

Tri-Party Agreement Milestone Review – Office of River Protection
August 24, 2004
Meeting Minutes

0063140

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

Date: 11/16/04

Approval: *Joel B. Hebdon*
 Joel B. Hebdon (A5-12)
 RL IAMIT Representative

Date: 11/18/04

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

Date: 11/16/04

Approval: *Nick Ceto*
 Nick Ceto (B5-01)
 EPA IAMIT Representative

Date: 18 NOV 24 2004
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Minutes Prepared by: *Eileen J. Murphy-Fitch*
 Approval: *Eileen J. Murphy-Fitch*
 Eileen J. Murphy-Fitch (A4-25)
 Fluor Hanford, Inc.

Date: 11/16/04
EDMC

Aromi, E. S.	CH2M	H6-63	Liou W.	ORP	H6-60
Bartus, D.	EPA	H0-57*	Lober, R.	ORP	H6-60
Brown, M.	Ecology	H0-57*	Long, J.	ORP	H6-60
Buxbaum, M.E.	FH	B3-53	Louie, C. S.	ORP	H6-60*
Caggiano, J. A.	Ecology	H0-57	Lyon, J.	Ecology	H0-57*
Castleberry, J.	CH2M	R3-26	Mauss, B.	ORP	H6-60*
Clark, C. E.	RL	A5-15*	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*	Niles, K.	ODE*	
Gallagher, R.	FH	H5-20	Piippo, R. E.	FH	A4-25
B. Harper	CTUIR		Quintero, R.	ORP	H6-60*
Harris, S.	CTUIR		Rasmussen, J. E.	ORP	H6-60
Hebdon, J.	RL	A5-12*	Ramsay, M.	ORP	H6-60
Hedges, J.	Ecology	H0-57*	Russell, W.	ORP	H6-60*
Heggen, D.	Ecology	H0-57	Singleton, D.	Ecology	H0-57
Henry, D.	ODE*		Skinnarland, E. R.	Ecology	H0-57
Hertzal, J. S.	FH	A4-25	Sobotta, P.	NPT	
Jackson, D. E.	RL	A4-52	Stevens, A.	ORP	H6-60
Jackson, G. W.	FH	H5-20	K. Tollefson	CH2M	R3-26
Jarayssi, M. N.	CH2M	H6-03	Uziemblo, N. H.	Ecology	H0-57*
Jentzen, B.	Ecology	H0-57*	Voogd, J.	CH2M	S4-43
Jim, R.	YIN		Vinson, R.	PEC	H6-60
Keggen, D.	Ecology	H0-57*	Yasek, R.	ORP	H6-60
LaMont, P.	ORP	H6-60	Administrative Record	EDMC	H6-08*
Lijek, S. J.	Ecology	H0-57	*w/Attachments		
S. Lilligren	NPT				

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Office of River Protection
Tri-Party Agreement Milestone Review
August 24, 2004

Tri-Party Agreement Milestone Performance

Start: 9:07 a.m.

End: 9:15 a.m.

The status of FY 2004 performance was provided. Of the 30 Tri-Party Agreement milestones due in FY 2004, 19 are complete, 9 are forecast for on-schedule completion and 2 will be deleted. The milestone statistics do not reflect the recently approved M-045 Tri-Party Agreement change package (M-45-04-01) Milestones and issues associated with tank farms were discussed at length. Progress continues to be made.

The Office of River Protection (ORP) has an unfavorable \$64.2 million schedule variance and a \$24.2 million unfavorable cost variance. Both the cost and schedule variances are attributed to the tank farm vapor issues and costs exceeding the estimates for supplemental treatment/retrieval activities. The Tank Farm Contractor (CH2M HILL) continues to aggressively pursue numerous activities to ensure worker protection and resolve vapor concerns.

Ecology raised their concern on the rising cost. They are concerned that money is being expended for other activities at the expense of retrieval. Ecology is also concerned with the transuranic (TRU) path forward which is dependent upon DOE-HQ approval as well as securing New Mexico agreement for two permit modifications. The path forward will be evaluated in October. Ecology stated that the primary objective is to meet the agreed-to Tri-Party Agreement milestones and not do additional workscope that negatively impacts Tri-Party Agreement workscope. Presentation is attached.

M-043-00, Tank Farm Upgrades

Start: 9:16 a.m.

End: 9:37 a.m.

Field work has been impacted by the tank vapor issues and implementation of respiratory policy. CH2M HILL is monitoring plans, schedules and progress to ensure on or ahead of schedule completion. Presentation is attached.

M-046-00, Double Shell Tank Space Evaluation

Start: 9:49 a.m.

End: 9:57 a.m.

The Double-Shell Tank (DST) space evaluation was provided to Ecology on September 25, 2003. Ecology concurrence was scheduled for August 12, 2004. Ecology is requesting a Tri-Party Agreement change package for completion of reviews by September 3, 2004.

Implementation of the DST Space Optimization Study summarizes where the DSTs are and what space would be available if increase the SpG. SST space will always be dependent on DST availability. Retrieval is limited by space. The evaporator was scheduled to run eight campaigns yet only three were done – why weren't the other five campaigns ran to make more space? The campaigns were not needed. Ecology asked what the decision process was used to not run the evaporator campaigns. Retrieval hasn't

been fast so the space wasn't needed. Space will be made available when it is needed. Presentation is attached.

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

Start: 9:37 a.m.
End: 9:39 a.m.

Field work has been impacted by the tank vapor issues and implementation of respiratory policy. Because the workscope is ahead of schedule, no long-term impact is anticipated. Presentation is attached.

Interim Stabilization (Consent Decree)

Start: 10:42 a.m.
End: 11:00 a.m.

