

**Office of River Protection
Tri-Party Agreement Milestone Review Meeting Minutes
February 22, 2005**

0065707

Approval: *Michael A. Wilson*
 Michael A. Wilson, Chairperson (H0-57)
Ecology IAMIT Representative

Date: 6/28/05

Approval: *Matthew S. McGormick*
 Matthew S. McGormick (A5-11)
RL IAMIT Representative

Date: 6/28/05

Approval: *James E. Rasmussen*
 James E. Rasmussen (H6-60)
Chairman and ORP IAMIT Representative

Date: 6/28/05

Approval: *Nick Ceto*
 Nick Ceto (B1-46)
EPA IAMIT Representative

Date: 6/28/05

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Minutes Prepared by: *Eileen J. Murphy-Fitch*
 Approval: *Eileen J. Murphy-Fitch*
 Eileen J. Murphy-Fitch (A4-25)
Klubr Hanford, Inc.

Date: 6/28/05

EDMC

Aromi, E. S.	CH2M	H6-63	Lijek, S. J.	Ecology	H0-57
Bartus, D.	EPA	H0-57	S. Lilligren	NPT	
Bohnee, G.	NPT		Liou W.	ORP	H6-60
Brown, M.	Ecology	H0-57	Lober, R.	ORP	H6-60
Buxbaum, M.E.	FH	B3-53	Long, J.	ORP	H6-60
Caggiano, J. A.	Ecology	H0-57	Louie, C. S.	ORP	H6-60
Castleberry, J.	CH2M	R3-26	Lyon, J.	Ecology	H0-57
Chalk, S.	RL	A7-75	Mauss, B.	ORP	H6-60
Cimon, S.	Oregon		Miller, P.	CH2M	R1-51
Clark, D.	ORP	H6-60	Morrison, R. D.	FH	A4-25*
Cusack, L.	Ecology	H0-57*	Murphy-Fitch, E. J.	FH	A4-25
Dahl, S.	Ecology	H0-57	Navarro, J.	ORP	H6-60
Eschenberg, J.	ORP	H6-60	Nifes, K.	Oregon	
Fick, K.	ORP	H6-60	Parnell, K.	PAC	H6-60
Fort, L.	Ecology	H0-57	Parsons, G. L.	CHG	
Fritz, L.	FH	H8-12	Piippo, R. E.	FH	A4-25
Gallagher, R.	FH	H5-20	Ollinger, S.	ORP	H6-60
Harris, S.	CTUIR		Quintero, R.	ORP	H6-60
Heacock, H.	HAB.		Rasmussen, J. E.	ORP	H6-60
Hedges, J.	Ecology	H0-57	Ramsay, M.	ORP	H6-60
Heggen, D.	Ecology	H0-57	Russell, W.	ORP	H6-60
Henry, D.	ODE		Singleton, D.	Ecology	H0-57
Hertzel, J. S.	FH	A4-25	Skinnarland, E. R.	Ecology	H0-57
Huffman, L.	RL	A5-15	Stevens, A.	ORP	H6-60
Jackson, D. E.	RL	A4-52	Tollefson, K.	CH2M	R3-26
Jackson, G. W.	FH	H5-20	Uziemblo, N. H.	Ecology	H0-57
Jarayssi, M. N.	CH2M	H6-03	Voice, J.	RL	
Jentzen, B.	Ecology	H0-57	Voogd, J.	CH2M	S4-43
Jim, R.	YIN		Yasek, R.	ORP	H6-60
Keggen, D.	Ecology	H0-57	Administrative Record	EDMC	H6-08*
LaMont, P.	ORP	H6-60	*w/Attachments		

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Tri-Party Agreement Milestone Performance

FY 2005 performance was stasured. There are 11 Tri-Party Agreement milestones, 1 Tri-Party Agreement target date and 1 Consent Decree milestone due in FY 2005 and will be completed on or ahead of schedule. Cost and schedule concerns continue; there is an unfavorable schedule variance of \$55.8 million and an unfavorable cost variance of \$73.8 million project to date. Resource constraints, increased respiratory protection requirements, vapor issue mitigation and enhanced work package development and approval, continue to impact ORP critical path workscope. Recovery plans/actions are underway.

M-043-00, Tank Farm Upgrades

Double-shell tank (DST) systems needed to support operation on July 1, 2005, will be compliant with 40 CFR 264/WAC 173-303-640 standards by June 30, 2005 or operated under the conditions of an approved variance. Systems that do not have planned near-term use are addressed through a deferred use list that will be upgraded prior to use.

M-046-00, Double Shell Tank Space Evaluation

DST space scope was tracked to implement four space optimization recommendations and tank space management efforts. Three of the four are complete and one remains (increase fill height). This milestone will be completed on or ahead of the December 31, 2005, due date.

M-047, Complete Work Necessary to Support Acquisition and Phase I Operations of Hanford Site High-Level Radioactive Waste Treatment, Storage and Disposal Facilities

Tri-Party Agreement Interim Milestone M-047-54A, Complete Startup and Turnover Activities for Waste Retrieval and Mobilization Systems for Selected Initial Low-Activity Waste Feed Tank (Other than AZ-101 and AZ-102) was completed 14 months ahead of schedule. Evaporator campaigns follow retrieval activities to manage the DST space; one campaign will be conducted in 2006.

Interim Stabilization (Consent Decree)

Interim stabilization of all 29 SSTs was completed roughly 6-months ahead of schedule. Interim stabilization of 241-S-102 and 241-S-112 are held in abeyance in accordance with the third amendment to the consent decree. Approximately 3,034.3 Kgal of pumpable liquids were removed from SSTs and transferred to DSTs since pumping began in June 1998 (excludes 241-S-102 and 241-S-112).

M-045-00, SST Closure

Completion of the specified near-term SST waste retrieval and interim closure activities, may not be completed by the September 30, 2006, due date (Tri-Party Agreement Milestone M-045-00B). Alternative strategies to meet the September 30, 2006, completion date are in development. The last C-Farm TWRWP was submitted to Ecology along with the SST-wide Data Quality Objective and Sampling/Analysis Plan.

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Tri-Party Agreement Interim Milestone M-045-05A, Complete Initial Waste Retrieval from Tank 241-S-102, may not be completed by the June 30, 2005, due date because the contents are in more of a solid form. Tri-Party Agreement Interim Milestone M-045-15, Interim Completion of Tank 241-S-102 SST Waste Retrieval and Closure Demonstration Project, due March 31, 2006, may not be completed until August 2006 because the 241-S-102 retrieval system was shutdown shortly after startup due to pump screen plugging. EPA approval is needed and a risk Based Disposal Approval is required to recycle the supernatant. Retrieval designs are proceeding at risk assuming recycle of DST supernatant.

Action: Meet with Ecology to review the schedule for U-200 series tanks construction given the impacts resulting from the C-200 series tanks delays.
Actionee: Jeff Lyons/Roger Quinterro

M-045-50, 60 SST Corrective Actions

Lab work continues on the Field Investigation Report for the T, TX, and TY Waste Management Area (WMA). Revisions to the C/A-AX/U Work Plan will be discussed with Ecology in March 2005.

M-023, Tank Integrity and Monitoring

Workscope is on schedule.

M-048-00, DST Integrity Assessment Program

The 241-AP-104 level increase activity underground testing is complete.

In Tank Characterization and Summary

Sampling activities, BBI updates and DQO's were statused.

M-090-00, Complete Acquisition of Facilities for Interim Storage of IHLW and Storage/Disposal of ILAW and M-20 Part B Permits

Progress continues to be made on M-090 series milestones. IDF construction activities were temporarily suspended pending the issuance of an IDF Final status RCRA Permit. A mutually agreeable (Ecology and ORP) path forward for the permit is being implemented. The IDF Permit is projected to be in effect by July 2005. NOD workshops for the IHLW permit are needed to begin in February in support of the proposed revisions to the permitting plan. If resources are obligated to the IDF permitting effort, the IHLW permit NOD workshops may be slowed or delayed. It is anticipated that efforts on the IHLW permit will begin in earnest after the IDF permit enters the 45-day comment period which should be initiated by the end of March 2005.

LDR Assessment Status

A complete assessment of 241-Z-701 was completed in December 2004. The June 30, 2005, assessment of the 242-S and 242-T Evaporators may be in jeopardy due to access concerns. The 242-S and 242-T Evaporators roof inspection which was delayed until August 2005. Post 2006 LDR inspections will no

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longer be included in the ORP Tri-Party Agreement Milestone Review; it will be discussed during the Central Plateau Tri-Party Agreement Milestone Review under Tri-Party Agreement Milestone M-026.

M-062, Complete Pretreatment Processing and Vitrification of Tank Wastes

The Hanford Waste Treatment and Immobilization Plant (WTP) Project is approximately 44 percent complete (based on dollars) through December 2004. Ecology is reviewing permit modifications to reflect the 2+2 melter design and technetium removal in the Dangerous Waste Permit. License conditions for the Radioactive Air Emission License are in final negotiations with the Washington State Department of Health (WDOH). A RCRA/ Dangerous Waste Permit modification package for the 2+2 melter configuration was submitted to Ecology for review.

The High-Level Waste Facility (HLW) is approximately 37 percent complete. The completion of the 0' slabs are now scheduled for late October 2005 – two months later than originally planned. Any schedule recovery is contingent upon obtaining qualified craft that are currently not available. Cost and schedule impacts from the revised ground motion spectra are under review.

The Low-Activity Waste Facility (LAW) is approximately 42 percent complete.

A 2004 Estimate at Completion (EAC) was completed. Cost growth was the result of increases in bulk commodity and equipment procurements, design/growth changes in all facilities, subcontracts cost, and additional contingency for commissioning. A preliminary FY 2005 EAC will be delivered by March 31, 2005 and will include updated risk assessment, potential trend impacts, and reforecast on to-go workscope. The final EAC is due May 31, 2005 and will include the impacts for seismic design criteria. The U.S. Army Corps of Engineers (COE) will review the EAC.

A new proposed baseline schedule was submitted in November 2004. The schedule incorporates impacts from over 400 trends reflecting use of schedule contingency, commodity growth, growth in and performance of engineering, impacts from the mixing and hydrogen control trend, alignment of activities to working schedule and details for the next 18 months. A schedule change package was submitted on January 12, 2005 that details the basis for the schedule impacts in each of the facilities which includes Pretreatment Facility construction completion extending to July 2008 (uses all the planned schedule contingency); HLW and Analytical Lab (LAB) construction completions (November and October 2007, respectively) were unchanged, and LAW construction completion will be completed one month earlier (October 2007). The Pretreatment Facility is on the critical path. ORP will complete the review of this change package in February.

Additional WTP issues include seismic design criteria, hydrogen generation and mitigation, alternative ion exchange resin development, and ultrafiltration design throughput optimization.

Ecology asked if there is a process for identifying tanks with wear plates concern design intent for tanks that are compatible with the waste form, are regulatory compliant, design completeness based on data available, and incorporated into the next permit modification. Ecology and ORP will discuss this at the weekly technical discussion to share data, and address concerns.

Office of River Protection

Tri-Party Agreement
Quarterly Milestone Review
February 22, 2005



U.S. Department of Energy
U.S. Environmental Protection Agency
Washington State Department of Ecology

1st Quarter of FY 2005

Agenda

Office of River Protection
 Tri-Party Agreement Project Manager's Meeting
 February 22, 2005
 Ecology Offices, 3100 Port of Benton
 9:00 a.m. – 12:00 p.m.

Page	Topic	Leads	Time
3 7	• TPA Milestone Statistics • FY 2004 ORP TPA Cost & Schedule Performance (CHG)	Diane Clark / Suzanne Dahl / Jeff Lyon	9:00
27	M-45-00, Complete Closure of All Single-Shell Tank Farms	Roger Quintero / Dick Heggen	9:10
39	M-43-00, Tank Farm Upgrades	Cathy Louie / Les Fort	9:20
40	M-46-00, Double-Shell Tank Space Evaluation	Cathy Louie / Jeff Lyon	9:30
43	M-47-00, Tank Waste Treatment, Storage and Disposal Facilities	Cathy Louie / Jim Navarro / Les Fort	9:40
45	M-45, -50, -60 Single-Shell Tank Corrective Action	Rob Yasek / Joe Caggiano	9:50
47	M-90-00, Complete Acquisition of Facilities for Interim Storage of IHLW and Storage/ Disposal of ILAW and M-20, Part B Permits	Phil LaMont / Bud Derrick	10:00
49	M-23-00, Tank Integrity and Monitoring	John Long / Jeff Lyon	10:10
51	Interim Stabilization Consent Decree	John Long / Nancy Uziemblo	10:20
53	M-48-00, DST Integrity Assessment Program	Andy Stevens / Vic Callahan / Brenda Jentzen	10:30
	BREAK		
54	In Tank Characterization and Summary	Wen-Shou Liou / Debra Singleton	10:40
55	M-26-01N, Calendar Year 2003 Land Disposal Restrictions Report, Table 3-4, Schedule for ORP Assessments for CYs 2004 through 2006	Woody Russell / Jeff Lyon	10:50
56	• BNI Cost & Schedule Performance and • M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes/Supplemental Technologies	Bruce Nicoll / Pete Furlong / Lina Pacheco / Bobby Williams / Billie Mauss / Suzanne Dahl	11:00

