters) of drainable fluid spewed out and hit the hot cell wall. The resultant concern related to pressurized gas trapped in the sampler and other concerns has placed continued scheduled sampling of tank 241-SY-103 on hold.

Pacific Northwest Laboratory's (PNL's) 325 Laboratory remains in a standdown but progress toward start up continues.

The prestart action items identified by the PNL Safety Review Council (SRC) during their assessment of facility operations and the prestart action items identified by the DOE Line Review Team have been completed. The RL Operational Readiness Assessment (ORA) is currently scheduled to begin October 17, 1994, with restart approval expected on November 9, 1994.

The mock-up exercise for the installation of the rotary extruder was successfully completed. Preparations for installation of the extruder at the 325 Laboratory are proceeding. The installation is expected to be performed as a demonstration activity during the RL-ORA.

The Task Activity Packages for the resumption of the TWRS 90-day and 180-day characterization activities have been completed and are being reviewed by PNL management. These packages contain information about the operational space in which specific radiological activities are conducted, the approved Safe Operating Procedures, as well as radiological activity-specific documentation (Radiological Control Protocols, Radiological Work Permits, compliance-related training status reports, and Internal/External Dosimetry validations).

The Sample Exchange/Evaluation (SEE) Triad obtained 222-S and 325 Laboratory management approval of the Phase II final report. The Phase III test plan is in final comment and resolution with submittal to management for approval expected by October 14, 1994.

Idaho National Engineering Laboratory (INEL) upgrades progress on schedule for an October 31, 1994, startup to provide safety screening and safety resolution analytical support for characterization. Approximately a dozen deficiencies, identified in the preliminary report

of the Quality Assessment conducted in September, are being tracked and worked off. 222-S Laboratory standards for selected TWRS analytes are being shipped to Idaho for analysis.

A final design review of the LABCORE work list module was held on October 6, 1994. This module, when implemented, will give the chemists the ability to view "on screen" which samples are ready for analysis. The module checks to see if the samples are out of the hot cell and if any needed digestion is done before placing them on the list of samples needing to be analyzed. After development of the formal test case and user acceptance this capability will be placed in production.

Pacific Northwest Laboratory has completed two releases of software enhancements for the Tank Characterization Database ahead of schedule. This completes WHC Key Milestone TW4-94-443.

EVALUATION, DOCUMENTATION, AND REPORTING (WBS 1.1.1.4.4)

A Tank Characterization Plan (TCP) for the push-mode sampling of tank 241-C-103 was reviewed and approved on October 6, 1994. Two core samples are planned for this tank and the samples are to be analyzed per the Safety Screening, Organic, and Interim Pretreatment data quality objective documents. Rapid review and approval was requested by TWRS in light of the planned near-term sampling.

The data for the Tank Characterization Reports has been loaded into the Tank Characterization Database as of September 27, 1994, for the following nine tanks:

241-AP-101, 241-AP-102, 241-AP-103, 241-AP-105, 241-AP-106, 241-AP-107, 241-B-110, 241-C-110, and 241-T-107.

On September 29, 1994, WHC received drafts of the Historical Tank Content Estimate reports for the Northwest and Southeast Quadrants. These two draft reports, WHC-SD-WM-ER-351 and WHC-SD-WM-ER-350, respectively, met the WHC Key Milestone TW4-94-439.

On September 30, 1994, WHC delivered to RL a letter report addressing risk acceptance criteria for the TWRS Characterization Program. The report addressed the four risk acceptance goals that had been communicated to WHC by RL and the role of characterization in meeting these goals. Definition of acceptable risk levels for characterization activities is an important input into the development of Data Quality Objectives. The report fulfills Defense Nuclear Facilities Safety Board (DNFSB) 93-5 Implementation Plan Commitment 1.20. The due date on the Commitment had been extended by RL to September 30, 1994.

Progress reports were delivered on September 30, 1994, by Los Alamos National Laboratory for the Waste Status and Transaction Record Summary

reports on the Northwest and Southeast quadrants, completing WHC key milestone TW4-94-438.