All 29 SSTs were declared as interim stabilized in accordance with Interim Stabilization Consent Decree D-001-00 on March 18, 2004. Interim stabilization of S-102 and S-112 will be held in abeyance in accordance with the 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 by March 31, 2005. Tank S-112 retrieval is forecast for completion by October 31, 2004. Retrieval of S-102 by March 31, 2005, may be in jeopardy given delays due to phosphate formation, breathing air requirements, and work stoppage to address radiological compensatory measures.

M-045-00, SST Closure

Start: 9:39 a.m.
End: 9:49 a.m.

The presentations do not reflect the recently approved M-045 Tri-Party Agreement change package M-045-04-01. A completeness determination on C-016 Closure Plan is expected from Ecology by August 31, 2004. All other closure plan submittals are on hold pending the C-106 completeness determination (except for S-102 and S-112 which have their own Tri-Party Agreement commitments). A workshop to look at closure plans and how to plan the next two years will be held in early September 2004.

Due to air respirator requirements in the Tank Farms, C-106 isolation field work has been delayed into FY 2005. The full-scale saltcake waste retrieval technology demonstration at Tank S-112 is being done on an accelerated schedule and anticipate completion by October 31, 2004. The tendency for sodium phosphate to solidify in S-102, DST and evaporator systems may cause problems with retrieval. ORP is currently evaluating the waste process impacts of sodium phosphate on the DST system and results are expected soon. Work on the S-102 Closure Plan is continuing at risk pending Ecology approval of the C-106 Closure Plan.

Non-Tri-Party Agreement Milestone Tanks (forecast completion dates per IMES 8/1/04)

Ecology asked how much liquid is sitting in the tanks for retrieval. It is taking longer than predicted in the F&R and the increased volume is more than was agreed to. There is never more than 100 gallons at

any time, water is continuously sucked out and any standing liquid is sucked out of the tank at the end of each shift. There will always be less than 100 gallons in the tanks.
The TWRWP for the U-200 Tanks will be submitted by October 2004. This workscope was impacted by delays in C-200 series tank retrievals and associated documentation.

Ecology asked for the status on Tank Closure Environmental Impact Statement (EIS). ORP stated that it is being prepared and currently undergoing internal review and that they anticipate it will be ready to go out for public review in the September/October timeframe. Since time is short, if there is any delay in issuance it will be considered as a day-to-day slip.

Action: Provide a briefing to Ecology on the impacts of the vapor issue, identify what work is impacted and what workscope is being done.

Actionee: Moses Jarayssi/Jim Honeyman/Jim Rasmussen

Presentation is attached.

M-045-50, 60 SST Corrective Actions

Start: 9:57 a.m.

End: 10:15 a.m.

The Field Investigation Report for the SST Waste Management Area (WMA) Phase I RFI/CSM Work Plan Addenda for WMA T, TX and TY and the Field Investigation Report for the A-AX, C and U WMA's were discussed. Field work impacts associated with the tank vapor issues and/or the implementation of the respiratory policy are being evaluated. Presentation is attached.

M-023, Tank Integrity and Monitoring

Start: 10:29 a.m.

End: 10:37 a.m.

Liquid Observation Wells (LOWs) were installed in SX-112, T-101, TX-103, and TX-104. The installation of the TX-116 replacement LOW was completed and liquid level measurements initiated. Tri-Party Agreement Milestone M-023-27, *Complete 244-Change Request Liquid Level Assessments*, may be in jeopardy due to the tank farm vapor issue(s). The milestone is not being statused as "in jeopardy" at this time. Presentation is attached.

M-048-00, DST Integrity Assessment Program

Start: 10:37 a.m.

End: 10:40 a.m.

Workscope is on schedule. Some field work may be impacted by the tank vapor issues and/or implementation of the respiratory policy. Presentation is attached.

In Tank Characterization and Summary

Start: 10:40 a.m.

End: 10:42 a.m.

Status on sampling activities, BBI updates, and DQO's was provided. Presentation is attached.

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

Start: 10:15 a.m.

End: 10:29 a.m.

Further delay in issuance of an IDF final status RCRA Permit will impact the schedule for construction of critical systems. The Permit is needed by December 2004. SEPA issues are resolved, public comment complete and anticipate a temporary authorization by September 2004.

The regulators requested that the TSCA permit and schedule for IDF facility be included as part of M-090 presentation. There is a need to look at the waste streams coming into IDF. TSCA requirements will be used to ensure that there isn't any orphan waste to be dealt with. Presentation is attached.

Action: Add status on the TSCA Permit and the schedule for the IDF Facility into the M-090 presentation

Actionee: Phil Long

LDR Assessment Status

Start: 11:00 a.m.

End: 11:15 a.m.

Ecology comments on the CY 2003 LDR Report, submitted April 28, 2004, are expected by September 14, 2004. An LDR inspection of the 241-CX Tank System was conducted in August 2004. There was one outstanding action remaining for the CY 2002 LDR Report on the lack of adequate characterization DST/SST information in the data tables. A DQO process was agreed to and is underway therefore, the parties have agreed that the CY 2002 action can be closed. Results of the DQO process will be included in the CY 2004 LDR Report.

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

Start: 11:20 a.m.

End: 11:45 a.m.

Information on supplemental technologies was distributed and discussed. The RD&D Permit is out for comment and a public meeting will be held August 31, 2004. The Hanford Waste Treatment and Immobilization Plant (WTP) Project workscope is on schedule. Presentation is attached.