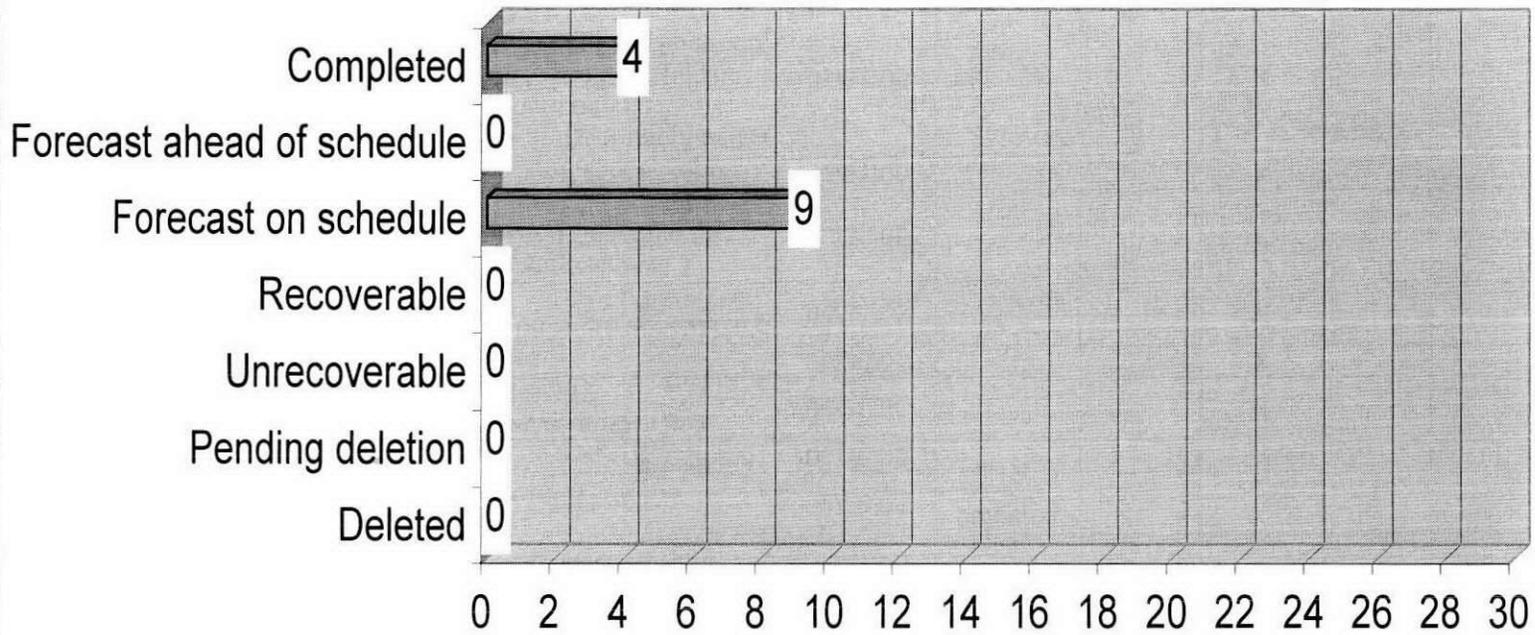
TPA Milestone Statistics

(Including target milestones)

Milestone	Due Date	Total Active as of 12/31/04	Milestone Number	Due Date	Milestone Number	Due Date
M-20-00, Submit Part B Permit Application on Closure/Post Closure Plans for all RCRA TSD Units	02/28/04 (M-20-00)	0				
M-23-25, Tank Integrity and Monitoring	03/31/05 (M-23-25)	0				
M-23-27, Complete 244-CR Liquid Level Assessment	12/30/04	0				
M-42-00, Provide Additional DST Capacity	TBD	1	M-42-00	TBD		
M-43-00, Complete Tank Farm Upgrades	06/30/05 (M-43-00)	1	M-43-00	06/30/05		
M-45-00, Complete Closure of all SST Farms	09/30/24 (M-45-00)	37	M-45-00C M-45-02M M-45-05N-T01 M-45-55-T03 M-45-05A M-45-03C M-45-02N M-45-13 M-45-02O M-45-00B M-45-55 M-45-13-T01 M-45-15 M-45-02P M-45-05-T05 M-45-15-T01 M-45-02P M-45-60 M-45-56	06/30/05 03/01/06 06/30/05 01/31/05 06/30/05 06/30/05 03/01/08 03/31/06 03/01/10 09/30/06 01/31/07 03/31/07 03/31/06 03/31/12 09/30/07 03/31/07 03/01/12 09/30/07 TBD	M-45-05-T06 M-45-05-T07 M-45-05-T08 M-45-00D M-45-05-T09 M-45-06-T03 M-45-05-T10 M-45-05-T11 M-45-06-T04 M-45-05-T12 M-45-05-T13 M-45-05-T14 M-45-05-T15 M-45-05 M-45-06 M-45-00 M-45-58 M45-59	09/30/08 09/30/09 09/30/10 01/31/08 09/30/11 03/31/12 09/30/12 09/30/13 03/31/14 09/30/14 09/30/15 09/30/16 09/30/17 09/30/18 09/30/24 09/30/24 06/30/07 TBD
M-46-00, Double Shell Tank Space Evaluation	11/30/06 (M-46-01)	1			M-46-21	12/31/05
M-47-00, Complete All Work for Phase 1 Operations	02/28/18 (M-47-00)	6	M-47-05A M-47-02	04/30/06 03/31/09	M-47-04 M-47-03A M-47-06 M-47-00	03/31/09 03/31/09 06/30/10 02/28/18
M-50-00, Complete Pretreatment Processing of Hanford Tank Waste	12/31/28 (M-50-00)	1	M-50-00	12/31/28		
M-51-00, Complete Vitrification of Hanford High Level Tank Waste	12/31/28 (M-51-00)	1	M-51-00	12/31/28		
M-61-00* (alternate path), Complete Pretreatment & Immobilization of Hanford Low Activity Tank Waste	12/31/28 (M-61-00)	1	M-61-00	12/31/28		
M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes	12/31/28 (M-62-00)	11	M-62-01K M-62-08 M-62-07B M-62-01L	07/31/05 01/30/05 12/31/07 01/31/06	M-62-01M M-62-03 M-62-09 M-62-10 M-62-11 M-62-00A M-62-00	07/31/06 12/31/06 02/28/09 01/31/11 01/30/06 02/28/18 12/31/28

Milestone	Due Date	Total Active as of 12/31/04	Milestone Number	Due Date	Milestone Number	Due Date
M-90-00 , Interim Storage and Disposal of LAW and Interim Storage of HLW	TBD (M-90-00)	4	M-90-10	08/31/08	M-90-11 M-90-00	08/31/10 TBD
M-48-00, DST Integrity Program , Submit Results of 4 DSTs not Previously Examined	09/30/07	4	M-48-13	09/30/05	M-48-14 M-48-15 M-48-00	03/31/06 09/30/07 09/30/07
Interim Stabilization Consent Decree	09/30/04 (D-001-00)	1	D-001-00			
Total Active Milestones:		67				

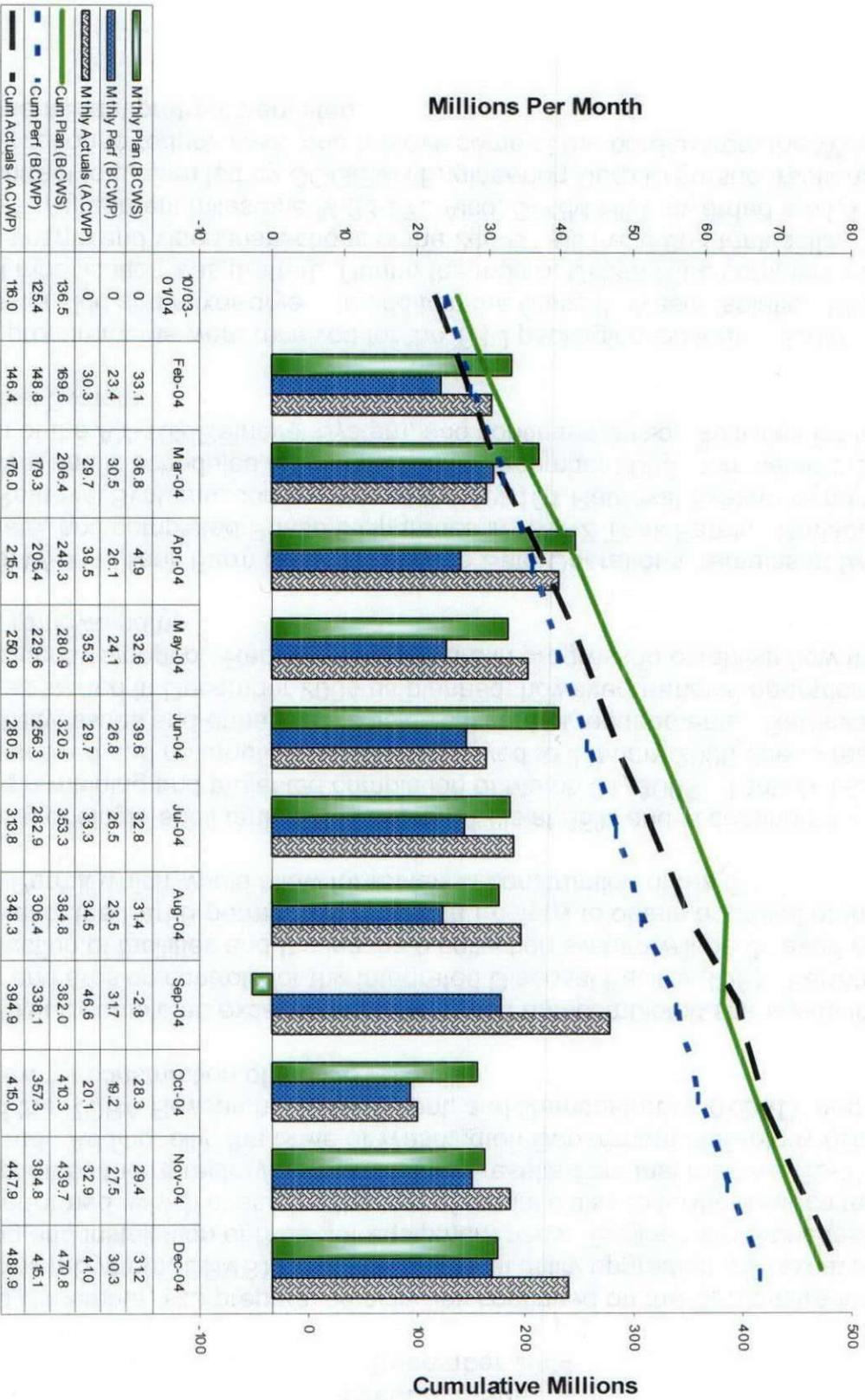
FY 2005 MILESTONE PERFORMANCE



Fiscal Year 2005 Tri-Party Agreement Milestone Status

Milestone	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Pending Deletion	Deleted
				Ahead of Schedule	On Schedule				
D-001-00-R22	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report.	10/31/04	10/29/04 X						
M-23-27	Complete 244-CR Liquid Level Assessments	12/30/04	12/29/04 X						
M-62-08	Submittal of Hanford Tank Waste Supplemental Treatment Technologies Report. Draft Hanford Tank Waste Treatment Baseline and Draft Negotiations Agreement in Principle (AIP).	01/30/05			X				
M-62-01J	Submit Semi-Annual Project Compliance Report	01/31/05	1/31/05 X						
M-90-08	Initiate ILAW Disposal Facility Construction	02/28/05	09/08/04 X						
M-45-05A	Complete Initial Waste Retrieval from Tank S-102	06/30/05			X				
M-45-03C	Complete Full Scale Saltcake Waste Retrieval Technology Demonstration at S-112	06/30/05			X				
M-43-00	Complete Tank Farm Upgrades	06/30/05			X				
M-45-05N-T01	Final Completion of Tank C-106 SST Retrieval and Closure	06/30/05			X				
M-45-00C	Initiate negotiation of SST Waste Retrieval & Closure Activities and Associated Schedule for period Sept 06 - Sept 08	06/30/05			X				
M-62-01K	Submit Semi-Annual Project Compliance Report	07/31/05			X				
M-45-55-T03	Submit to Ecology for Review and Comment as an Agreement Secondary Document a Field Investigation Report pursuant to the site-specific SST WMA Phase 1 RFI/CMS Work Plan Addenda for WMA-T and WMA TX-TY	07/31/05			X				
M-48-13	Submit Results of Four DSTs not Previously Examined	09/30/05			X				
TOTAL		13	4	0	9	0	0	0	0

CH2M HILL Performance Costs/Schedule 10/2003-12/2004



Executive Summary December 2004

During December, site preparation activities continued on the Demonstration Bulk Vitrification System (DBVS) including: electrical utility upgrades; and excavation, forming and installation of rebar for equipment pads. Engineering Scale test ES-31E was performed, which evaluates the use of ceramic tiles to further reduce technetium absorption by the refractory, and preliminary results from last month's ES-13 test were approved. Additionally, the State of Washington Department of Ecology (Ecology) issued the RCRA Research, Development, and Demonstration (RD&D) permit, which will allow for construction of the DBVS facility.

CH2M HILL completed excavation of the trench and completed site lay-up including safety and erosion controls for the Integrated Disposal Facility (IDF). Further construction of facilities and the leachate collection system will be delayed pending approval of the Part B permit. Working with Ecology to obtain approval of the RCRA part B Permit which would allow for restart of construction of the IDF.

Retrieval of single-shell tank (SST) 241-S-112 is at 95% and is continuing, with 55K gallons remaining and projected completion of March 31, 2005. Tank 241-C-203 is at 70% retrieved and resumption has been delayed to January 2005 due to resource availability issues and enhanced radiological control requirements. Retrieval of 241-S-102 was started in December 2004 as planned; however, retrieval operations were subsequently stopped. Recovery actions are in progress to establish flow through the S-102 retrieval pump.

Project W-314, Tank Farm Restorations and Safe Operations, remains at 97% complete, and completed Phase 2 Upgrades in AY/AZ Tank Farms. Project W 211, 10 DST Retrieval Systems; construction of the AN-101 Retrieval System remains at 90% complete and is scheduled for completion in December 2005, completed the Title II design of the AY-102 Retrieval System, and continued design activities for the AY-101 Retrieval System.

Major procurements were received for the TRU packaging system including the exhaustor skid and mixer-dryer. In addition the Class III Waste Isolation Pilot Plant permit modification was drafted. During the month, CH2M HILL completed liquid level assessments and video inspections of the 244-CT-001 and 003 tank/cells. This meets Tri-Party Agreement milestone M-23-27. Also, CH2M HILL awarded a \$1.4 million subcontract to a team led by COGEMA Engineering Corp to pursue fractional crystallization to reduce costs and remove some of the burden from the Waste Treatment Plant pretreatment step.

**Executive Summary
December 2004
(Continued)**

CH2M HILL has met a safety milestone of working over 1 million hours without a lost-workday injury. In addition, CH2M HILL continues to pursue numerous activities to ensure worker protection and resolve vapor concerns. Headspace and stack sampling and analysis on the first 15 tanks have been completed. Also, five of nine breather stack extensions have been installed on eight single-shell tanks (SST) and one double-shell tank (DST). The extensions are being installed to move vapors away from worker breathing space and to dilute the concentration of vapors.