On October 4, 1994, a representative from the Characterization Program attended the Federation of Analytical Chemistry and Spectroscopy Society's 21st Annual Meeting in St. Louis, Missouri. A study on the "Analytical Challenges, Strategies, and Technology Needs for the Hanford Waste Tank Program" was presented.

ANALYTICAL TECHNOLOGY DEVELOPMENT (WBS 1.1.1.4.6)

WHC technical and procurement staff met with Applied Research Associates, Inc. (ARA) to initiate work on testing related to the cone penetrometer system. A purchase order has been issued to begin testing to confirm the viability of obtaining tank waste physical data by using a cone penetrometer system. The results of these tests will be used in deciding whether to initiate design of a system for Hanford tank farm deployment. The original plan was to prepare simulated waste in drums at Hanford and ship it to ARA for the tests. Based on recommendations from PNL and on earlier cone penetrometer work, larger volumes (up to nine feet diameter) of simulant are judged necessary to avoid influences of the container wall. Shipment of the larger volumes of simulant is not practical. A modification to the purchase order was initiated for preparing simulant at the ARA site, and ARA has suggested an alternative which may provide the needed data with smaller volumes. The ARA proposal for the modified test plan is expected about October 12, 1994, for WHC technical review.

The Technology Development Program Office has arranged a workshop on potential analytical process improvements for high level waste October 18-19, 1994, in Salt Lake City, Utah. Representatives of the 222-S Laboratory, 325 Laboratory, INEL, LANL, Oak Ridge National Laboratory, West Valley, RL, and DOE-HQ are expected to participate. Results of the workshop will be used in preparing the characterization input to the Integrated Technology Plan, Revision 2. A letter documenting the results will be issued.

INFORMATION MANAGEMENT (WBS 1.1.1.4.7)

None to report.