ATTENDEES
Tri-Party Agreement Milestone Review
Office of River Protection
August 24, 2004
Mike Wilson, Chairperson

<u>NAME</u>	<u>ORGANIZATION</u>	<u>MAILSTOP</u>	<u>ATTACHMENTS</u>
Patricia Murphy	PT/TPAT	M4-25	
Nancy Uziembo	Ecology		
Suzanne Dahl	Ecology		
Jorge Hoops	Ecology		
Rob Vinson	ORP		
MIKE WILSON	ECOLOGY		
Sandra Lilligren	Nez Perce Tribe		
Jim Rasmussen	DOE/ORP		
JERR VOOGD	CHAM WILL		
Kathy Tolletson	CH		
Rehinda J Brown	Ecology		✓
Barbara Harper	CTUIR	bharper@amerion.com (please add to list)	
Catherine Howie	DOE/ORP		
David Barber	BPA		
Brenda R. Jones	Ecology		
Jim Navarro	DOE - ORP	—	N →
Moses Jarvis	CH2M		
Richard Haysden	Ecology		
Roger Quintana	DOE-ORP	H6-60	✓
JOE CAGLIANO	ECOLOGY	H0-57	
Woody Russell	DOE - ORP		
ROB YASEK	DOE - ORP		
JIM CASTLEBERRY	CH2M	R3-26	

M-62
SUPPLEMENTAL TECHNOLOGIES

Steam Reforming

Idaho Test: On the evening of August 1, heating of the system began. A minor glitch occurred when the feed viscosity/thickness was great enough to restrict its flow into feed loop. This caused a slight modification (flanged valve) to be welded and installed in the recirculation loop such that the feed slurry could be forced through the loop to the peristaltic feed pump (P-9). Consequently, feed slurry was not started to the reactor vessel until about 9:00 am Monday morning. The initial rate was 3 kg/hr. Clay was actually added to the LAW simulant at midnight on Sunday night. After about 31 hours of contact time, the feed slurry appeared to be "thickening" a bit. Adjusting mixer speed and recirculation rates seemed to help somewhat.

Feed slurry rate was increased to 4 kg/hr at 2:00 pm Monday, and to 5 kg/hr at 9:00 am this morning, August 3. The redesigned nozzle is performing well at this point. It was calculated that by about noon today, we had achieved about 95% bed turnover. The test ran a little less than the scheduled 100 hours due to the bed "rocking up". Analyses on the product are being performed at Savannah River National Laboratory.

Bulk Vitrification

Testing:

- Three 1/6th scaled tests were conducted in 325 Laboratory to determine if the changes to the BV (solid refractory, bottoms-up melt, and high plenum temperature) reduced the amount of technetium not incorporated into the glass. Analyses indicate that using the solid refractory would significantly reduced the amount of technetium available for leaching. One test experienced some process upsets and greater than expected amounts of rhenium (Tc surrogate) were detected on the hood.
- Two additional test have been performed at the Horn Rapids facility using a solid refractory that has a glazed coating. Analyses are underway.

Regulatory:

- The RD&D Permit for the Demonstration Bulk Vitrification System (DBVS) is out for public comment through Sept. 9. A public meeting will be held on Aug. 31.
- Comments on the Functions and Requirements (F&R) S-109 Partial Retrieval have been addressed and the document is being revised. Additional information will be included to cover emissions since the Categorical NOC DQO and IH DQO for tank retrievals are not yet approved.

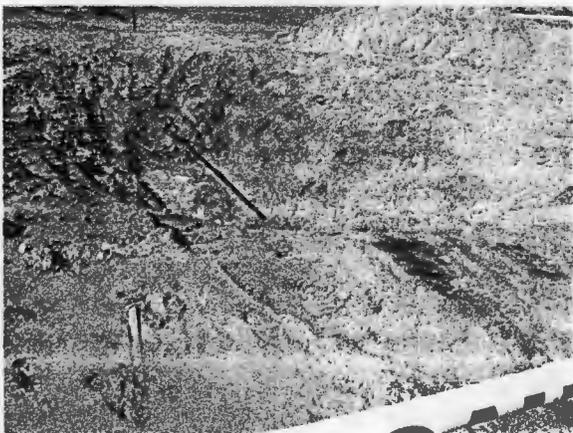
DBVS:

- Work at the Demonstration Bulk Vitrification System site has uncovered the unused pipe lines running underground. The purpose of the excavation is to allow characterization of the lines so that follow-on work packages can be developed to cut,

cap and/or remove the lines as appropriate in preparation for DBVS site construction activities. All five lines have been exposed. Radioactive contamination has been confirmed in one of the lines by the use of detection equipment on the outside of the pipe wall. Prior to further work on any of the lines, potential hazards will be assessed, and required controls established.

- AMEC has placed orders for two long lead components, the low and medium voltage power supply trailers.
- Bids were received for the DBVS site preparation contract. This contract includes, grubbing, grading, excavation and pouring equipment pads.

Excavation at the DBVS Site to remove/cap underground pipes.



Office of River Protection

Tri-Party Agreement
Quarterly Milestone Review Meeting
August 24, 2004

The logo for the Office of River Protection features the text "Office of River Protection" in a bold, black, sans-serif font. The text is centered within a horizontal, wavy, brush-stroke-like graphic that has a textured, greyish appearance, resembling a river or a natural element.

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

3rd Quarter of FY 2004

Agenda

Office of River Protection
 Tri-Party Agreement Quarterly Milestone Review Meeting
 August 24, 2004
 Ecology Offices, 3100 Port of Benton, Richland
 9:00 a.m. – 12:00 p.m.

Page	Topic	Leads	Time
3 8	• TPA Milestone Statistics • FY 2004 ORP TPA Cost & Schedule Performance (CHG)	Diane Clark / Suzanne Dahl / Jeff Lyon	9:00
22	M-43-00, Tank Farm Upgrades	Cathy Louie / Steve Lijek	9:10
23	M-46-00, Double-Shell Tank Space Evaluation	Cathy Louie / Jeff Lyon	9:20
26	M-47-00, Tank Waste Treatment, Storage and Disposal Facilities	Cathy Louie / Jim Navarro / Steve Lijek	9:30
28	M-45-00, Complete Closure of All Single-Shell Tank Farms	Roger Quintero / Dick Heggen	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
	LDR Assessment Status	Woody Russell / Jeff Lyon	10:50
55	• BNI Cost & Schedule Performance and • M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes/Supplemental Technologies	John Eschenberg / Billie Mauss / Suzanne Dahl	11:00