Status of the contract-period critical path activities is as follows: Complete Near Term Waste Retrieval/Closure (M-45-00B), is delayed by the unavailability of critical resources, and changes to respiratory protection and mercury baseline monitoring requirements; Interim closure of C-106 is delayed until the Closure Environmental Impact Statement (EIS) and Ecology approval of the RCRA closure plan are received; S-112 Retrieval and Closure Demo (M-45-13) is impacted by the delay in approval of the SST Sampling and Analysis Plan; Complete S-102 SST Waste Retrieval and Closure is delayed by implementation of vapor exposure and enhanced radiological controls in retrieval of S-102; and Project E-525 (Upgrade Transfer Systems) and Project W-314 are delayed by the unavailability of critical resources, and implementation of enhanced work planning related to mercury mitigation and improving conduct of radiological operations and safety performance. Recovery plans have been developed and are being implemented for all of the critical path activities.

The earned value data reflects a current month unfavorable schedule variance (SV) of \$1M, a project-to-date (PTD) unfavorable schedule variance of \$56M, a current month unfavorable cost variance (CV) of \$11M, and an unfavorable PTD cost variance of \$74M. The PTD SV is due to continued delay in HQ approval of the CH-TRU packaging Supplement Analysis #4, Supplemental Technology Demonstrations extended contract negotiations, delays in SST retrievals, Closure delays due to schedule extension for completion of the EIS and ROD, and Integrated Disposal Facility (IDF) permitting delays. The unfavorable PTD CV is due to higher than planned retrieval and closure costs including greater than anticipated design costs, longer retrieval periods, and unbudgeted costs for vapor mitigation activities. In addition, Supplemental Treatment incurred unplanned costs related to completion of engineering scale test 13, permitting, the S-109 F&R document, and retrieval of S-109 test waste.

**CH2M HILL Hanford Group, Inc.
CUMULATIVE PERFORMANCE MEASUREMENT - DECEMBER 2004
BY WORK BREAKDOWN STRUCTURE**

Dollars in Thousands

WBS	TITLE	Budgeted Cost			Cumulative Program-To-Date				Budget at Completion (BAC) *
		Work Scheduled	Work Performed	Actual Cost Work Performed	Schedule	SV %	Cost	CV %	
5.07	BASE OPERATIONS - Excluding 5.07.02	157,686.4	157,286.2	167,005.0	(400.2)	-0.3%	(9,718.8)	-6.2%	442,256.1
5.07.02	Env/TPA Milestone Achievement	32,996.1	29,065.7	24,846.7	(3,930.4)	-11.9%	4,219.0	14.5%	82,549.5
	TOTAL BASE OPERATIONS	<u>190,682.5</u>	<u>186,351.9</u>	<u>191,851.7</u>	<u>(4,330.6)</u>	-2.3%	<u>(5,499.8)</u>	-3.0%	<u>524,805.6</u>
5.08	RETRIEVE AND CLOSE - Excluding foll. WBS	9,124.5	9,032.0	7,513.0	(92.5)	-1.0%	1,519.0	16.8%	10,642.4
5.08.02	WTP Feed Delivery Program	14,538.3	14,442.9	19,065.4	(95.4)	-0.7%	(4,622.5)	-32.0%	30,347.0
		12,839.0	12,296.2	14,075.9					48,558.3
5.08.03.02	10 DST Retrieval Systems (W-211)				(542.8)	-4.2%	(1,779.7)	-14.5%	
		32,235.0	26,899.7	28,872.6					34,767.7
5.08.04.01	Tank Farm Restoration and Safe Operations (W-314)				(5,335.3)	-16.6%	(1,972.9)	-7.3%	
		12,603.7	8,300.1	12,188.9					15,489.5
5.08.04.02	Upgrade Transfer System (E-525)				(4,303.6)	-34.1%	(3,888.8)	-46.9%	
5.08.05	Retrieval / Closure Program	55,002.7	49,979.1	57,471.7	(5,023.6)	-9.1%	(7,492.6)	-15.0%	122,839.1
5.08.06/7	SST Retrieval East / West Area	35,226.0	25,615.6	63,910.4	(9,610.4)	-27.3%	(38,294.8)	-149.5%	163,162.3
5.08.13	SST Closure	7,248.9	4,929.9	8,319.0	(2,319.0)	-32.0%	(3,389.1)	-68.7%	37,945.0
	TOTAL RETRIEVE AND CLOSE	<u>178,818.1</u>	<u>151,495.5</u>	<u>211,416.9</u>	<u>(27,322.6)</u>	-15.3%	<u>(59,921.4)</u>	-39.6%	<u>463,751.3</u>
5.09	Elements	11,701.1	11,392.6	9,223.6	(308.5)	-2.6%	2,169.0	19.0%	32,648.8
5.09.02.02	TRU / LLW Packaging	25,379.9	9,530.4	15,024.0	(15,849.5)	-62.4%	(5,493.6)	-57.6%	40,832.6
5.09.02.03	LAW Treatment	22,858.8	16,992.5	26,716.4	(5,866.3)	-25.7%	(9,723.9)	-57.2%	48,078.7
5.09.03.01	Integrated Disposal Facility	11,568.2	9,859.5	7,118.3	(1,708.7)	-14.8%	2,741.2	27.8%	25,529.3
5.09.03.04	Initial IHLW Storage Facility (W-464)	3,448.5	3,402.4	1,922.0	(46.1)	-1.3%	1,480.4	43.5%	12,459.3
	TOTAL TREAT AND DISPOSE WASTE	<u>74,956.5</u>	<u>51,177.4</u>	<u>60,004.3</u>	<u>(23,779.1)</u>	-31.7%	<u>(8,826.9)</u>	-17.2%	<u>159,548.7</u>
5.10	ANALYTICAL/TECHNICAL SERVICES	<u>26,471.7</u>	<u>26,068.1</u>	<u>25,636.0</u>	<u>(403.6)</u>	-1.5%	<u>432.1</u>	1.7%	<u>66,526.1</u>
RPP TOTAL		<u>470,928.8</u>	<u>415,092.9</u>	<u>488,908.9</u>	<u>(55,835.9)</u>	-11.9%	<u>(73,816.0)</u>	-17.8%	<u>1,214,631.7</u>

* BAC on this chart and in the Cumulative Performance tables is for the period FY 2004 - FY 2006.

Cumulative Performance 10/03-12/04 – Base Operations (Excl. 5.07.02)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.07	157,686.4	157,286.2	167,005.0	(400.2) -0.3%	(9,718.8) -6.2%	442,256.1

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance is due to unplanned costs to support vapor issue mitigation efforts in the enhanced Industrial Safety Program, Environmental Health, and the Vapor Protection Initiative for WFO Operations. Additionally, unplanned Readiness-to-Serve costs were incurred in Site Wide Services relative to Fabrication services and Crane and Rigging support.

Impact: Unplanned costs are impacting ability to complete all planned baseline scope.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – Env/TPA Milestone Achievement						
	BCWS	BCWP	ACWP	SV	CV	BAC¹
5.07.02	32,996.1	29,065.7	24,846.7	(3,930.4) -11.9%	4,219.0 14.5%	82,549.5

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is because of delays in double-shell tank (DST) Integrity Project due to slippage of structural analysis activities resulting from unavailability of critical contractor resources, and delays in ultrasonic testing (UT) activities due to vapor issues. DST Space Options equipment modifications for AP Farm were delayed due to increased respiratory protection requirements and unavailability of field resources. Also, some DST Infrastructure Upgrades activities have not started in anticipation of deferral or deletion of work scope.

Impact: DST Integrity Project work scope associated with Tri-Party Agreement milestone M-48-13 will be completed by the 4th quarter in FY05; however some activities associated with milestone M-48-14 will be deferred into FY06. DST Space Options work scope is scheduled to complete in FY05. Some DST Infrastructure Upgrades activities will be deferred or deleted.

Corrective Action: Recovering the schedule for DST Integrity Project requires the application of additional field resources.

COST VARIANCE

Description and Cause: The program-to-date favorable cost variance is due to lower than planned support to 242-A evaporator operations and Cross Site Transfers as a result of delays in SST retrievals. In addition, efficiencies were realized in other DST project management activities.

Impact: No impact.

Corrective Action: None required.

¹ BAC for this WBS changed from last month as a result of implementation of BCR RPP-005-002, which established a new WBS for the DST Space Management Project, provided work authorization, and consolidated the Life Extension Project into the DST Space Management Project WBS.

Cumulative Performance 10/03-12/04 – Retrieve and Close (excl. 5.8.2, projects, 5.8.5, retrievals & Closure)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08	9,124.5	9,032.0	7,513.0	(92.5) -1.0%	1,519.0 16.8%	10,642.4

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The program-to-date favorable cost variance is due to the completion of interim stabilization of all SST's ahead of schedule, which resulted in reduced Shift Operations resources/costs.

Impact: No impact.

Corrective Action: None required.

Cumulative Performance 10/03-12/04 – WTP Feed Delivery Program						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.02	14,538.3	14,442.9	19,065.4	(95.4) -0.7%	(4,622.5) -32.0%	30,347.0

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance is due to unplanned labor and subcontracts support to the Chemical Vapor Solutions Team.

Impact: Unplanned costs are impacting ability to complete all planned baseline scope.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – 10 DST Retrieval Systems (W-211)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.03.02	12,839.0	12,296.2	14,075.9	(542.8) -4.2%	(1,779.7) -14.5%	48,558.3

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance is attributable to the additional work efforts, for the AN-101 retrieval system, required to address enhanced work package development/approval, ongoing implementation of Integrated Safety Management System (ISMS) and Conduct of Operations requirements. Additional costs were incurred due to field work inefficiencies resulting from respiratory protection requirements, and Title III costs have been higher than planned.

Impact: Unplanned costs are impacting ability to complete all planned baseline scope.

Corrective Action: Project W-211 is re-evaluating future work scope to identify any potential efficiencies that might offset the AN-101 variance.

Cumulative Performance 10/03-12/04 – Project W-314 (Tank Farm Restoration and Safe Operations)						
	BCWS	BCWP	ACWP	SV	CV	BAC
5.08.04.01	32,235.0	26,899.7	28,872.6	(5,335.3) -16.6%	(1,972.9) -7.3%	34,767.7

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is primarily in Field Construction and is attributable to interferences with SST retrieval and associated waste transfers, ongoing implementation of ISMS and Conduct of Operations requirements, additional work steps needed to address enhanced work package development and approval, enhanced respiratory protection requirements, and availability of limited field resources for competing priorities (particularly availability of health physics technicians [HPT] and air equipment).

Impact: Schedules will be recovered.

Corrective Action: Recovery actions necessary for Project W-314 to complete TPA Milestone M-43-00 by June 30, 2005, were incorporated into the IMES and the schedule retargeted in December 2004. (Negative float to the TPA Milestone was recovered).

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance is primarily in Field Construction and is attributable to the additional efforts required to address enhanced work package development/approval, and ongoing implementation of ISMS and Conduct of Operations requirements. Additional costs were incurred due to field work inefficiencies resulting from respiratory protection requirements, lost time driven by deferrals of the work, and additional shifts/overtime required to recover schedule. Also, the need for continued project management and engineering was longer than assumed in the baseline, because of the schedule extensions and the impacts of other Tank Farm priorities on availability of key field resources.

Impact: A significant portion of the cost variance is not recoverable. An unfavorable variance at completion is forecast for this project.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – Project E-525 (Upgrade Transfer Systems)						
	BCWS	BCWP	ACWP	SV	CV	BAC
5.08.04.02	12,603.7	8,300.1	12,188.9	(4,303.6) -34.1%	(3,888.8) -46.9%	15,489.5

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is primarily in Field Construction and is attributable to ongoing implementation of ISMS and Conduct of Operations requirements, additional work steps needed to address enhanced work package development and approval, respiratory protection requirements, and availability of limited field resources for competing priorities (particularly availability of HPTs and air equipment).

Impact: Construction window for all Project E-525 work is slipping.

Corrective Action: Recovery actions have been implemented, including hiring of additional construction resources, purchasing of additional equipment to meet vapor requirements, and working closely with other organizations to ensure compatibility of schedules. Also, additional HPTs are being hired to support construction priorities.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance is primarily in Field Construction and is attributable to additional work effort required to address enhanced work package development/approval, and ongoing implementation of ISMS and Conduct of Operations requirements. Additional costs were incurred due to field work inefficiencies resulting from enhanced respiratory protection requirements, lost time driven by deferrals of the work, additional shifts/overtime required to recover schedule. Also, project management and engineering support is continuing longer than planned, due to schedule extension.

Impact: A significant portion of the cost variance is not recoverable. An unfavorable variance at completion is forecast for this project.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – Retrieval / Closure Program						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.05	55,002.7	49,979.1	57,471.7	(5,023.6) -9.1%	(7,492.6) -15.0%	122,839.1

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is primarily due to field work delays on Vadose RCRA Corrective Actions, and 244-CR Vault activities caused by safety concerns in farms; availability of field resources, and lack of access to tank farms as a result of vapor issues.

Impact: The schedule variance for Vadose RCRA Corrective Actions will not be recovered in the near term; however, there is no impact as the Tri-Party Agreement milestones that this activity supports has been renegotiated to FY05 through FY07.

Corrective Action: Borehole drilling and direct pushes are being deferred to later in FY05 and to FY06. Remaining uncompleted work will be performed concurrently with FY05 scope.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance is due to unplanned cost to support vapor monitoring for the Closure Project and SST Essential Services. In addition, 244-CR Vault has incurred unplanned costs for rework of work packages in response to enhanced work planning controls and mercury monitoring requirements.

Impact: Unplanned costs are impacting ability to complete all planned baseline scope.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – SST Retrieval East / West Area						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.06/07	35,226.0	25,615.6	63,910.4	(9,610.4) -27.3%	(38,294.8) -149.5%	163,162.3

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is due to delays in awarding design/engineering contracts in support of C-Farm retrieval design; minimal work being performed on Tank 241-C-105 as the decision was made to change the retrieval technology for this tank; and increased respiratory protection requirements that have restricted work in the tank farms.

Impact: Issues identified above caused an extension of existing construction and startup schedules.

Corrective Action: Design contracts have been awarded and efforts continue to obtain necessary breathing air supplies, and to aggressively manage critical path activities to minimize the life-cycle schedule variance.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance is primarily due to SST retrievals experiencing higher than planned material and fabrication costs; increased special equipment and engineering costs; weather delays resulting in work stoppages; and costs related to vapor issues.