CHARACTERIZATION PROGRAM
DNFSB Commitments through September 30, 1994

TYPE	#	TITLE OF MDS	DUE DATE	STATUS (WHC to DOE)	DOE to DNFSB
DNFSB	3.1	Init. Construction of 2nd/3rd Rotary Modattrucks	11/30/93	Submitted on 11/1/93	Nov. 93
DNFSB	1.21	Ferrocyanide Safety Issue DQO Report	12/15/93	Submitted on 12/31/93	
DNFSB	1.21	Vapor Rotary Core DQO Final Draft Report	1/20/94	Submitted on 2/14/94	
DNFSB	1.13	Char. Functions/Reqmts in detailed Functional Anals	1/31/94	Submitted on 1/20/94	6/1/94
DNFSB	6.6	Eval. 12 Validated Data Reports for Safety	1/31/94	Submitted on 4/25/94	6/30/94
DNFSB	6.9	Plan to Upgrade INEL Lab	1/31/94	Submitted on 1/31/94	6/28/94
DNFSB	6.3	Initial On-Line Capability (LABCORE-1)	1/31/94	Submitted on 1/31/94	6/23/94
DNFSB	2.2	Safety Screening Module DQO Report	1/31/94	Submitted on 2/23/94	
DNFSB	1.21	C-103 Vapor DQO Draft Report	1/31/94	Submitted on 3/26/94	
DNFSB	1.21	Organic Safety Issue DQO Report (PNL)	1/31/94	Submitted on 4/29/94	
DNFSB	1.7	Streamline DQO Process	1/31/94	Submitted on 12/31/93	5/27/94
DNFSB	6.4	Demonstrate Offsite Access to TCD/Input 3 HLW	1/31/94	Submitted on 1/28/94	
DNFSB	1.21	Safety Screening Module DQO	1/31/94	Submitted on 2/32/94	
DNFSB	4.2	DOE-RL to Submit a request for DOA to DOE-HQ	1/31/94	Submitted on 1/10/04	N/A
DNFSB	3.2	Review Char. Field Procedures Using DOE Conduct of	1/31/94	Submitted on 2/28/94	
DNFSB	4.1	Issue Approved Broad-based Envir. Assessment	2/28/94	Submitted on 2/28/94	N/A
DNFSB	1.8	Release TWRS Characterization QA Plan	2/28/94	Submitted on 2/28/94	5/26/94
DNFSB	1.1	Enhance WHC Char. Program Mgmt Staff	2/28/94	Submitted on 2/28/94	6/27/94
DNFSB	5.11	Dev. Min/Max Lab Capacity Strategy	2/28/94	Submitted on 2/28/94	6/30/94
DNFSB	1.21	Waste Compatibility DQO Report	2/28/94	Submitted on 3/4/94	
DNFSB	1.22	Update FY94 Field Schedule to Incorp. New Techn's	2/28/94	Submitted on 2/3/94	6/27/94
DNFSB	3.3	Complete Qualification of First Push-mode Crew	2/28/94	Submitted on 1/26/94	6/30/94
DNFSB	3.5	Complete Training & Qual Reqmts for Sampling Coq	2/28/94	Submitted on 2/24/94	6/27/94
DNFSB	1.21	In-tank Generic Vapor DQO Final	3/03/94	Submitted on 3/7/94	
DNFSB	5.10	Plan to Upgrade LANL Lab	3/29/94	Submitted on 3/28/94	6/30/94
DNFSB	1.2	Reduce Number of Mgmt Layers in WHC TWRS	3/31/94	Submitted on 3/24/94	6/30/94
DNFSB	1.6	Define Responsibilities of Key WHC Managers/Chgs	3/31/94	Submitted on 3/31/94	7/12/94
DNFSB	5.3	Letter Assessing New Extruder	3/31/94	Submitted on 3/28/94	
DNFSB	5.5	Issue Results of Sampler Exchange Phase II	3/31/94	Submitted on 3/31/94	6/30/94
DNFSB	3.7	Complete Qual of First Rotary Mode Crews	3/31/94	Submitted on 3/31/94	6/30/94
DNFSB	3.4	Redeploy PM Core Sampling	3/31/94	Submitted on 3/31/94	6/30/94
DNFSB	3.6	Restore Rotary Mode Sampling (TPA)	3/31/94	To be deployed 10/21/94	
DNFSB	1.10	Issue Quarterly Progress Reports (DNFSB/DOE)	4/29/94	Submitted on 5/3/94	5/10/94
DNFSB	1.4	Improve WHC Char Technical Staff Competencies	4/29/94	Submitted on 4/29/94	7/12/94
DNFSB	6.1	Prepare a Customer Needs Analysis	4/29/94	Submitted on 5/2/94	6/23/94
DNFSB	1.21	Hydrogen Generating DQO Final Report	4/29/94	Submitted on 5/13/94	
DNFSB	2.1	DQOs for all 6 Safety Issues	4/29/94	Submitted on 6/13/94	

CHARACTERIZATION PROGRAM
DNFSB Commitments through September 30, 1994

TYPE	#	TITLE OF MDS	DUE DATE	STATUS (WHC to DOE)	DOE to DNFSB
DNFSB	4.3	Delegation of Authority for RL/Safety & Env'l	4/29/94	Submitted on 8/16/94	8/15/94
DNFSB	3.9	Detailed Plans for Acquiring/Training Add'l Crews	4/29/94	Submitted on 4/29/94	6/30/94
DNFSB	1.12	Mgmt Staff Complete Systems Engineering Training	5/31/94	Submitted on 2/15/94	5/25/94
DNFSB	1.9	Plan for Blind Samples	5/31/94	Submitted on 5/24/94	6/15/94
DNFSB	6.2	Issue a Data Mgmt Improvement Plan	5/31/94	Submitted on 5/26/94	5/26/94
DNFSB	1.3	Improve RL Oversight	5/31/94	Submitted on 5/27/94	NA
DNFSB	1.14	Char Portion of Initial Sys Eng Analysis Results	6/30/94	Submitted on 6/30/94	6/30/94
DNFSB	5.6	Evaluate Lab Staff Training	6/30/94	Submitted on 6/30/94	6/13/94
DNFSB	3.15	EEA for In Situ Moisture Monitoring	6/30/94	Submitted on 6/28/94	6/30/94
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DNFSB	3.19	Eng'g Eval. of Installing New Risers in SSTs	8/31/94	Submitted on 8/31/94	9/12/94
DNFSB	1.20	TWRS Risk Acceptance Criteria	8/31/94	Submitted on 9/30/94	
DNFSB	5.7	Dev. & Implement Training for Laboratory Staff	8/31/94	Submitted on 6/30/94	6/13/94
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DNFSB	3.11	Additional Rotary Mode Core Systems (DOE-RL)	9/30/94	Expected date: June 1995	
DNFSB	1.16	Historical Tank Layering Models	9/30/94	Submitted on 9/30/94	
DNFSB	6.5	Data Loading of 20 Tanks into TCD (M-44-06)	9/30/94	Submitted on 9/30/94	9/29/94