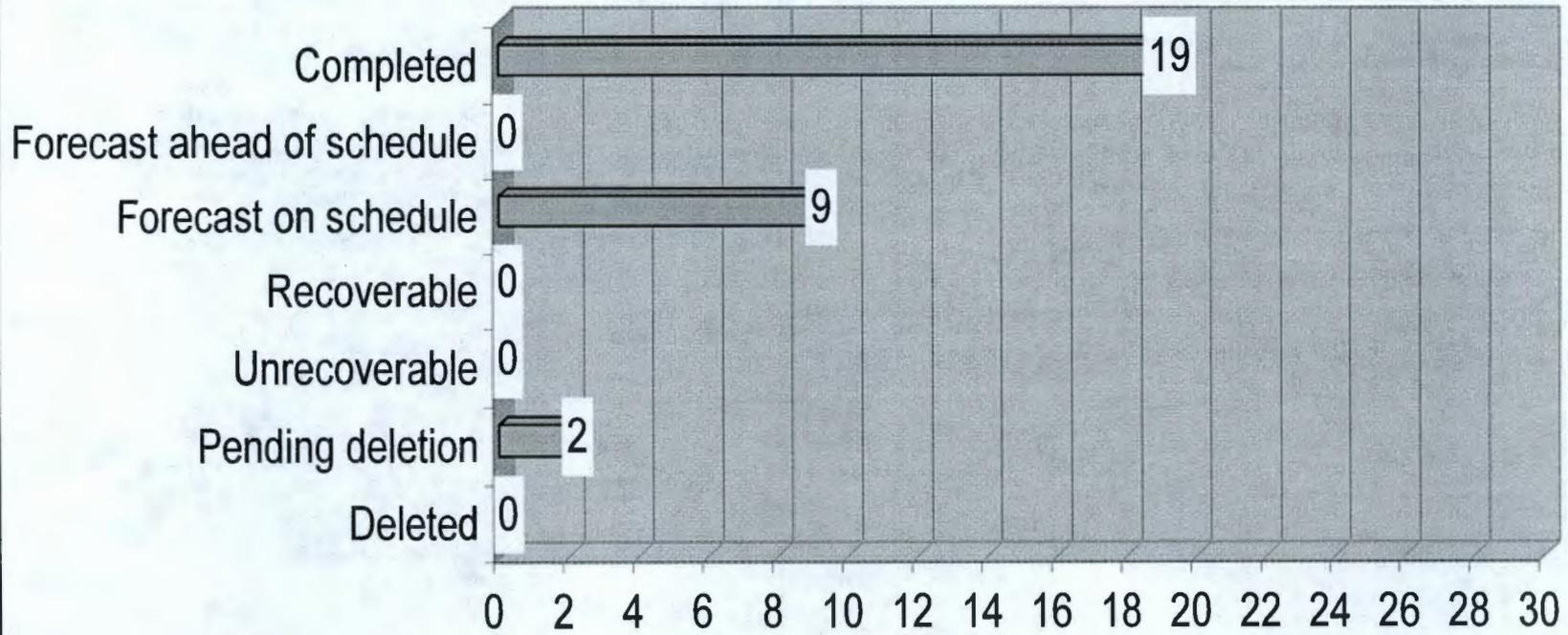
TPA Milestone Statistics

(Including target milestones)

Milestone	Due Date	Total Active as of 05/25/04	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)	3	M-23-25	03/31/05	M-23-25G M-23-27	03/31/05 12/30/04
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	9/30/2024 (M-45-00)	69	M-45-06-T20A M-45-02M M-45-03H M-45-06B M-45-06C M-45-05N-T01 M-45-55-T03 M-45-05-T17 M-45-05A M-45-03C M-45-02N M-45-13 M-45-02O M-45-03I M-45-00B M-45-05E M-45-06D M-45-55 M-45-13-T01 M-45-15 M-45-02P M-45-03F M-45-05-T05 M-45-06-T20B M-45-14 M-45-15-T01 M-45-02Q M-45-05F M-45-60 M-45-56	11/01/03 02/27/04 02/28/04 09/30/04 09/30/04 09/30/04 9/30/04 9/30/04 9/30/04 3/31/05 1/31/05 4/30/05 3/31/05 3/31/05 9/30/05 12/31/05 9/30/06 9/30/06 9/30/06 6/30/07 6/30/07 1/31/07 12/30/06 12/31/05 9/30/07 9/30/07 9/30/07 6/30/06 6/30/08 12/31/06 9/30/08 9/30/08 9/30/07 TBD	M-45-05-T06 M-45-06E M-45-14-T01 M-45-02R M-45-05-T07 M-45-05G-T01 M-45-06-T20C M-45-16 M-45-02S M-45-05-T08 M-45-00D M-45-16-T01 M-45-02T M-45-05-T09 M-45-06-T03 M-45-06-T20D M-45-02U M-45-05-T10 M-45-02V M-45-05-T11 M-45-06-T04 M-45-06-T20E M-45-02W M-45-05-T12 M-45-02X M-45-05-T13 M-45-06-T20F M-45-02Y M-45-05-T14 M-45-02Z M-45-05-T15 M-45-06-T20G M-45-05 M-45-06-T20J M-45-06-T20K M-45-06 M-45-00 M-45-58 M45-59	9/30/08 12/31/08 6/30/09 9/30/09 9/30/09 10/31/09 6/30/08 7/31/10 9/30/10 9/30/10 6/30/11 7/31/11 9/30/11 9/30/11 3/31/12 6/30/12 9/30/12 9/30/12 9/30/13 9/30/13 3/31/14 6/30/14 9/30/14 9/30/14 9/30/15 9/30/15 6/30/16 9/30/16 9/30/16 9/30/17 9/30/17 6/30/18 9/30/18 6/30/20 6/30/22 9/30/24 9/30/24 6/30/07 TBD