Impact: Unplanned costs are impacting ability to complete all planned baseline scope.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – SST Closure						
(\$000)						
	BCWS	BCWP	ACWP	SV	CV	BAC
5.08.13	7,248.9	4,929.9	8,319.0	(2,319.0) -32.0%	(3,389.1) -68.7%	37,945.0

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is primarily due to Tank 241-C-106 closure activities, which are behind schedule due to the delay in the approval of the Closure Environmental Impact Statement (EIS) Record of Decision.

Impact: There is no anticipated impact as the closure of C-106 has been deferred to FY06.

Corrective Action: Tank 241-C-106 work packages will be revised in FY05 and the isolation and fill work for tank closure will be performed in FY06.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance is due to performing more sampling and analytical work than planned and incurring higher costs than planned for closure design and work package planning.

Impact: Unplanned costs are impacting ability to complete all planned baseline scope.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – Treat & Dispose Waste (Excl. WBS 5.9.2.2/2.3/3.1/3.4)						
(\$000)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.09	11,701.1	11,392.6	9,223.6	(308.5) -2.6%	2,169.0 19.0%	32,648.8

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The program-to-date favorable cost variance is due to efficiencies realized in the Fluor Hanford, Inc. (FH) support of the Waste Treatment Plant interfaces. In addition, efficiencies were realized in Strategic Planning.

Impact: No impact.

Corrective Action: None required.

Cumulative Performance 10/03-12/04 – TRU / LLW Packaging						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.09.02.02	25,379.9	9,530.4	15,024.0	(15,849.5) -62.4%	(5,493.6) -57.6%	40,832.6

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance results primarily from permitting related delays in converting a Research, Development, and Demonstration (RD&D) permit into an extensive Part B permit. In addition NEPA permitting and Part B certification issuance has been delayed by the DOE while it resolves related litigation issues. Lastly, some schedule delay has occurred from ORP decision to issue PDSA as new scope in addition to the planned DSA amendment.

Impact: Permitting issues and regulatory uncertainty have delayed packaging operation planning such that support of 10 TRU tank closures through FY06 has been reduced to 8.

Corrective Action: Developed and updated a draft Part B permit application to minimize need for a standard Part B revision, and supported ORP in development of the ROD.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance results from added costs to mitigate permitting delays and additional rework associated with NEPA document revision per DOE. Also, the packaging vendor has accumulated additional design costs resulting from inadequate design estimation.

Impact: Recovery planning is in progress. Final impacts will be detailed upon evaluation and planning.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – LAW Treatment						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.09.02.03	22,858.8	16,992.5	26,716.4	(5,866.3) -25.7%	(9,723.9) -57.2%	48,078.7

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is due to the 6-month delay in issuing the RD&D permit for the Demonstration Bulk Vitrification System (DBVS), and to delayed placement of the supplement treatment procurements to allow evaluation of bid estimates that exceeded baseline values. In addition, the pretreatment technology development project is impacted by the delay in S-112 retrieval.

Impact: Delays in supplemental treatment procurements could potentially impact the startup of the Bulk Vitrification Test and Demonstration Facility.

Corrective Action: The RD&D permit was issued on December 13, 2004. Plans are to accelerate design/construction and work with the state to minimize the impact of required reviews. However, the variance may be unrecoverable. The scope for the pretreatment technology development project is planned to complete in FY05 in line with the new S-112 and S-102 retrieval schedules.

COST VARIANCE

Description and Cause: The program-to-date unfavorable cost variance results from higher than planned costs associated with DBVS RD&D permit. Additionally, unplanned costs were incurred for the S-109 retrieval functions and requirements document, and completion of engineering scale test 13.

Impact: Unplanned costs are impacting ability to complete all planned baseline scope.

Corrective Action: Unfavorable cost variances will be managed at the overall company level.

Cumulative Performance 10/03-12/04 – Integrated Disposal Facility (IDF)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.09.03.01	11,568.2	9,859.5	7,118.3	(1,708.7) -14.8%	2,741.2 27.8	25,529.3

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is due to delay in issuance of Part B Permit for the Integrated Disposal Facility (IDF), which has resulted in suspension of construction activities.

Impact: No impact.

Corrective Action: Working with the State to resolve State Environmental Policy Act of 1971 (SEPA) documentation issues created by the delay of the Part B Permit.

COST VARIANCE

Description and Cause: The program-to-date positive cost variance is due to a favorable fixed-price contract for the IDF.

Impact: No impact.

Corrective Action: None required.

Cumulative Performance 10/03-12/04 – Initial IHLW Storage facility (W-464)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.09.03.04	3,448.5	3,402.4	1,922.0	(46.1) -1.3%	1,480.4 43.5%	12,459.3

(\$000)

	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.09.03.04	3,448.5	3,402.4	1,922.0	(46.1) -1.3%	1,480.4 43.5%	12,459.3

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The program-to-date favorable cost variance is due to efficiencies realized on the detailed design activity, resulting from favorable contract performance.

Impact: No impact.

Corrective Action: None required.

Cumulative Performance 10/03-12/04 – Analytical Technical Services						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.10	26,471.7	26,068.1	25,636.0	(403.6) -1.5%	432.1 1.7%	66,526.1

SCHEDULE VARIANCE

Description and Cause: The program-to-date unfavorable schedule variance is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The program-to-date favorable cost variance is within threshold.

Impact: No impact.

Corrective Action: None required.

Milestone M-45-00, Complete Closure of All Single-Shell Tank Farms

SST Retrieval and Closure Program

I. Deliverables

- **M-45-00, Complete Closure of all Single-Shell Tank Farms**
Due: 9/30/24
Status: On schedule

- **M-45-00B, Complete Specified "Near-Term" SST Waste Retrieval and Interim Closure Activities, to Result in the Retrieval of all Tank Wastes in WMA-C SSTs Pursuant to the Agreement Criteria in Milestone M-45-00**
Due: 9/30/06 (Or as otherwise indicated within the descriptive text of this milestone.)
Status: Current working schedule projects completion of some C-Farm retrievals extending beyond September 2006. ORP is working on strategies to accelerate schedule to complete all retrievals by the required due date.
 - Completion of four limits of technology retrieval demonstrations:
 - Saltcake dissolution (S-112): In progress; forecast completion by March 31, 2005.
 - Modified sluicing (C-106): Completed
 - Vacuum retrieval (C-200's): In progress; forecast completion of C-203 during 2/05 and completion of remaining C-200's by June 30, 2005.
 - Mobile retrieval (C-101, C-110, or C-111): Retrieval planned for FY 2006.

 - Implementation of full-scale LDMM technologies for the first three 100-series tank retrievals following Tank S-112:
 - Tank S-102: High Resolution Resistivity (HRR) system installed; collecting baseline data for deployment test
 - Tank C-103: HRR system installation in progress; 95% complete, forecast completion by March 3, 2005.
 - Tank C-109: HRR system installation in progress; design and procurement completed, installation initiated.

 - Submittal of TWRWPs:
 - Tanks C-201, C-202, C-203, and C-204 (provide supplemental information by 3/31/04): Completed (04-TPD-046, 4/8/04)
 - Two (2) 100-series tanks by 7/31/04: Completed (C-103 and C-109)
 - Four (4) 100-series tanks by 10/31/04: Transmitted TWRWP for tanks C-102, C-104, C-107, C-108, and C-112 to Ecology on 10/8/04
 - Five (5) 100-series tanks by 1/31/05: Submitted TWRWP for remaining C-Farm tanks to Ecology on 1/24/05 (C-101, C-105, C-110, and C-111).

- Submittal of Waste Management Area (WMA) integration plans by 6/30/05:
 - WMA C: In progress
 - WMA T: In progress

- **M-45-00C, Initiate Negotiation of SST Waste Retrieval and Closure Activities and Associated Schedules (for the Period September 2006 through September 2008)**
Due: 6/30/05
Status: On schedule

- **M-45-00D, Initiate negotiation of the SST Waste Retrieval and Closure Activities (for the Period September 2008 to September 2013)**
Due: 1/31/08
Status: On schedule

- **M-45-00E, Initiate Negotiation of SST Waste Retrieval and Closure Activities for the Remainder of the SST Program**
Due: 10/31/12
Status: On schedule

- **M-45-05, Retrieve Waste from all Remaining Single-Shell Tanks**
Due: 9/30/18
Status: On schedule

- **M-45-05-T05, Initiate Tank Retrieval from Five Additional Single-Shell Tanks**
Due: 9/30/07
Status: On schedule

- **M-45-05-T06, Initiate Tank Retrieval from Five Additional Single-Shell Tanks**
Due: 9/30/08
Status: On schedule

- **M-45-05-T07, Initiate Tank Retrieval from Seven Additional Single-Shell Tanks**
Due: 9/30/09
Status: On schedule

- **M-45-05-T08, Initiate Tank Retrieval from Eight Additional Single-Shell Tanks**
Due: 9/30/10
Status: On schedule

- **M-45-05-T09, Initiate Tank Retrieval from Ten Additional Single-Shell Tanks**
Due: 9/30/11
Status: On schedule

- **M-45-05-T10, Initiate Tank Retrieval from 12 Additional Single-Shell Tanks**
Due: 9/30/12
Status: On schedule
- **M-45-05-T11, Initiate Tank Retrieval from 14 Additional Single-Shell Tanks**
Due: 9/30/13
Status: On schedule
- **M-45-05-T12, Initiate Tank Retrieval from 17 Additional Single-Shell Tanks**
Due: 9/30/14
Status: On schedule
- **M-45-05-T13, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**
Due: 9/30/15
Status: On schedule
- **M-45-05-T14, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**
Due: 9/30/16
Status: On schedule
- **M-45-05-T15, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**
Due: 9/30/17
Status: On schedule
- **M-45-06, Complete Closure of all Single-Shell Tank Farms in Accordance with Approved Closure/Post Closure Plan(s)**
Due: 9/30/24
Status: On schedule
- **M-45-06-T03, Initiate Closure Actions on a WMA Basis**
Due: 3/31/12 (See M-45-06)
Status: On schedule
- **M-45-06-T04, Complete Closure Actions on one WMA**
Due: 3/31/14 (See M-45-06)
Status: On schedule

II. Significant Accomplishments

- Installation of subsurface electrodes for HRR leak detection systems continued at C-103 and was initiated at C-109.
- Completed remaining C-Farm TWRWP and submitted to Ecology.
- SST-wide Data Quality Objective and Sampling/Analysis Plan submitted to ORP and Ecology.

III. Significant Planned Activities in the Next Six Months

- Completion of saltcake dissolution retrieval technology demonstration (S-112).

- Completion of vacuum retrieval technology demonstration in C-203 and retrieval of remaining C-200 tanks.
- Complete installation of HRR leak detection systems at C-103 and C-109; begin collection of baseline data.
- Complete integration plans for WMA's C and T.
- Initiate negotiation of SST waste retrieval and closure activities for the period covering 9/06 through 9/08 (M-45-00C).
- Complete SST Performance Assessment and submit to Ecology, EPA, and NRC for review.
- Complete SST-wide DQO and SAP.

IV. Issues

- Recovery schedule being developed to ensure TPA milestone M-45-00B (complete C-Farm retrievals) is met.

SST RETRIEVAL SEQUENCE DOCUMENT

I. Deliverables

- **M-45-02M, Submit Biennial Updates to SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition**
Due: 3/1/06 (Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)
Status: On schedule
- **M-45-02N, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (See Text of M-45-02M for further details)**
Due: 3/1/08 (Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)
Status: On schedule
- **M-45-02O, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (See Text of M-45-02M for further details)**
Due: 3/1/10 (Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)
Status: On schedule
- **M-45-02P, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (See Text of M-45-02M for further details)**
Due: 3/1/12 (Biennially thereafter. Parties to meet annually to agree on SSTs to

be retrieved during the coming year from the tank pool.)

Status: On schedule

II. Significant Accomplishments

- Issued RPP-21216, Rev. 0A, "Single-Shell Tank Retrieval Selection and Sequence," establishing a tank pool list in September 2004.

III. Significant Planned Activities in the Next Six Months

- Nothing to report.

IV. Issues

- Nothing to report.

TANK RETRIEVALS WITH INDIVIDUAL MILESTONES

Tank 241-C-106

I. Deliverables

- **M-45-05H, Interim Completion of Tank C-106 SST Waste Retrieval and Closure Demonstration Project**
Due: 6/30/04
Status: Completed
- **M-45-05L-T01, Complete Full-Scale C-106 Waste Retrieval**
Due: 11/1/03
Status: Completed
- **M-45-05M-T01, Submit C-106 Waste Retrieval Results, Analysis of Residual Waste(s), and (if appropriate) Request for Exception to the Criteria Pursuant to Agreement Appendix H**
Due: 2/27/04
Status: Completed
- **M-45-05N-T01, Final Completion of Tank C-106 SST Retrieval and Closure Demonstration Project**
Due: 6/30/05
Status: Forecasted completion by 8/20/06.

II. Significant Accomplishments

- Released Tank Fill Design.
- Procured construction contract for tank isolation.
- Completed comment resolution workshops with Ecology on C-106 Appendix H exception request, including presentations on limits of technology, risk assessment, and leak detection.

- NRC review of Appendix H "Basis for Exception to the HFFACO Retrieval Criteria for SST 241-C-106"; comments provided with request for additional information.

III. Significant Planned Activities in the Next Six Months

- Complete Appendix H exception request comment resolution workshops.
- Respond to NRC comments on Appendix H exception request and provide additional information as requested.
- Continue preparations for C-106 interim closure.
- Continue development of SST System Permit

IV. Issues

- Due to supplied air requirements in tank farms, C-106 isolation and tank fill field work has been delayed into FY 2006.
- C-106 Closure Plan approval is pending completion of the Tank Closure Environmental Impact Statement and associated Record of Decision (ROD); ROD forecasted for completion by 1/29/06.