CHARACTERIZATION PROGRAM

DNFSB Commitments October 1 through December 31, 1994

TYPE	#	TITLE OF MDS	DUE DATE	STATUS (WHC to DOE)	DOE to DNFSB
DNFSB	1.10	Issue Quarterly Progress Reports	10/21/94	On schedule	
DNFSB	1.15	Integrate Vapor Sampling Program into Char. Prgm	10/31/94	On schedule	
DNFSB	5.12	Upgrade INEL Lab to Ready to Serve Mode	10/31/94	On schedule	
DNFSB	3.12	Hire, Train, and Qualify 4 Add'l Rotary Mode Crews	10/31/94	Expected date: June 1996	
DNFSB	1.23	Identify "Bounding Tanks" for Disposal	11/30/94	On schedule	
DNFSB	1.21	C-103 Dip Sample DQO	12/16/94	Submitted on 8/31/93	
DNFSB	1.21	C-106 High Heat DQO Final Report	12/20/94	Submitted on 1/20/94	
DNFSB	1.19	Dev. Statistical Tools Necessary/Amnt Samples Need	12/30/94	On schedule	

Letter # 9458379

Attachment 3

4 Pages

EXPENSE COST PERFORMANCE

($ In Millions)

11/21/94 11:43 AM

WBS / TITLE	FY TO DATE BUDGET COST WORK SCHED	FY TO DATE BUDGET COST WORK PERF	FY TO DATE ACTUAL COST WORK PERF	FY TO DATE VARIANCE SCHED	FY TO DATE VARIANCE COST	AT COMPLETION (FY) BAC	AT COMPLETION (FY) EAC *	AT COMPLETION (FY) EXPT'D FUNDS FY95 ***	AT COMPLETION (FY) PROJ'D C / O SCOPE	COMMENTS
(1130-0) CHARACTERIZATION										
-WESTINGHOUSE HANFORD COMPANY										
1.1.2.4.1 Tech. Integration & Planning	0.1	0.1	0.1	0.0	0.0	1.4			0.0	
1.1.2.4.2 Tech Developm't & Appl Engr	0.2	0.2	0.2	0.0	0.0	1.9			0.0	
1.1.2.4.3 Field Sampl'g & Measurem't	2.0	1.2	1.0	(0.8)	0.2	24.1			0.0	
1.1.2.4.4 Analytical Integration	1.9	1.1	0.2	(0.8)	0.9	29.8			0.0	
1.1.2.4.5 Data Eval'n & Reporting	0.5	0.5	0.1	0.0	0.4	6.0			0.0	
TOTAL - W.H.C.	4.7	3.1	1.6	(1.6)	1.5	63.2			0.0	
- P.N.L										
1.1.2.4.1 Tech. Integration & Planning	0.1	0.0	0.0	(0.1)	0.0	0.5			0.0	
1.1.2.4.2 Tech Developm't & Appl Engr	0.1	0.1	0.1	0.0	0.0	1.4			0.0	
1.1.2.4.4 Analytical Integration	0.2	0.2	0.1	0.0	0.1	4.2			0.0	
1.1.2.4.5 Data Eval'n & Reporting	0.1	0.1	0.1	0.0	0.0	1.5			0.0	
TOTAL - P.N.L.	0.5	0.4	0.3	(0.1)	0.1	7.6			0.0	
- O.R.N.L										
1.1.2.4.4 Analytical Integration	0.1	0.1	0.1	0.0	0.0	0.5			0.0	
- G.J.P.O										
1130-0 Vadose Zone Monitoring	0.0	0.0	0.0	0.0	0.0	0.3			0.0	

CONTINUED ON NEXT PAGE

* EAC is not available at this time.