Milestone	Due Date	Total Active as of 05/25/04	Milestone Number	Due Date	Milestone Number	Due Date
M-46-00 , Double Shell Tank Space Evaluation	11/30/06 (M-46-01)	8	M-46-01J M-46-00K	8/12/04 9/30/04	M-46-01K M-46-00L M-46-01L M-46-21 M-46-00M M-46-01M	11/30/04 9/30/05 11/30/05 12/31/05 9/30/06 11/30/06
M-47-00 , Complete All Work for Phase 1 Operations	02/28/2018 (M-47-00)	7	M-47-01 M-47-05A M-47-02	3/31/06 4/30/06 3/31/09	M-47-04 M-47-03A M-47-06 M-47-00	3/31/09 3/31/09 6/30/10 02/28/18
M-50-00 , Complete Pretreatment Processing of Hanford Tank Waste	12/31/2028 (M-50-00)	1	M-50-00	12/31/28		
M-51-00 , Complete Vitrification of Hanford High Level Tank Waste	12/31/2028 (M-51-00)	1	M-51-00	12/31/28		
M-61-00* (alternate path), Complete Pretreatment & Immobilization of Hanford Low Activity Tank Waste	12/31/2028 (M-61-00)	1	M-61-00	12/31/28		
M-62-00 , Complete Pretreatment Processing and Vitrification of Tank Wastes	12/31/2028 (M-62-00)	13	M-62-01J M-62-01K M-62-08 M-62-07B M-62-01L	1/31/05 7/31/05 1/30/05 12/31/07 1/31/06	M-62-01M M-62-03 M-62-09 M-62-10 M-62-11 M-62-00A M-62-00 M-62-12	7/31/06 12/31/06 2/28/09 1/31/11 1/30/06 2/28/18 12/31/28 TBD
M-90-00 , Interim Storage and Disposal of LAW and Interim Storage of HLW	TBD (M-90-00)	4	M-90-08 M-90-10	2/28/05 8/31/08	M-90-11 M-90-00	8/31/10 TBD
M-48-00, DST Integrity Program , Submit Results of 4 DSTs not Previously Examined	9/30/07	5	M-48-12 M-48-13	9/30/04 9/30/05	M-48-14 M-48-15 M-48-00	3/31/06 9/30/07 9/30/07
Interim Stabilization Consent Decree	9/30/04 (D-001-00)	2	D-001-00 D-001-00-R22	9/30/04 10/31/04		
Total Active Milestones:		116				