Tank 241-S-102

I. Deliverables

- **M-45-05C, Complete S-102 Initial Waste Retrieval Project Construction (to Include all Physical Systems Including Those Necessary for Leak Detection, Monitoring, and Mitigation)**
Due: 3/31/04
Status: Completed
- **M-45-06C, Submit a Certified S-102 Component Closure Activity Plan, as an Application for a Modification to the Hanford Site-Wide Hazardous Waste Facility Permit to Ecology**
Due: 9/30/04
Status: Completed
- **M-45-05A, Complete Initial Waste Retrieval from Tank S-102**
Due: 6/30/05 (per approved HFFACO Change Package M-45-04-05)
Status: In jeopardy.
- **M-45-15, Interim Completion of Tank S-102 SST Waste Retrieval and Closure Demonstration Project**
Due: 3/31/06 (per approved HFFACO Change Package M-45-04-05)
Status: Forecast completion 8/1/06.
- **M-45-15-T01, Final Completion of Tank S-102 SST Retrieval and Closure Demonstration Project**
Due: 3/31/07 (per approved HFFACO Change Package M-45-04-05)
Status: On schedule

II. Significant Accomplishments

- Issued tank isolation design.
- Issued cascade line isolation design.
- Issued the waste retrieval system test results report.
- Completed work on S-A manifold installation; removed jumpers and flushed pit; installed camera in SY-102; completed SY-102 drop leg removal/installation.
- Completed procurement of S-102 recirculation raw water distribution device riser extensions and shield boxes.
- Incorporated comments and released the design for S-102 tank fill.
- Initiated S-102 retrieval operations.
- Ecology approval of HFFACO Change Package M-45-04-05 extending due dates for milestones M-45-05A, M-45-15, and M-45-15-T01.
- Installed shims to raise S-102 retrieval pump as part of recovery actions to establish flow and resume retrieval operations; temporarily resumed retrieval operations.
- Commenced design, fabrication, and work package planning to support new retrieval pump installation.

III. Significant Planned Activities in the Next Six Months

- Resolve pump screen plugging problems; install new retrieval pump.
- Complete retrieval operations.
- Initiate post-retrieval sampling and preparation of Retrieval Data Report or Appendix H to document completion of retrieval.

IV. Issues

- The tendency for sodium phosphate to solidify may cause problems with retrieval. Evaluated the waste process impacts of sodium phosphate. Preliminary indications suggest control of sluice water temperature and dilution rate may be effective in mitigating phosphate formation; sodium phosphate controls implemented.
- S-102 retrieval system shutdown shortly after startup due to pump screen plugging with debris in waste. Roughly 26,300 gallons of waste retrieved. Corrective actions underway. S-102 retrieval issues impacting currently scheduled cross-site waste transfers. Installation of new pumping system will retrieve waste from the top down. New pumping system is expected to be installed and tested by March 15, 2005.
- Need approvals from Ecology and EPA to use supernatant for sluicing S-102.

Tank 241-S-112

I. Deliverables

- **M-45-06B, Submit a Certified S-112 Component Closure Activity Plan, as an Application for a Modification to the Hanford Site-Wide Hazardous Waste Facility Permit to Ecology**
Due: 9/30/04
Status: Completed

- **M-45-03C, Complete Full-Scale Saltcake Waste Retrieval Technology Demonstration at Single-Shell Tank S-112**
Due: 6/30/05 (per approved HFFACO Change Package M-45-04-05)
Status: On schedule
- **M-45-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project**
Due: 3/31/06 (per approved HFFACO Change Package M-45-04-05)
Status: On Schedule
- **M-45-13-T01, Final Completion of Tank S-112 SST Retrieval and Closure Demonstration Project**
Due: 3/31/07 (per approved HFFACO Change Package M-45-04-05)
Status: On schedule

II. Significant Accomplishments

- Retrieval is 99.5% complete (611 Kgal of 614 Kgal based on BBI); revised estimate of total waste volume is 648 Kgal based on preretrieval BBI, process data, and remaining waste level measurements.
- Issued tank isolation design.
- Issued clamshell test summary report.
- Awarded contract for off-riser sampler.
- Initiated procurement of construction contract for tank isolation.
- Incorporated comments and released design for S-112 tank fill.
- Completed S-112 Grab Sample Liquid/Solid.
- Ecology approval of HFFACO Change Package M-45-04-05 extending due dates for milestones M-45-03C, M-45-13, and M-45-13-T01.

III. Significant Planned Activities in the Next Six Months

- Complete full-scale saltcake waste retrieval technology demonstration at single-shell tank S-112 (M-45-03C).
- Conduct post retrieval sampling in support of closure.
- Initiate post-retrieval sampling and preparation of Retrieval Data Report or Appendix H to document completion of retrieval.

IV. Issues

- Completion of S-112 retrieval potentially impacted by resource allocation to S-102 to resolve pump screen plugging problem.

ACCELERATED C-FARM TANK RETRIEVALS (C-FARM ACCELERATED RETRIEVAL SUMMARY SCHEDULE FORECASTS)

I. Deliverables: C-Farm Tanks

Tank	TWRWP to Ecology	SST DQO/SAP to ORP	Complete Construction	Start Retrieval	Complete Retrieval	Retrieval Data Report or Appendix H to Ecology	Component Closure Plan, Rev 0 to Ecology	Complete Interim Closure
C-101	Complete	2/17/05	12/30/05	3/1/06	4/25/06	12/25/06	7/25/06	9/25/07
C-102	Complete	2/17/05	5/31/05	8/23/05	12/15/05	8/15/06	3/15/06	5/15/07
C-103	Complete	2/17/05	3/31/05	5/2/05	7/28/05	3/28/06	10/28/05	12/28/06
C-104	Complete	2/17/05	11/30/05	1/1/06	4/10/06	12/10/06	7/10/06	9/10/07
C-105	Complete	2/17/05	4/28/06	10/1/06	12/15/06	8/15/07	3/15/07	5/15/08
C-107	Complete	2/17/05	1/31/06	4/26/06	8/1/06	4/1/07	11/1/06	1/1/08
C-108	Complete	2/17/05	7/29/05	9/1/05	10/20/05	6/20/06	1/20/06	3/20/07
C-109	Complete	2/17/05	9/30/05	11/1/05	12/19/05	8/19/06	3/19/06	5/19/07
C-110	Complete	2/17/05	6/30/06	8/1/06	11/11/06	7/11/07	2/11/07	4/11/08
C-111	Complete	2/17/05	3/31/06	5/18/06	6/28/06	2/28/07	9/28/06	11/28/07
C-112	Complete	2/17/05	9/30/05	12/20/05	2/17/06	10/17/06	5/17/06	7/17/07
C-201	Complete	2/17/05	4/18/05	4/19/05	5/18/05	1/18/06	8/18/05	10/18/06
C-202	Complete	2/17/05	3/14/05	3/22/05	7/15/05	3/15/06	10/15/05	12/15/06
C-203	Complete	2/17/05	Complete	Complete	2/11/05	10/11/05	5/11/05	7/11/06
C-204	Complete	2/17/05	6/2/05	6/3/05	6/23/05	2/23/06	9/23/05	11/23/06

- NOTES:
- (1) C-100 complete construction, start retrieval, and complete retrieval dates based on C-Farm accelerated retrieval summary schedule forecasts developed by C-Farm Retrieval and Closure Project Team.
 - (2) Completion of Retrieval Data Reports assumed to be 8 months after completion of retrieval.
 - (3) Completion of Component Closure Plan (Rev. 0) assumed to be 3 months after completion of retrieval.
 - (4) Completion of Interim Closure assumed to be 17 months after completion of retrieval.
 - (5) Completion dates are subject to change as efforts continue to identify and implement schedule efficiencies.

II. Significant Accomplishments

- Completed TWRWPs for all C-Farm tanks.
- Continued C-108, C-109, and C-112 modified sluicing system final design; received C-108 final design package.
- Modified retrieval system design for C-102 to use modified sluicing equipment procured for C-105 (C-105 changed from modified sluicing to mobile retrieval system); issued Notice of Award for C-102 construction to Fluor Federal Services.
- Continued C-103 modified sluicing retrieval system construction activities: C-103 sluicer installed.
- Continued baseline development for C-104 and C-107 modified sluicing systems.
- Continued design of mobile retrieval systems for C-101, C-105, C-110, and C-111; released Design Package 2 and Level 2 Specification for C-101; completed C-101 ALARA Analysis; received Design Package 3 for C-101 and initiated review; received 30% design report for C-110 and C-111.

- Installed hose-in-hose transfer line and shield pits from C-Farm to AN-Farm.
- Released C-200 tank fill design and awarded design contract for tank preparation and phase 1 tank fill.
- Received Washington Department of Health approval of C-200 Notice of Construction.
- Reconfigured C-203 waste slurry vacuum line and resumed retrieval operations; roughly 3250 gallons retrieved with an estimated remaining volume of 250 to 300 gallons; forecast completion of retrieval by 2/28/05.
- Continued factory acceptance testing on exhausters skids; continued fabrication of HVAC ducting and associated support equipment.
- Completed AN-106 supernatant pump installation in support of C-Farm retrievals.

III. Significant Planned Activities in the Next Six Months

- Receive C-Farm HVAC system from vendor; complete fabrication and installation of HVAC ducting, ducting supports, and air flow devices.
- Complete C-102, C-108, C-109, and C-112 modified sluicing retrieval system designs; initiate procurement.
- Complete installation of C-103 and C-109 High Resolution Resistivity leak detection system.
- Complete C-103 modified sluicing retrieval system construction activities and start retrieval.
- Complete baseline development for C-104 and C-107 modified sluicing system retrievals.
- Complete mobile retrieval system designs for C-101, C-105, C-110, and C-111; initiate procurement.
- Complete retrieval of all C-200 tanks; initiate post-retrieval sampling and preparation of Retrieval Data Report or Appendix H to document completion of retrieval.

IV. Issues

- Authorization to recycle supernatant. Retrieval designs are proceeding at risk assuming recycle of DST supernatant. Environmental Protection Agency approval required for supernatant recycle and a Risk Based Disposal Approval is required.
- All tank farm entries require use of supplied air respiratory protection until further notice due to vapor concerns.
- Target dates subject to change due to resource availability and inter-project logic ties with E-525 and W-314. C-Farm Project Team working on schedule efficiencies to ensure TPA commitments are met.

OTHER 200 SERIES TANKS

241-B-200 Series Tanks

I. Deliverables

- B-200 series tank work deferred into FY06 and beyond; will be replanned.

II. Significant Accomplishments

- Early completion of final retrieval system design.
- Completed fabrication, factory testing, and receipt of the B-200 series vacuum retrieval system.

III. Significant Planned Activities in the Next Six Months

- Repair B-200 vacuum retrieval system; damaged during shipping; repairs expected by March 2005.

IV. Issues

- No retrieval system installation and operations work scope approved for FY 2005 with impacts to out-year target dates. Activities deferred into FY 2006 and beyond.
- TRU/regulatory issues need to be resolved.

241-T-200 Series Tanks**I. Deliverables**

- T-200 series tank work deferred into FY06 and beyond; will be replanned.

II. Significant Accomplishments

- Nothing to report.
- Early completion of retrieval system design.
- Completed fabrication, factory testing, and receipt of T-200 series vacuum retrieval system.

III. Significant Planned Activities in the Next Six Months

- Repair T-200 vacuum retrieval system; damaged during shipping; repairs expected by March 2005.

IV. Issues

- No retrieval system installation and operations work scope approved for FY05 with impacts to out-year target dates. All activities deferred into FY06 and beyond.
- TRU/regulatory issued need to be resolved.

241-U-200 Series Tanks

I. Deliverables

Tank	TWRWP to Ecology	DQO/SAP to ORP	Complete Construction	Start Retrieval	Complete Retrieval	Retrieval Data Report or Appendix H to Ecology	Component Closure Plan, Rev 0 to Ecology	Complete Interim Closure
U-201	4/5/05	Complete	8/31/05	10/24/05	11/18/05	7/18/06	2/18/05	4/18/07
U-202	4/5/05	Complete	8/31/05	12/2/05	1/3/06	9/3/06	4/3/06	6/3/07
U-203	4/5/05	Complete	8/31/05	1/13/06	2/9/06	10/9/06	5/9/06	7/9/07
U-204	4/5/05	Complete	8/31/05	2/22/06	3/21/06	11/21/06	6/21/06	8/21/07

NOTES: (1) Completion of Retrieval Data Reports assumed to be 8 months after completion of retrieval.
 Completion of Component Closure Plan (Rev. 0) assumed to be 3 months after completion of retrieval
 Completion of Interim closure assumed to be 17 months after completion of retrieval.

II. Significant Accomplishments

- Received articulated mast systems.
- Completed fabrication and delivery of articulated mast containment boxes.
- Completed procurement and delivery of hose-in-hose transfer lines.
- Completed fabrication and delivery of ventilation system demisters.
- Placed contract for the supply of the U-200's tank wash down system.
- Completed installation and inspection of grounding grid outside U-Farm.
- Continued redesign of the U-200 retrieval system to include deployment of the new skids at U-Farm.
- Completed the shop assembly and pressure testing of the U-200 inlet breather filter assemblies.
- Completed replacement of SY-102 drop leg

III. Significant Planned Activities in the Next Six Months

- Complete installation of hose-in-hose transfer line between U-Farm and SY-Farm.
- Complete U-200 retrieval system design and procurement; initiate construction and testing.
- Submit U-200 TWRWP to Ecology.

IV. Issues

- U-200 series tanks construction schedule continuing to be negatively impacted by C-200 series tanks delays.
- Work impacted by vapor concerns and supplied air requirements.

Milestone M-43-00, Tank Farm Upgrades

I. Near-Term Deliverables:

- **M-43-00, Complete Tank Farm Upgrades**

Due: 06/30/05

Status: DST systems needed to support operation on July 1, 2005 will be compliant with 40 CFR 264 / WAC 173-303-640 standards by June 30, 2005, or operated under the conditions of an approved variance. Systems that do not have planned near term use are addressed through approved deferred use list (ref. Ecology letter January 14, 2002) and must be upgraded prior to use.

II. Significant Accomplishments:

- Completed upgrades to AP-03D pit.
- Completed preparatory work for AP-07A pit upgrades.
- Completed modifications on COBs AW-1 & 2.
- Unplugged SL-177 (covered by variance).