*** Expected Funds is defined as total funding guidance expected at fiscal year end (includes anticipated approval of change requests, carryover, reprogramming actions and reserve holdbacks).

EXPENSE COST PERFORMANCE

($ In Millions)

11/21/94 11:43 AM

WBS / TITLE	FY TO DATE					AT COMPLETION (FY)				COMMENTS
	BUDGET COST		ACTUAL COST	VARIANCE		BAC	EAC *	EXPT'D FUNDS FY95 ***	PROJ'D C / O SCOPE	
	WORK SCHED	WORK PERF	WORK PERF	SCHED	COST					
CHARACTERIZATION (CONT'D)										
– I.N.E.L										
1.1.2.4.4 Analytical Integration	0.0	0.0	0.0	0.0	0.0	5.2			0.0	
–L.A.N.L.										
1.1.2.4.2 Tech Developm't & Appl Engr	0.0	0.0	0.0	0.0	0.0	0.3			0.0	
1.1.2.4.5 Data Eval'n & Reporting	0.1	0.1	0.1	0.0	0.0	1.8			0.0	
TOTAL – L.A.N.L.	0.1	0.1	0.1	0.0	0.0	2.1			0.0	
–S.N.L.										
1.1.2.4.2 Tech Developm't & Appl Engr	0.0	0.0	0.0	0.0	0.0	0.6			0.0	
TOTAL 1.1.2.4 (1130)	5.4	3.7	2.1	(1.7)	1.6	79.5	N/A	65.6	0.0	

* EAC is not available at this time.

*** Expected Funds is defined as total funding guidance expected at fiscal year end (includes anticipated approval of change requests, carryover, reprogramming actions and reserve holdbacks).

ISSUES

WBS NO.	DATE IDENT	ISSUE	IMPACT	STATUS
Characterization				
1.1.2.4-27	1/94	Rotary Mode Core Sampling System redeployment schedule has experienced a delay due to mechanical design problems with the grapple box cable shaft and other component failures.	Planned sampling was adjusted to correspond with the late deployment of the rotary truck system.	All pre-start corrective actions for the rotary mode sampling system were completed and the system was released to operations for field deployment. (Issue closed)
1.1.2.4-47	4/94	Many SSTs only have one to three risers available for sampling instrument installations.	Presently, safety initiative and Tri-Party Agreement milestone schedules show instruments (Thermocouple trees (TCs), Liquid Observation Wells (LOWs) installed before the tank is sampled, further reducing the number of available risers.	An integrated sampling schedule has been developed and issued to RL and includes logic to install TCs/LOWs after the tank has been characterized. A study for installation of new risers in single-shell tanks (SST) was completed. The study presents five alternatives ranging in cost. An alternative is being evaluated.

ISSUES

WBS NO.	DATE IDENT	ISSUE	IMPACT	STATUS
1.1.2.4-64	6/94	The 325 laboratory has not restarted radiological work as the latest restart package was not accepted by DOE-HQ and RL. (Refer to issue number 1.1.2.3-57 on pg. XIII-9, for more details).	Radiological activities in the 325 Building continue to be suspended due to the radiation control incidents.	Based on deficiencies identified by the DOE, Independent Review Teams preliminary assessment, corrective actions and a walk through are being conducted by 325 Lab management to address the deficiencies. The DOE Independent Review Team is expected to resume their review on December 2, 1994.
Waste Retrieval				
1.1.2.5-49	4/94	The FY 1995 productivity challenge for Project W-320, 106-C Sluicing, is inconsistent with the project authorization.	Project W-320 cannot be completed within funding constraints, based on engineering estimates.	No productivity challenge will be applied, per pending revised FY 1995 baseline. (Issue closed)
1.1.2.5-71	7/94	Recent events, temperature transients, in Tank 241-C-106 have compounded construction scheduling problems.	Safety Initiative 6D43, "Initiate Sluicing Retrieval of 241-C-106" may be in jeopardy.	All waste intrusion work at 241-C-106 has been suspended by Tank Farm management.