FY 2004 MILESTONE PERFORMANCE

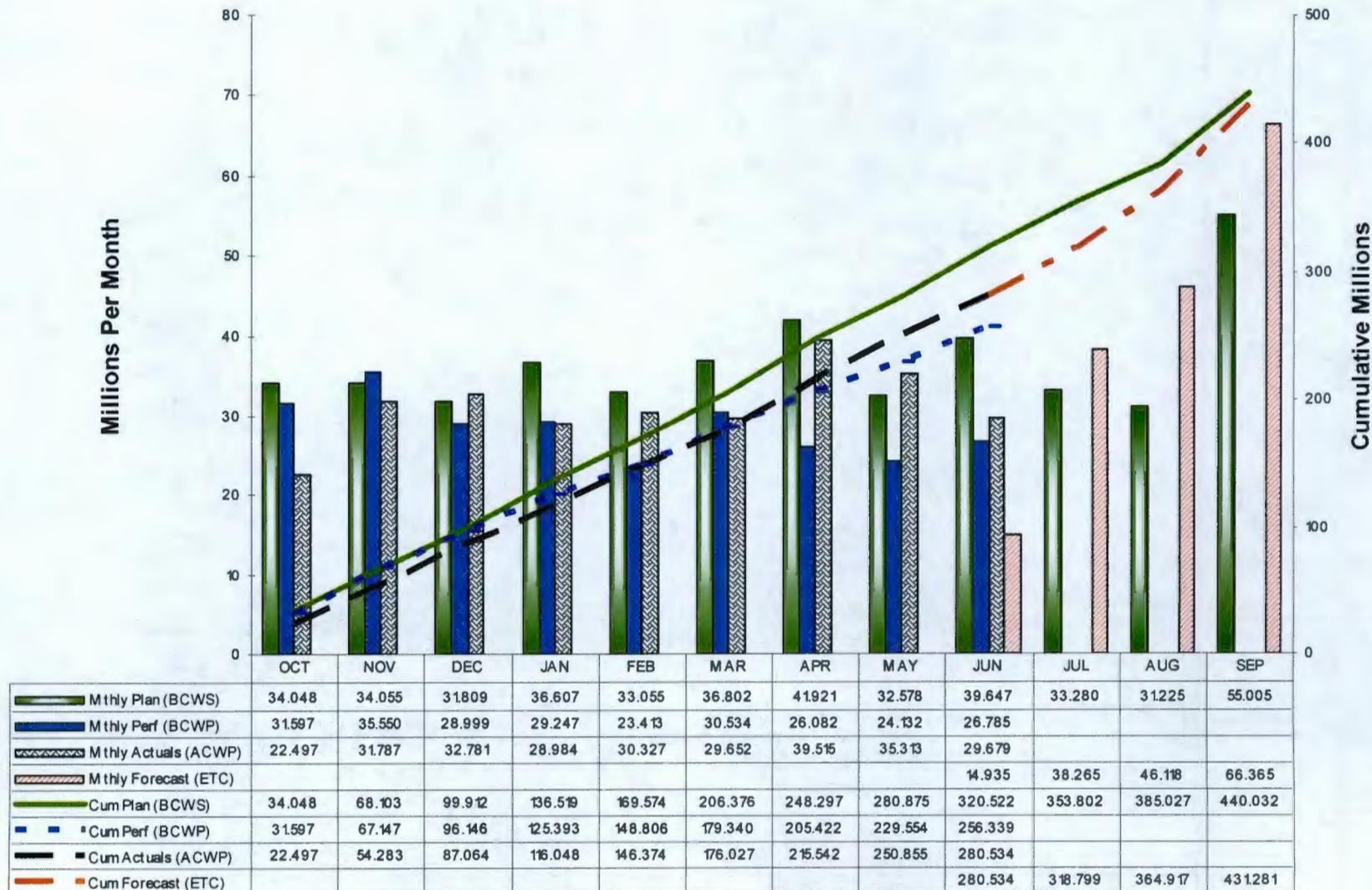


Fiscal Year 2004 Tri-Party Agreement Milestone Status

Milestone	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Pending Deletion	Deleted
				Ahead of Schedule	On Schedule				
D-001-00-R18	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.	10/31/03	10/29/03						
M-062-07A	Initial erection of LAW Vitrification Facility elevation - 21' structural steel columns, beams, and Q-Deck at elevation +3.	10/31/03	7/24/03						
M-045-05L-T01	Complete full-scale C-106 waste retrieval.	11/1/03	12/31/03						
D-001-14-T01	Complete pumping of C-103.	12/30/03	8/21/03						
D-001-00-R19	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.	1/31/04	1/31/04						
M-062-01H	Submit semi-annual Project Compliance Report.	1/31/04	1/31/04						
M-045-05M-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.	2/27/04	06/02/04						
M-045-00C	Complete Renegotiation of Second Phase (i.e., 09/30/06 through 09/30/2015) SST waste retrieval activities.	2/28/04	2/27/04						
M-023-25F	Complete installation of LOWs and begin weekly Liquid Observation Monitoring for 4 additional SSTs.	3/31/04	3/17/04						
M-045-05B	Complete S-102 Initial Retrieval Project Design.	3/31/04	5/30/03						
M-045-05C	Complete S-102 Retrieval Construction.	3/31/04	2/27/04						
M-046-01J	Concurrence of additional tank acquisition. (Ecology Action)	Extended to 08/12/04	On Schedule		X				
D-001-00-R20	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.	4/30/04	04/29/04						
M-045-05H	Interim completion of Tank C-106 SST waste retrieval and closure demonstration project.	6/30/04	6/30/04						
M-047-05	Start construction of waste retrieval and mobilization systems for selected initial LAW feed tank.	5/31/04	10/7/03						
M-045-03G	Complete C-104 sludge/hard heel, confined sluicing and robotic technologies, waste retrieval cold demonstration.	6/30/04	8/13/03						
M-045-06-T20A	Submit SST System Implementation Plan in support of retrieval and closure activities.	6/30/04	On hold pending approval of M-45-04-02 change request					X	
M-047-03	Start construction of waste retrieval and mobilization.	7/30/04	12/16/02						
D-001-00-R21	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.	7/31/04	7/31/04						
M-062-01I	Submit semi-annual Project Compliance Report.	7/31/04	7/31/04						
D-001-00	DOE shall complete interim stabilization of all 29 SSTs.	9/30/04	3/18/04						
M-023-25	Complete installation of LOWs for SSTs: AX-103, B-101, T-109, TX-103, TX-104, B-107, B-108, B-109, BY-108, BX-110, TX-116, C-102, C-105, BX-109, TY-105, U-110, A-106, C-112, SX-111, SX-112, S-107, C-103, and TX-105.	3/31/05	Due date changed to 03/31/05 per TPA change request M-23-04-01		X				
M-023-25G	Complete installation of LOWs and begin weekly Liquid Observation	3/31/05	Due date changed to		X				

Milestone	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Pending Deletion	Deleted
				Ahead of Schedule	On Schedule				
	Monitoring for 4 additional SSTs.		03/31/05 per TPA change request M-23-04-01						
M-045-02M	Submit annual update of SST Retrieval Sequence Document.	9/30/04	On hold in anticipation of M-45 TPA Change Request		X				
M-045-03E	Complete S-112 Saltcake Waste Retrieval Technology Demonstration Construction.	3/31/04	6/30/03						
M-045-03H	Complete C-104 Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration Design.	9/30/04	On hold in anticipation of M-45 TPA Change Request					X	
M-045-06B	Submit certified SST System Closure Plan Modification and S-112 Waste Retrieval and Closure Demonstration Plan.	9/30/04	On Schedule		X				
M-045-06C	Submit certified SST System Closure Plan Modification and S-102 Waste Retrieval and Closure Demonstration Plan.	9/30/04	On Schedule		X				
M-046-00K	Double-Shell Tank Space Evaluation.	9/30/04	On hold in anticipation of M-45 TPA Change Request		X				
M-048-12	Submit results of 4 DSTs not previously examined.	9/30/04	On Schedule		X				
TOTAL		30	19	0	9	0	0	2	0

CH2M HILL Performance Cost/Schedule



Executive Summary June 2004

The Tank Farm Contractor (TFC) accomplishments for the month included restarting retrieval of tank 241-S-112 and the upgrade of the 702-AZ primary ventilation system; completing C-106 Retrieval Performance Based Incentive (PBI) by the transmitting of Appendix H to the State of Washington, Department of Ecology (Ecology) by the U.S. Department of Energy, Office of River Protection (ORP); starting retrieval of C-200 series tanks; awarding of the contract for the Demonstration Bulk Vitrification System; certifying and issuing RCRA Part B Permit for the Integrated Disposal Facility (IDF), obtaining the Solid Waste -Environmental Impact Statement Record of Decision and awarding the IDF utility construction contract; and completing AP-01A, AP-04A, and AP-03A Pit Upgrades.