Transfer system upgrade status is shown in the table below:

Transfer System Scope	Status
New AZ Valve Pit	Installation Complete
Upgrade 10 Existing Pits (leak detection, drain seals, jumpers, nozzles and nozzle seals, valve actuators and indicators, crack repair, special protective coating, cover blocks)	Installation Complete
Add 11 Waste Transfer Lines	Installation Complete Awaiting transfer outage following M-45-03C & 05A for cross-site tie-in
Upgrade 27 Existing Pits	Installation Complete for 22 of 27 pits
Install 3 Waste Transfer Lines	Installation Complete
By-Pass 244-S DCRT	Installation Complete
By-Pass 241-A-A valve pit	In Progress Coordinating field schedule with M-45-03C & 05A
Upgrade 4 SY transfer line - pit penetrations	In Progress Coordinating field schedule with M-45-03C & 05A
Remove 16 Clean Out Boxes	Modifications Complete for 8 of 16 COBs
Upgrade 204-AR Transfer Lines	Installation Complete
Upgrade AY/AZ Condensate system	In Progress

III. Significant Planned Actions in the Next Six Months:

- Waste Transfer System: cross-site tie-in
- AP farm pit upgrades
- Resume SY Farm pit and line upgrades
- Remove COBs from service

IV. Near-term Actions Needed by DOE or Ecology:

- Update and agree on DST system configuration, post June 30, 2005 for closure of milestone.

V. Issues:

- None

Milestone M-46-00, Double-Shell Tank Space Evaluation

I. Deliverables:

- **M-46-21, Complete implementation of Double Shell Tank Space Optimization Study recommendations** (Tank Space Options report, Document No. RPP-7702, April 12, 2001)
Due: 12/31/05

DST space scope is being tracked to implement four space optimization recommendations and tank space management efforts as identified below.

(1) Increase the DST fill height

Status: On schedule to have AP-108 ready for increased fill height.
Remaining planned scope:

Elevate in tank vapor probes in AP-108
Update authorization basis
Update procedures and set points

(2) Reserve emergency space to reflect compliance with DOE Order 435.1 for the DST system

Status: Complete. DST Emergency Pumping Guide (HNF-3484) updated May 2003. WTP Emergency space shared with Tank Farms – Interface Control Document 19, August 2003.

(3) Implement tank-by-tank evaluations to allow greater concentration of wastes beyond current 1.41 SpG limit

Status: Complete. Evaporator campaigns 2003-03, 2003-04 and 2004-01 were completed above 1.41 SpG. Additional upgrades are continuing to support handling of slurries resulting from high SpG evaporator campaigns.

(4) Use space currently identified as “restricted” space in tanks that contain staged feed for WTP

Status: Complete. ORP rescinded restrictions on restricted tank space, letter 04-TPD-024, March 17, 2004. CH2M Hill incorporated changes to TF Waste Compatibility Program, HNF-SD-WM-OCD-015, on July 28, 2004 for approving transfers to Feed Control List (restricted WTP feed tanks).

II. Significant Accomplishments:

- Completed supplemental Ultra sonic testing in AP-104 for tank fill height increase structural integrity evaluation.

III. Significant Planned Actions in the Next Six Months:

- Evaporator campaigns as shown in the attached table
- Complete Supplemental UT evaluation of AP-104 for increased fill height structural qualification

IV. Near-term Actions Needed by DOE or Ecology:

- None

V. Issues:

- Nothing to report

M-46-21 Project Managers Monthly Report: Evaporator Campaign Plans and Actuals

	Jul-04	Aug-04	Mar-04	Mar-05**	Aug-05**	Sept-05	TBD	TBD	TBD	TBD
Campaign	2003-03	2003-04	2004-01	2005-01a	2005-02	2005-03	2006-01	2006-02	2006-03	2006-04
Staging Tk	AP-108	SY-101	AP-105	AP-107	AP-105	AP-107	AP-104	AP-101	AY-102	AW-106
Campaign Boil-off Upper Planned Limit- kGallons	497	120.9	185	411*	345*	696*	418*	265*	484*	485*
Campaign Boil-off Actual kGallons	464.6	136.1	164							
Target WVR% (Post-Flush)	40%	20%	19%	41%	TBD	TBD	TBD	TBD	TBD	TBD
Actual WVR% (Post-Flush)	39.00%	22.50%	17%							
Specific Gravity	1.46	1.42	1.43							

*Indicates Campaign Upper Planned Limit boil off gallons, are based upon model estimates pending laboratory boil off tests and process control plan

** The schedule date and number of Evaporator campaigns is subject to change based upon timing and volume of SST retrievals.

Milestone M-47-00, Complete Work Necessary to Support Acquisition and Phase I Operations of Hanford Site High-Level Radioactive Waste Treatment, Storage, and Disposal Facilities

I. Near-Term Deliverables:

- **M-47-02, Complete startup and turnover activities for required transfer system upgrades to allow transfer of first high-level waste feed to the Pretreatment/Treatment Complex.**
Due: 03/31/09
Status: Ahead of schedule.
 - W-314 completed construction of new transfer lines from AZ to AP tank farms (SN-634, SN-636, and SN-637)
 - W-211 completed AP to WTP transfer system construction
 - W-211 completed AP-02A and AP-02D pit modifications construction. (See M-47-01)
 - Awaiting Operational Acceptance testing and turnover

- **M-47-04, Complete startup and turnover activities for required transfer system upgrades to allow transfer of first low-activity waste feed to the pretreatment/treatment complex. Installation of the pump will not be required until necessary to support WTP waste feed activities.**
Due: 03/31/09
Status: Ahead of schedule.
 - AP-101 transfer pump was turned over to Operations December 29, 2004
 - Transfer pump jumper installed May 2004
 - Transfer piping is addressed in M-47-02
 - AP-101 construction was completed July 2004
 - Awaiting Operational Acceptance Testing

- **M-47-05A, Complete startup and turnover activities for waste retrieval and mobilization systems for selected initial low-activity waste feed tank (other than AZ-101 or AZ-102).**
Due: 04/30/06
Status: Complete. AP-101 transfer pump was turned over to Operations December 29, 2004. Official notification of milestone completion was sent to Ecology February 2, 2005 (letter 05-TPD-013).

Out year (Post 2006) Milestones:

- **M-47-03A, Complete startup and turnover activities for waste retrieval and mobilization systems for selected initial high-level waste feed tank.**
Due: 03/31/09
Status: Ahead of schedule.
 - AZ-101 Retrieval system upgrades are near completion (w/exception of transfer pump installation)

- Completed AY-102 Title II design.
- **M-47-06, Complete negotiation of additional agreement requirements (milestones, target dates, and associated language) governing work necessary to support completion of treatment complex Phase I operations by 2018.**
Due: 06/30/10
Status: Negotiations are not yet underway

II. Significant Accomplishments:

- Completed TPA Milestone M-47-05A, with startup and turnover of AP-101 transfer pump. Official notification of milestone completion was sent to Ecology February 2, 2005 (letter 05-TPD-013).

III. Significant Planned Actions in the Next Six Months:

- Place contract for AY-102 field construction.

IV. Near-term Actions Needed by DOE or Ecology:

- None

V. Issues:

- Nothing to report

Milestone M-45,-50,-60 Single-Shell Tank Corrective Action

I. Near-Term Deliverables:

- **M-45-55-T03, Submit to Ecology for review and comment as an Agreement secondary document a Field Investigation Report pursuant to the site-specific SST WMA Phase I RFI/CMS Work Plan addenda for WMA T, TX, and TY.**

Due: 07/30/05

Status: Lab work continues, writing of document is underway.

- **M-45-55-T04, Submit to Ecology for review and comment a draft of the A-AX, C, and U Field Investigation Report.**

Due: 04/30/06

Status: Gamma logging of laterals is projected to start in March 2005, with other planned field work to follow. Field work to be completed in FY05 and FY06, lab work to begin in FY05, writing of document to begin in FY05.

- **M-45-55, Submit to Ecology for review and approval as an Agreement primary document a Phase 1 RFI report integrating results of data gathering activities and evaluations for WMAs S-SX, T, TX-TY, A-AX, B-BX-BY, C, and U; and related activities, including groundwater monitoring and impacts assessment using Hanford Site groundwater models, with conclusions and recommendations.**

Due: 01/31/07

Status: Work not started; forecast on schedule.

- **M-45-58, Submit to Ecology for review and approval as an Agreement primary document a RCRA Corrective Actions Corrective Measures Study for WMAs S-SX, T-TX-TY, B-BX-BY, A-AX, C, and U.**

Due: 06/30/07

Status: Work not started; forecast on schedule.

- **M-45-60, Submit to Ecology for review and approval as an Agreement primary document DOE's RCRA Corrective Actions Work Plan for SST WMAs.**

Due: 09/30/07

Status: Work not started; forecast on schedule.

II. Significant Accomplishments:

- Gamma monitoring was completed in the drywells around tank C-103.

III. Significant Planned Actions in the Next Six Months:

- Continue work on T/TX-TY Field Investigation Report.
- Continue Vadose Zone field work in C Farm, with cone penetrometer measurement/sampling.
- Initiate geophysical logging in laterals beneath 241-A and 241-SX tank farms.

- Continue geophysical logging in SST Farm drywells.
- Gamma logging in drywells around C-106.

IV. Issues:

- Continue work under new respiratory procedures at Vadose zone sites in Tank Farms.
- Met with Joe Caggiano of Ecology on 02/15/05 to discuss revisions to C/A-AX/U work plan.

Milestone M-90-00, Complete Acquisition of New Facilities, Modifications of Existing facilities, and/or Modifications of Planned Facilities, as Necessary for Storage of Hanford Site Immobilized High Level Waste (IHLW), Immobilized Low Activity Waste (ILAW), and Disposal of ILAW, and M-20-00, Submit Part B Permit Applications

I. Near-Term Deliverables:

- **M-20-56, Submit Canister Storage Facility Part B Permit Application**
Due: 6/30/03
Status: **Complete**
- **M-20-57, Submit ILAW Disposal Facility Certified Part B Permit Application to Ecology**
Due: 6/30/03
Status: **Complete**
- **M-90-09-T01, Complete Detailed Design of ILAW Disposal Facility Critical Systems to 80%**
Due: 5/30/03
Status: **Complete**
- **M-90-08, Initiate ILAW Disposal Facility Construction**
Due: 2/28/05
Status: **Complete**

Out year (Post 2006) milestones:

- **M-90-10, Initiate Placement of ILAW Waste Canisters in ILAW Disposal Facility**
Due: 8/31/08
Status: On schedule
- **M-90-11, Complete Canister Storage Facility Construction**
Due: 8/31/10
Status: On schedule

II. Significant Accomplishments:

- Completed IDF excavation, utility tie-ins, and access roads – November 2004
- IDF Pre-Operational Monitoring Plan approved by DOE – January 2005
- Completed IDF Operations Performance Specification January 2005
- Transmitted FY04 Performance Assessment Annual Summary to DOE-HQ – February 2005
- ORP issued CD-3 decision for Project W-464 – February 2005

III. Significant Planned Actions in the Next Six Months:

- Prepare draft air permit for IDF operations – February 2005
- DOE approve IDF Preliminary Documented Safety Analysis – February 2005

- Update IDF Waste Acceptance Criteria – February 2005
- Begin IHLW Permit NOD Workshops – February/March 2005
- Construct IDF test pad – March 2005
- Initiate IDF Permit 45 Day Public Comment Period – March 2005
- Construct two additional groundwater monitoring wells for IDF – April 2005
- Begin IDF liner construction – April 2005
- Draft IHLW Final Documented Safety Analysis for DOE Approval – April 2005
- Initiate groundwater monitoring to support development (one year effort) of the pre-operational baseline – May 2005
- Draft 2005 IDF Performance Assessment for review – May 2005
- IDF Permit Effective – July 2005

IV. Issues

- IDF construction activities have temporarily been suspended pending issuance of an IDF final status RCRA permit. However, a mutually agreeable (Ecology and DOE-ORP) path forward for the permit is being implemented. Some construction activities are anticipated to be approved via temporary authorization. The IDF Permit is expected to be effective in July 2005.
- IHLW permit NOD workshops are needed to begin in late January/early February in accordance with the proposed revised permitting plan to support procurement and construction activities in 2006. Because resources may be otherwise obligated to the IDF permitting effort, the IHLW permit NOD workshops may be slowed or delayed. It is anticipated efforts on the IHLW permit will be begin in earnest after the IDF permit enters the 45 day public comment period in late March.

Milestone M-23-00, Tank Integrity and Monitoring

I. Near-Term Deliverables:

- **M-23-23, Submit SST System Leak Detection and Monitoring F&R Document**
Due: 06/15/02
Status: Completed
- **M-23-25B, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Liquid Observation**
Due: 09/30/02
Status: Completed
- **M-23-25C, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Liquid Observation**
Due: 03/31/03
Status: Completed
- **M-23-25D, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Monitoring**
Due: 09/30/03
Status: Completed
- **M-23-26, Submit a Schedule, as a Primary Document, for Performing Liquid Level Assessments**
Due: 09/30/03
Status: Completed
- **M-23-25F, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Monitoring**
Due: 03/31/04
Status: Completed
- **M-23-25G, Complete the Installation of Liquid Observation Wells (LOWs) and Begin Monitoring**
Due: 03/31/05
Deleted per approved Change Request M-23-04-02.
- **M-23-27, Complete 244-CR Liquid Level Assessments**
Due: 12/30/04
Status: Completed

II. Significant Accomplishments:

- M-23-25F completed; LOWs installed in SX-112, T-101, TX-103, and TX-104.
- Completed installation of the TX-116 replacement LOW and initiated liquid level measurements.
- Reformatted field work packages in response to Management Directive MD-38 and MD-43 for radiological controls compensatory measures and mercury monitoring in tank farms.
- Completed liquid level assessments and video inspections for 244-CR 001 and 003 tanks/cells; submitted 244-CR Consent Decree completion letter to ORP documenting completion of TPA milestone M-23-27.
- Cut-up equipment from tank 244-CR-011 and cell 11 and packaged for processing.

III. Significant Planned Actions in the Next Six Months:

- Continue monitoring LOWs installed under M-23-25F.
- Cut-up equipment from tank 244-CR-001 and cell 1 and package for processing.
- Cleanout Pit 3, remove equipment, and install riser extensions.
- Remove containment tent from Pit 3 and set aside for future use.
- Cut-up equipment from tank 244-CR-003 and Cell 3 and package for processing.
- Develop logic and schedule for removing the liquid from the 244-CR sumps and discuss with Ecology.

IV. Issues:

- None.

Interim Stabilization Consent Decree

I. Near-Term Deliverables:

- **D-001-00V, Reduce Total Liquids to 2% of Total Volume from SSTs**
Due: 09/30/03
Status: Completed. Letter sent to Ecology 09/10/03.
- **D-001-00, Complete Interim Stabilization of all 29 SSTs**
Due: 09/30/04
Status: Completed on 03/18/04 with discontinuation of pumping in U-108 and subsequent consultation with Ecology staff. Interim stabilization of S-102 and S-112 held in abeyance by third amendment to the Consent Decree; these two tanks are undergoing accelerated retrieval. ORP's obligation to interim stabilize S-102 and S-112 will be satisfied upon completion of accelerated retrieval operations.