The tank farm vapor issues and resulting use of supplied air respirators in the tank farms continue to severely impact work productivity (e.g. work per hour in the tank farm) and total work that can be scheduled in the tank farm (e.g. how many jobs). This issue continues to unfavorably impact the TFC's cost and schedule performance. CH2M HILL continues to aggressively pursue numerous activities to ensure worker protection and resolve vapor concerns. The design of single-shell tank (SST) stack extensions was completed, and the fabrication contract awarded. In addition, the fabrication design for the double-shell tank (DST) AP-Farm stack extension was completed. CH2M HILL has initiated numerous other field activities to mitigate the vapor issues including; installation of exhaust fans in all control cabinets; and completion of a "search and seal" mission to seal all readily accessible fugitive emission pathways in all 149 SSTs. There are also numerous related technical basis and Industrial Hygiene (IH) program actions underway. Vapor samples of the tank head space is being performed to support the IH program, focusing first on the 16 SSTs in C-Farm. To date, samples have been obtained from eight C-Farm tanks. Field measurements, use of personal sampling devices, and work to resolve the Department of Energy's Office of Independent Oversight and Performance Assurance's observations and findings are ongoing.

There were no lost workday cases during the month, but seven recordable injuries were reported. The Lost Workday 12-Month Rolling Average Case Rate improved from a May adjusted rate of 1.09 cases per 200,000 hours to 1.02 in June, and the recordable case rate improved from an adjusted 5.05 in May to 4.86 in June. Initiatives are ongoing, including addressing ergonomics and employee participation in safety behavior observation programs.

The fiscal year-to-date (FYTD) schedule variance as of June is an unfavorable \$64.2M, changed from an unfavorable \$51.3M as of May. The change from last month is primarily due to the continued impact of vapor issues, delays in retrieval and closure of single shell tanks, and delayed approval of the Record of Decision for the TWRS Supplement Analysis for dealing with processing and packaging of transuranic (TRU) tank waste. The FYTD cost variance changed from an unfavorable \$21.3M as of May to an unfavorable \$24.2M as of June. This change is a result of the continued impact of vapor issues, and costs in excess of estimates for supplemental treatment. More detailed explanations of variances are contained below and beginning on page 16 of this report.

Executive Summary
June 2004
(Cont'd)

Schedule

The FYTD unfavorable schedule variance (-\$64.2M; -20.0%) is primarily due to: delays in procurement and construction activities for B, C, T, and U-Farm retrievals because of the longer than anticipated design process, inclement weather impacts, and restricted field work due to tank vapors; C and S-Farm Closure activities which are impacted by the delay in the SST retrieval schedule and the Closure Environmental Impact Statement (EIS) Record of Decision; delay in the Supplemental Technology Demonstrations procurements to allow for evaluation of bid estimates that exceed baseline plans; the Fee activity because 21 PBI milestones were not completed as planned; delays in the CH-TRU waste Packaging Part B permit; and Project E-525 which experienced delays in starting construction field activities due to inclement weather, resource allocation issues, and increased respiratory requirements.

Cost

The FYTD cost variance is an unfavorable -\$24.2M or -9.4%. Although the cost of Interim Stabilization, Waste Management, and Closure work is being driven down, these savings are being overcome by the difficulty of accomplishing retrievals for the estimated cost, including the impact of vapor issues. Costs for both Supplemental Technology, (due to additional requirements associated with the RD&D permit, and new requirements associated with development of the S-109 F&R) and CH-TRU (due to costs to mitigate permitting delays and additional rework associated with NEPA document revision) are higher than planned. Therefore, an FY 2005 baseline update is needed to provide an achievable performance measurement goal.

The detailed estimate at completion (EAC) decreased from \$446M in May to \$431M in June. This change is primarily attributable to reduction in the estimates for the Closure Project EAC to align with the work that can be performed in the remainder of FY 2004. This revised EAC is within the available contract funding of \$441M.

CH2M HILL Hanford Group, Inc.
FISCAL YEAR 2004 PERFORMANCE MEASUREMENT - JUNE
BY WORK BREAKDOWN STRUCTURE / PBS
 Dollars in Thousands