II. Significant Accomplishments:

- Completed Consent Decree Milestone D-001-00, "DOE Shall Complete Interim Stabilization of all 29 Single-Shell Tanks," as amended, roughly 6-months ahead of schedule.
- Of the sixteen SSTs included in FY 2004 scope: Twelve tanks documented as being interim stabilized (A-101, AX-101, BY-105, C-103, S-101, S-107, SX-101, SX-102, SX-103, U-107, U-108, and U-111). Pumping has been completed in all tanks. Two tanks transitioned to accelerated retrieval in lieu of interim stabilization in accordance with the third amendment to the Consent Decree signed by a District Court Judge on 09/9/03 (S-102, S-112). Two tanks are in evaluation to document completion of pumping and satisfaction of interim stabilization criteria (BY-106 and S-111).
- Issued the Single-Shell Tank Interim Stabilization Evaluation Form for Tank 241-U-108 documenting completion of pumping and satisfaction of interim stabilization criteria.
- Approximately 3,034.3 Kgal of pumpable liquids have been removed from SSTs and transferred to DSTs since pumping began in June 1998 (excluding S-102 and S-112).
- Issued the First Quarter Fiscal Year 2005 Interim Stabilization Activity Report to Ecology.
- Ecology approval of HFFACO Change Package M-45-04-05 extending the retrieval completion dates for tanks S-102 and S-112 from March 31, 2005 to June 30, 2005.

III. Significant Planned Actions in the Next 6 Months:

- Complete and issue the Interim Stabilization Evaluation Forms for the two tanks in evaluation mode (BY-106 and S-111) documenting completion of pumping and satisfaction of interim stabilization criteria. Must wait until interstitial liquid levels equilibrate in tanks before the Interim Stabilization Evaluation Forms can be completed. Anticipate issuing last two IS evaluation forms by 2/28/05.

- Issue the Second Quarter Fiscal Year 2005 Interim Stabilization Activity Report to Ecology.
- Complete retrieval of tanks S-102 and S-112 thereby satisfying ORP's obligation to interim stabilize these tanks under the Consent Decree and associated amendments.

IV. Issues:

- None.

Milestone M-48-00, DST Integrity Assessment Program

I. Deliverables:

- **M-48-12, Submit Results of Four DSTs not Previously Examined**
Due: 9/30/04
Status: Complete
- **M-48-13, Submit Results of Four DSTs not Previously Examined**
Due: 9/30/05
Status: On schedule
- **M-48-14, Submit Written Integrity Report for the DST System**
Due: 3/31/06
Status: On schedule
- **M-48-15, Submit a Report to Ecology for the Re-examination of Six DSTs by Ultrasonic Testing**
Due: 9/30/07
Status: On schedule
- **M-48-00, Complete Tank Integrity Assessment Activities for Hanford Double Shell Tanks System**
Due: 9/30/07
Status: On schedule

II. Significant Accomplishments:

- Completed Level Increase Activity UT at tank AP-104.

III. Significant Planned Actions in the Next Six Months:

- Complete UT examinations of tanks AN-103 and AN-104.
- Begin UT examinations of tanks AN-105 and AN-101.
- Complete encasement pressure testing at pits AP07A, AP02A, AP05A and AP08A.
- Begin assessments of pump pit AP02D and AP Valve Pit.
- Perform primary transfer line video of SN-618 located in pit AP08A.
- Complete annulus video examinations of tanks AP-101, AP-103 and AP-105.
- Perform primary tank video examinations of tanks AP-102, AP-103, AP-104, AP-105 and AP-106.
- Perform primary video examination of tank AN-105.

IV. Issues:

- None.

In Tank Characterization and Summary

As of February 9, 2005

I. Significant Accomplishment:

- **Sampling Activities:**

- Vapor samples from tanks U-106, U-101, S-101, S-107, and S-103 to support Industrial Hygiene Program.
- Grab samples from Tank AP-105 to support Evaporator Campaign 05-02, grab samples from Tank SY-102 to support Retrieval Program and push samples from Tank AY-102 to support Tank Integrity Program are planned for February.

- **BBI Updates:**

- * 19 BBI updates are planned for 2nd Quarter.

- **DQO:**

- * The following DQOs are under various stages of preparation,
 - Single-Shell Tank Component Closure DQO, Revision 0.
 - Evaluation of Tank Chemical Emission for Worker Safety DQO, Revision 0.
 - DQO for the Demonstration Bulk Vitrification System, Revision 0.
 - Compatibility DQO, Revision 11.
 - Evaporator DQO, Revision 4.

II. Planned Action within the next Six Months:

- * Continuation of BBI updates.

III. Issues:

- None

Milestone M-26-01N, Calendar Year 2003 Land Disposal Restrictions Report, Table 3-4, Schedule for ORP Assessments for CYs 2004 through 2006

I. Near-Term Deliverables:

- **Complete assessment of 241-A-701**
Due: 12/31/04
Status: **Completed**

- **Complete assessment of 242-S and 242-T Evaporators**
Due: 6/30/05 (second quarter 2005)
Status: **Schedule in jeopardy - Assessment dependent upon entry for roof inspection now scheduled for August, 2005.**

Out year (Post 2006) assessments:

- **None identified. Future assessments will be discussed in the M-26 Project Managers Meeting and identified in the update to the annual LDR Report.**
Due: 4/30/05
Status: On schedule

II. Significant Accomplishments:

- None

III. Significant Planned Actions in the Next Six Months:

- None

IV. Issues

- Schedule for completion of 242-S and 242-T evaporators is in jeopardy. Assessment was based on entry for roof inspection that has now been rescheduled for August 2005.

Hanford Waste Treatment and Immobilization Plant (WTP) Project

Project Overview:

The Hanford Waste Treatment and Immobilization Plant (WTP) Project objective is the design, construction, and commissioning of a chemical processing plant to treat liquid radioactive waste stored in the large underground storage tanks at the Hanford Site. Operation of the WTP is planned under separate contract. The WTP complex consists of five major facilities: Pretreatment facility, the High Level Waste vitrification facility, the Low Activity Waste vitrification facility, the Analytical Laboratory, and the Balance of Facilities. This status reflects December 2004 financial data.

Through December 2004, the overall project is 44% complete (based on dollars). Design, procurement, and construction activities are continuing on all facilities. Engineering design is 76% complete (based on dollars). Construction is 37% complete based on dollars (i.e., construction dollars include craft labor, management, subcontracts, and other support functions). BNI procurements are over 72% awarded.

Construction forces have installed approximately 77% of underground conduit, 52% of concrete, 13% of structural steel, 7% of underground piping, 5% of HVAC duct, 3% of building conduit, 2% of building piping, 2% of cable tray, and 2% of cable & wire (See Table 1). An average of 1,240 craft and 620 non-manual staff were working on-site.

Table 1: Key Commodity Quantity Progress

Quantity Progress	Installed To-Date	Planned At Completion
Concrete	130,730 cu. yd.	251,750 cu. yd.
Structural Steel	3,183 ton	24,984 ton
Piping (above ground)	18,760 feet	872,540 feet
Piping (underground)	87,810 feet	113,300 feet
Conduit (above ground)	22,830 feet	840,460 feet
Conduit (underground)	164,640 Feet	206,410 feet
Cable Tray	2,470 feet	109,620 feet
Cable & Wire	83,140 feet	4,874,830 feet
HVAC Ductwork	185,370 lbs.	3,510,860 lbs.

State and Federal regulatory agencies continue to work closely with DOE and BNI to maintain permits, licenses, and authorizations needed to support the WTP Project. Permit modifications to reflect the 2+2 melter design and technetium removal in the Dangerous Waste Permit is under review by the Washington State Department of Ecology and the license conditions for the Radioactive Air Emission License modification are in final negotiations with the Washington State Department of Health (WDOH). A Radioactive Air Emissions NOC license modification for the 2+2 melter configuration was sent to WDOH February 2004. ORP has received draft license conditions and is in final stages of negotiations before approval. A Resource Conservation and Recovery Act (RCRA)/Dangerous Waste Permit modification package

for the 2+2 melter configuration was submitted, and is currently being reviewed by the Department of Ecology.

BNI provided a 2004 Estimate at Completion (EAC), which was the first reforecast since the March 2003 approved baseline. This was a first effort at projecting an EAC and refining the EAC process. The 2004 forecast EAC at \$5,830 million (baseline \$5,781 million) for total project cost was caused by increases in bulk commodity and equipment procurements, design growth/changes in all facilities, and subcontracts costs, plus additional contingency for commissioning. BNI is reassessing the Project EAC for 2005. A preliminary EAC will be delivered by March 31, 2005, and will include updated risk assessment, potential trend impacts, and reforecast on to-go workscope. The final EAC, due May 31, 2005, will include impacts from revised seismic design criteria.

Facility status details are reported during the Tri-Party Agreement Program Manager's Meetings. Only a brief status is provided below for each facility. This status reflects December 2004 financial data.

Pretreatment (PT) Facility: The PT Facility objective is to separate radioactive tank waste into Highly Radioactive Waste and Low Activity Waste fractions and transfer each waste to its respective vitrification facility. Facility construction began November 2002 and is scheduled to be completed in January 2008. Overall this facility is 40% complete. Eleven vessels are fabricated and at the site ready for installation. The shield door and the resin dewatering skid are installed in the spent resin disposal area. More than 96% of the concrete walls up to the 28 foot level and nearly 40% of the concrete walls up to the 56 foot level are placed. Structural steel to the 28 foot level is nearly 70% complete and floor slabs at the 28 foot level have been placed on half of this steel. BNI initiated assembly of the piping modules at ground level assembly platforms and will be lift into place when completed. The issues associated with the mixing and hydrogen release of non-Newtonian vessels were resolved and engineering is proceeding with design based upon the revised methodology for mixing these vessels

High Level Waste (HLW) Facility: The HLW Facility will vitrify the highly radioactive waste fraction of the treated waste sent from the PT facility to immobilize the waste in glass. Facility construction began July 2002 and is scheduled to be completed in December 2007. Overall this facility is 37% complete. Completion of the 0' slabs and walls will take approximately two months longer than the baseline date of August 23, 2005. Any recovery of the schedule will require obtaining qualified craft not currently available in the local labor pool. Cost and schedule impacts from the revised ground motion spectra are currently unknown. Changes to existing walls and slabs are unlikely. Changes are possible in the upper structure and system components. Procurement of components has the possibility of affecting the construction schedule. Award of the melter feed vessels was deferred for several months, pushing installation into 2006, which need to be installed prior to placing the slab at the 58' level. Fabrication of the plant wash vessel, acid drain vessel, and the HEPA filter housing have been delayed due to engineering design changes which support piping and components that must be installed prior to placement of the slab at 58' elevation. Melter cell, HEPA Filter Housing

Space, Wet Process Cell and Power Cable Installation represent areas where schedule extensions are possible due to installation difficulties.

Low-Activity Waste (LAW): The LAW Facility will vitrify the low activity waste fraction of the treated waste from the PT facility to immobilize the waste in glass. Construction started on July 2002, and is scheduled for completion November 2007. The LAW Facility is 42% complete. The LAW construction is ahead of the critical path schedule. LAW construction completed the elevation +3' walls (25 of 25 walls) and concrete slabs. Construction started on the structural steel erection to support the +48 foot elevation slab. Installation of the fan coil units started at the -21 elevation level. The east turntable pedestal and base plate in Pour Cave 1 is being installed. Fourteen of the process cell vessels were delivered to the site and twelve have been placed in the facility. HVAC, fire protection, cable tray, and piping installations at -21' are proceeding. The melter procurement contract was awarded. Placed 74 cubic yards of concrete for the +28 foot elevation slab 102 (north middle portion of building). Replacement lugs for the five process cell vessels were received and installed. The LAW project has no significant technical issues. The MACT testing schedule was extended due to an unexpected rise of temperature in the carbon bed scrubber material during addition of organics for MACT testing of HLW. Since LAW has much higher level of organics, offline testing of the carbon bed was performed to further understand and mitigate the temperature increase issue.

Analytical Laboratory (LAB): The Radiochemical Analytical Laboratory (LAB) will incorporate features and capabilities necessary to ensure efficient WTP operations including: (1) receipt/handling of Hanford Tank Farm samples for waste feed acceptance; (2) process control; (3) waste form qualification testing; (4) environmental and authorization basis compliance; and (5) limited technology testing. Due to technical risks and cost advantages, the LAB will outsource low level and non-radioactive (environmental) samples. The project as a whole is approximately 19% complete with a positive cost variance of 6.5% and negative 1.4% schedule variance. Other activities scheduled through June 30, 2005, include: (1) completion of architectural and civil structural designs, issued for construction; (2) installation of the under-slab non-radioactive liquid drain pipe; (3) installation of the in-slab radioactive drain pipe, south end of the facility; and (4) initial structural steel installation; and (5) receipt of the C2, C3 and C5 liquid drain vessels.

Balance of Facilities (BOF): The BOF sub-project provides essential site services to all production and service facilities at the WTP. BOF includes multiple facilities of varying sizes that will provide such items as electrical power, roads, security, water, steam, glass former storage, chemical treatment, and air systems. Overall, the BOF facilities are 46% complete. The steam plant facility building is erected and the construction forces are installing the interior piping and electrical commodities. Site-wide underground pipe construction is progressing well. The chiller compressor plant concrete foundation and slab has been placed. Fabrication of the two fire water pump houses, the liquid effluent pump house, and the fuel oil pump house was completed and delivered to the site. Clearing and grubbing activities started on the site for the two

structural steel fire-proof coating buildings. Construction on the site drainage around the A6 substation was started. The cooling tower facility is complete. Hydro-testing on the Domestic Water and Plant Service Water tanks are in process.

Baseline Schedule: In November 2004, BNI delivered a new proposed baseline schedule incorporating impacts from over 400 trends reflecting use of schedule contingency, commodity growth, growth in and performance of engineering, impacts from the mixing and hydrogen control trend, alignment of activities to working schedule (i.e., engineering, procurement, construction), and details for the next 18 months. BNI provided a schedule change-basis package on January 12, 2005, to detail the basis for the schedule impacts in each of the facilities which included: (1) PT construction completion extending to July 2008 which uses all the planned schedule contingency; (2) HLW and LAB construction completions (November and October 2007, respectively) were unchanged; and (3) LAW construction completion accelerated one month to October 2007. The PT facility is the critical path. DOE will complete the review in February 2005.

I. Deliverables: (WTP Project Specific)

- **M-50-00, Complete Pretreatment Processing of Hanford Tank Waste**
Due: December 31, 2028
Status: On schedule. "River Protection Project System Plan," ORP-11242, Revision 2, model runs show completion can be met. The WTP is designed with the capacity and is progressing to support this milestone. The System Plan Revision 3 is tentatively rescheduled for release in late 2005 following the completion of optimization studies that will support M-62-08 (i.e., Submittal of Hanford Tank Waste Supplemental Treatment Technologies Report, Draft Hanford Tank Waste Treatment Baseline, and Draft Negotiations Agreement in Principle).
- **M-51-00, Complete Vitrification of Hanford High Level Tank Waste**
Due: December 31, 2028
Status: On schedule. "River Protection Project System Plan," ORP-11242, Revision 2, model runs show completion can be met. The WTP is designed with the capacity and is progressing to support this milestone. The System Plan Revision 3 is tentatively rescheduled for release in late 2005 following the completion of optimization studies that will support M-62-08 (i.e., Submittal of Hanford Tank Waste Supplemental Treatment Technologies Report, Draft Hanford Tank Waste Treatment Baseline, and Draft Negotiations Agreement in Principle).
- **M-61-00, Complete Pretreatment and Immobilization of Hanford Low Activity Waste (LAW)**
Due: December 31, 2028
Status: On schedule. "River Protection Project System Plan," ORP-11242, Revision 2, model runs show completion can be met. The WTP is designed with

the capacity and is progressing to support this milestone. The System Plan Revision 3 is tentatively rescheduled for release in late 2005 following the completion of optimization studies that will support M-62-08 (i.e., Submittal of Hanford Tank Waste Supplemental Treatment Technologies Report, Draft Hanford Tank Waste Treatment Baseline, and Draft Negotiations Agreement in Principle).

- **M-62-00, Complete Pretreatment Processing and Vitrification of Hanford High Level (HLW) and Low Activity (LAW) Tank Waste**

Due: December 31, 2028

Status: On schedule. "River Protection Project System Plan," ORP-11242, Revision 2, model runs show completion can be met. The WTP is designed with the capacity and is progressing to support this milestone. The System Plan Revision 3 is tentatively rescheduled for release in late 2005 following the completion of optimization studies that will support M-62-08 (i.e., Submittal of Hanford Tank Waste Supplemental Treatment Technologies Report, Draft Hanford Tank Waste Treatment Baseline, and Draft Negotiations Agreement in Principle).

- **M-62-00A, Complete WTP PT, Processing and Vitrification of Hanford HLW and LAW Tank Wastes (i.e., completed pretreatment and vitrification of no less than 10 percent of Hanford's tank waste by mass* and 25 percent by activity)**

Due: February 28, 2018

Status: On schedule. "River Protection Project System Plan," ORP-11242, Revision 2, model runs show completion can be met. The WTP is designed with the capacity and is progressing to support this milestone. The System Plan Revision 3 is tentatively rescheduled for release in late 2005 following the completion of optimization studies that will support M-62-08 (i.e., Submittal of Hanford Tank Waste Supplemental Treatment Technologies Report, Draft Hanford Tank Waste Treatment Baseline, and Draft Negotiations Agreement in Principle).

- **M-62-01, Submit Semi-Annual Project Compliance Report**

Due: Semi-Annual Beginning July 31, 2000

Status: Ongoing and on schedule. M-62-01J was delivered January 31, 2005. M-62-01 is on schedule for July 31, 2005.

- **M-62-07B, Complete Assembly of LAW Melter #1 so that it is ready for transport and installation in the LAW vitrification building (BNI baseline schedule activity 4DL321A3200 as part of DOE Contract No. DE-AC27-01RV14136), and complete schedule activity ID 4DH46102A2 – Move #1 melter into the HLW vitrification facility.**

Due: December 31, 2007

Status: On Schedule. The melter procurement contract for the LAW and HLW melters was awarded July 29, 2004. Note: Impacts due to funding shortfalls,

mixing and hydrogen generation mitigations, ground motion criteria reevaluations, and commodity growths will be evaluated during the 2005 EAC process.

- **M-62-09, Start Cold Commissioning –Waste Treatment Plant**
 Due: February 28, 2009
 Status: On Schedule. Note: Impacts due to funding shortfalls, mixing and hydrogen generation mitigations, ground motion criteria reevaluations, and commodity growths will be evaluated during the 2005 EAC process.
- **M-62-10, Complete Hot Commissioning - Waste Treatment Plant**
 Due: January 31, 2011
 Status: On Schedule. Note: Impacts due to funding shortfalls, mixing and hydrogen generation mitigations, ground motion criteria reevaluations, and commodity growths will be evaluated during the 2005 EAC process.

II. Significant Accomplishments (in the last three months):

- Two vessels have been placed in the PT Facility and 9 vessels are on-site ready for installation.
- PT engineering has completed design of over 300,000 feet of the 540,000 feet in the facility.
- LAW replaced the lifting lugs and set in place the five Eaton process vessels.
- Fireproofing of structural steel started in the LAW facility.
- LAW started Structural Steel erection from the +28 to the +48 elevation.
- HLW placed all the walls at the -21' elevation and began slabs on the 0' elevation.
- LAW completed placement of walls and slabs at the +3 foot elevation and installation of the stainless steel liner plates for the process cells.
- The LAB placed the first structural concrete one month ahead of schedule.
- BOF awarded the Glass Former Facility equipment design and supply contract.
- LAB commenced backfill of the C2/C3 and C5 vessel vaults.
- First shipment of the in-slab radioactive drain lines delivered to marshalling yard for LAB.
- LAB completed design of Phase 3 structural steel columns and beams.
- BNI completed review of the autosampling system 60% design package.
- ORP approved the LAB authorization basis amendment request for laser ablation implementation.

III. Significant Planned Actions (next six months):

Facility	Milestone	Scheduled	Projected Aug 04
HLW	Start 0' Level Walls – First Rebar	10/04	10/04 A
	Complete slab at 0' level	4/05	4/05
	Complete 0' Structural Steel Erection	4/05	4/05
	Issue 37' Elevation Slab Drawings	7/05	6/05
	Complete Setting Wall Modules	8/05	7/05
	Complete Construction of the 0' level walls	10/05	7/05

Facility	Milestone	Scheduled	Projected Aug 04
LAW	Set all +3' elevation major process vessels	7/04	2/05
	Complete placement of slabs at el. +28'	05/05	5/05
PT	Completion Planning Group 1 Module Preassembly	3/05	4/05
	Completion of Concrete Walls to 56' Elevation	3/05	6/05
AL	Complete Structural Steel Design	01/05	1/05
	Complete Installation of In-slab Pipe	08/05	8/05
BOF	Complete Cooling Tower Facility Construction	11/04	12/04 A
	Complete NLD pump house Construction/Set on Foundation	11/04	11/04 A
	Complete Fire Water Pump Houses Construction/Set on Foundation	12/04	12/04 A
	Complete Fuel Oil pump house Construction/Set on Foundation	12/04	11/04 A
	Complete 8 Field Erected Tanks Construction	01/05	2/05
	Complete BOF Switchgear Facility (91) Construction	02/05	5/05
	Complete Steam Plant Construction	05/05	5/05

IV. Issues:

- Seismic Design Criteria:** DOE has reassessed the seismic ground motion design basis for the WTP site. Based on this reassessment, an increase of the peak ground acceleration is approximately 0.03 g above the 0.26 g horizontal acceleration currently used in the design. The peak spectral acceleration increased from 0.58 g to 0.80 g at 5 Hz, a 40% increase. The increased ground motions in the new design spectra is the consequence of correcting less conservative assumption on soil and gravel depth underneath the WTP than previously assumed (365 feet rather than 500 feet); and more accurate modeling of the four deeper soil/basalt layers based on newer data. (Existing seismic spectra approved for WTP were based on the data and methodology approved in 1996 for the Hanford Site). The Defense Nuclear Facilities Safety Board (DNFSB) was briefed on January 28, 2005, on these findings and indicated general agreement with the approach used to develop the new design basis. BNI has been directed to use the revised spectra as the seismic design basis and to incorporate the new seismic design basis in the WTP design, while minimizing the impact to the project.

BNI has also been directed to develop bounding interim design criteria to be used to continue with the release of structures and components for installation, prior to the development of in-structure responses and structural loads using analytical models. Until the interim design criteria is developed and approved by DOE, BNI is required to get DOE approval for each placement on a case-by-case basis based on the available design margin.

BNI design evaluation team is evaluating the available seismic design margins, and excess conservatism that exist in the already-designed structures and components to evaluate the adequacy of the design. Design margin evaluation

of the PT 0-to-56 foot elevation walls and slabs and the HLW up to the 14 foot elevation is complete. The assessment indicates that these structures, in general, have sufficient margin to accept the anticipated increase in seismic loading. The team will continue the evaluation for the other WTP facilities. A number of sub-teams are developing similar methodologies and evaluating capacity margins and conservatism for other components, including structural steel, piping, equipment, HVAC and cable trays. A separate BNI team is involved in performing the dynamic and static analysis of the facilities for the revised ground motion spectra using updated models.

- **Hydrogen Generation:** BNI completed the testing needed to acquire the data required to evaluate hydrogen accumulation in settled solids in the Pretreatment Facility vessels with non-Newtonian slurries on December 20, 2004. BNI proposed changes to the WTP design basis for hydrogen generation rates – replace the Contract approach of assuming maximum radionuclides with the approach of using bounding tank waste composition based on inventory projections. BNI also requested approval to omit waste in double shell tank (DST) 241-AZ-101 from this design basis because it significantly increased projected hydrogen generation rates. On January 13, 2005, ORP directed BNI to assume the HLW slurry contained in DST 241-AY-102 (based on the Tank Farm COUP, Rev. 5a data) as the most limiting feed and to modify the hydrogen generation rate design basis accordingly. Waste from 241-AZ-101, and potentially 241-AZ-102, will be blended to a concentration such that hydrogen generation will be equal to or less than that of 241-AY-102. Benefits associated with this direction include: (1) reduced hydrogen generation rates and the associated vessel vent and pulse jet mixer air-demand requirements; (2) simplification or reduction of design features required to address hydrogen generation in piping and ancillary vessels concerns; and (3) potential improvement to WTP waste treatment rates during operations due to large solids mass loss observed during treatment of 241-AZ-101 solids.

The Tank Farm contractor completed a preliminary study and confirmed the feasibility of blending the DST 241-AZ-101 slurry, and will finalize this study effort to define the specific approach and technical justification for blending the DST 241-AZ-101 slurry in April 2005.

The emphasis in the hydrogen generation and mitigation program has shifted from the evaluation of hydrogen accumulation in primary process vessels to potential hydrogen accumulations in piping and ancillary vessels (HPAV). High points in some of the piping systems can accumulate hydrogen to levels above the lower flammability limit if the lines are filled with radioactive slurries for short intervals (in some cases less than an hour). BNI is conducting a systematic safety review of WTP piping and ancillary vessels and expects that most of the points of accumulation can be dealt with through administrative means such as line flushing. BNI is completing the review of plant systems and the safety evaluations are scheduled for completion in May 2005.

- **Alternative Ion Exchange Resin Development:** There is only one producer of the baseline SuperLig 644 resin. To reduce the single-supplier risk, BNI is developing spherical resorcinol formaldehyde (RF) resin as an alternative to the reference SuperLig 644 resin for removal of cesium from tank waste. Stage 1 development results in 2003 indicated spherical RF performed equivalent or superior in almost all areas. The spherical RF resin has the potential to endure an increased number of regeneration cycles compared to SuperLig 644 and is expected to have substantially lower cost. Stage 2 development of RF is underway and planned to be complete in time for potential application during commissioning. The Stage 2 scope includes assessing scale-up, batch to batch performance, multi-cycle testing, and radiolytic and thermal testing. Work completed during 2004 demonstrated adequate stability and capacity. Cost estimates for production quantities continue to show significant potential lifecycle savings. Scale-up production of 100 gallons is planned to be complete in June 2005 and ½ scale testing is planned to be complete in August 2005.
- **Ultrafiltration System Design Review:** WTP Engineering Division completed a design review of the PT Facility Ultrafiltration Process System (UFP) in July 2004. The design oversight concluded the WTP process flowsheet was not optimized to remove soluble aluminum during caustic leaching and modification to the sizing of the filters may be required to complete treatment of all HLW by 2028. ORP authorized a study in October to address caustic leaching effectiveness and UFP throughput. Accomplishments to date include optimizing leaching chemistry and improving strategies for routine ultrafilter cleaning. The option to perform caustic leaching in other larger facility vessels appears promising. The study is scheduled to be complete by April 2005. ORP also authorized the Tank Farm Contractor to perform studies to optimize tank waste treatment. Several of these appear feasible and can significantly reduce the burden on the UFP system. These studies include: (1) sludge washing, caustic leaching, and oxidative leaching in tank farms; (2) envelope C treatment to remove strontium and TRU in tank farms; (3) approaches to blend double shell tank 241-AZ-101; and (4) blending to reduce the quantity of HLW glass produced.
- **Budget:** The WTP Project is level funded at \$690M/yr (FY02-FY07). Anticipated spending is about \$880M in FY05, \$850M in FY06, and \$800M in FY07, as the project reaches the heavy construction years. A funding shortfall is anticipated in early FY07 (\$40-\$60M) at these spend rates which the Project will have to manage. The early-project slower spend rate provides some relief (\$330 million carryover). However, the unexpected magnitude of the mixing and hydrogen control mitigations and the ground motion study seismic-response update to the design basis spectra will exacerbate funding pressures. With the additional impacts and level funding constraints, work scope may have to be pushed to the out-years.

Costs: In addition to the mixing and hydrogen control impacts to cost (e.g., redesign, more piping, etc) and schedule (e.g., escalation for extended work), BNI has identified a significant number of potential trends due to commodity growth, additional schedule extension, increased subcontract and procurement costs, engineering performance and growth, increased commissioning costs, increased risk, and potential impacts from the revised seismic design basis criteria. The EAC will be forecasting these impacts. The 2005 EAC forecast will provide the Project a basis to assess whether the Project can maintain the baseline.