WBS / PBS	TITLE	Budgeted Cost			Cumulative Fiscal Year To Date					
		Work Scheduled	Work Performed	Actual Cost Work Performed	Schedule	SV %	SPI	Cost	CV %	CPI
5.07	BASE OPERATIONS	<u>120,905.3</u>	<u>112,933.9</u>	<u>112,060.0</u>	<u>(7,971.4)</u>	-6.6%	0.93	<u>873.9</u>	0.8%	1.01
5.08	RETRIEVE AND CLOSE - Excluding Projects	65,032.2	51,860.0	51,136.7	(13,172.2)	-20.3%	0.80	723.3	1.4%	1.01
5.08.03.02	10 DST Retrieval Systems (W-211)	9,359.4	8,730.8	8,185.2	(628.6)	-6.7%	0.93	545.6	6.2%	1.07
5.08.04.01	Tank Farm Restoration and Safe Ops (W-314)	23,662.4	21,435.7	21,395.4	(2,226.7)	-9.4%	0.91	40.3	0.2%	1.00
5.08.04.02	Upgrade Transfer System (E-525)	8,385.1	5,445.9	6,058.1	(2,939.2)	-35.1%	0.65	(612.2)	-11.2%	0.90
5.08.06	SST Retrieval East Area	20,845.7	12,458.0	22,221.8	(8,387.7)	-40.2%	0.60	(9,763.8)	-78.4%	0.56
5.08.07	SST Retrieval West Area	<u>18,720.1</u>	<u>6,329.9</u>	<u>15,577.4</u>	<u>(12,390.2)</u>	-66.2%	0.34	<u>(9,247.5)</u>	-146.1%	0.41
	TOTAL RETRIEVE AND CLOSE	<u>146,004.9</u>	<u>106,260.3</u>	<u>124,574.6</u>	<u>(39,744.6)</u>	-27.2%	0.73	<u>(18,314.3)</u>	-17.2%	0.85
5.09	TREAT AND DISPOSE WASTE - Excluding Projects	35,234.3	19,027.3	27,133.6	(16,207.0)	-46.0%	0.54	(8,106.3)	-42.6%	0.70
5.09.04.01	Failed Melter Disposal System	0.0	0.0	0.0	0.0	0.0%	0.00	0.0	0.0%	0.00
	TOTAL TREAT AND DISPOSE WASTE	<u>35,234.3</u>	<u>19,027.3</u>	<u>27,133.6</u>	<u>(16,207.0)</u>	-46.0%	0.54	<u>(8,106.3)</u>	-42.6%	0.70
5.10	ANALYTICAL/TECHNICAL SERVICES	<u>16,096.3</u>	<u>15,814.0</u>	<u>15,198.4</u>	<u>(282.3)</u>	-1.8%	0.98	<u>615.6</u>	3.9%	1.04
SUB-TOTAL - ORP0014 - EXCLUDING W-464		<u>318,240.8</u>	<u>254,035.5</u>	<u>278,966.6</u>	<u>(64,205.3)</u>	-20.2%	0.80	<u>(24,931.1)</u>	-9.8%	0.91
5.09.03.04.02	W-464 Air Permitting - Expense	40.6	26.2	0.5	(14.4)	-35.5%	0.65	25.7	98.1%	0.00
5.09.03.04.03	W-464 Project Support - Expense	243.6	243.6	174.2	0.0	0.0%	1.00	69.4	28.5%	1.40
5.09.03.04.08	W-464 Contingency - Line Item	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	0.0%	0.00	<u>0.0</u>	0.0%	0.00
PBS ORP0014	PROJECT W-464	<u>284.2</u>	<u>269.8</u>	<u>174.7</u>	<u>(14.4)</u>	-5.1%	0.95	<u>95.1</u>	35.2%	1.54
TOTAL - ORP0014		<u>318,525.0</u>	<u>254,305.3</u>	<u>279,141.3</u>	<u>(64,219.7)</u>	-20.2%	0.80	<u>(24,836.0)</u>	-9.8%	0.91
5.09.03.04.01	W-464 Project Management - Line Item	339.2	339.2	131.1	0.0	0.0%	1.00	208.1	61.4%	2.59
5.09.03.04.04	W-464 Preliminary Design - Line Item	<u>1,657.8</u>	<u>1,694.1</u>	<u>1,261.4</u>	<u>36.3</u>	2.2%	1.02	<u>432.7</u>	25.5%	1.34
PBS ORP0014X	PROJECT W-464	<u>1,997.0</u>	<u>2,033.3</u>	<u>1,392.5</u>	<u>36.3</u>	1.8%	1.02	<u>640.8</u>	31.5%	1.46
RPP TOTAL		<u>320,522.0</u>	<u>256,338.6</u>	<u>280,533.8</u>	<u>(64,183.4)</u>	-20.0%	0.80	<u>(24,195.2)</u>	-9.4%	0.91
Memo:	Total Project W-464	2,281.2	2,303.1	1,567.2	21.9	1.0%	1.01	735.9	32.0%	1.47

FY 2004 Cumulative Performance – Base Operations						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.07	120,905.3	112,933.9	112,060.0	(7,971.4) -6.6%	873.9 0.8 %	168,128.6

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$8.0M; -6.6%) is primarily due to the Contract fee associated with 21 Performance Based Incentive (PBI) milestones not being earned as planned due to resource allocation issues, a partially plugged transfer line, adverse weather impacts, and increased respiratory protection requirements.

Impact: None.

Corrective Action: The fiscal year-to-date unfavorable schedule variance will improve as PBIs are completed.

COST VARIANCE

Description and Cause: The fiscal year-to-date favorable cost variance (\$0.9M; 0.8%) is within threshold.

Impact: No impact.

Corrective Action: None required.

FY 2004 Cumulative Performance – Retrieve and Close (Excluding Projects)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08	65,032.2	51,860.0	51,136.7	(13,172.2) -20.3%	723.3 1.4%	89,317.9

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$13.2M; -20.3%) is primarily because of C, S and U-Farm Closure activities, which are impacted by the delay in the single-shell tank (SST) retrieval schedule and the Closure Environmental Impact Statement (EIS) Record of Decision.

Impact: Tank closure activities will be further delayed as a result of the Closure EIS Record of Decision's delay to April 2005.

Corrective Action: Tank closure activities will be replanned as part of the FY 2005 baseline update.

COST VARIANCE

Description and Cause: The fiscal year-to-date favorable cost variance (\$0.7M; 1.4%) is within threshold.

Impact: No impact.

Corrective Action: None required.

FY 2004 Cumulative Performance – 10 DST Retrieval Systems (W-211)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u> (\$000)	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.03.02	9,359.4	8,730.8	8,185.2	(628.6) -6.7%	545.6 6.2%	13,241.6

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$0.6M; -6.7%) is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The fiscal year-to-date favorable cost variance (\$0.5M; 6.2%) is within threshold.

Impact: No impact.

Corrective Action: None required.

FY 2004 Cumulative Performance – Project W-314 (Tank Farm Restoration and Safe Operations)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.04.01	23,662.4	21,435.7	21,395.4	(2,226.7) -9.4%	0.0 0.2%	28,257.0

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$2.2M; -9.4%) is because of availability of field resources for competing priorities and due to delays caused by increased respiratory requirements.

Impact: The float for the Project W-314 portion of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-43-00, Complete Tank Farm Upgrades, has been reduced, but is still positive.

Corrective Action: Priorities are being assessed and a dedicated AP-Farm Pit Upgrade crew has been established. In addition, training in the use of respiratory equipment and mask fits have been completed, which will allow for worker access to the tank farms.

COST VARIANCE

Description and Cause: The fiscal year-to-date favorable cost variance (\$0.0M; 0.2%) is within threshold.

Impact: No impact.

Corrective Action: None required.

FY 2004 Cumulative Performance – Project E-525 (Upgrade Transfer Systems)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.04.02	8,385.1	5,445.9	6,058.1	(2,939.2) -35.1%	(612.2) -11.2%	11,720.6

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$2.9M; -35.1%) is because of interferences with Project W-314 activities in SY-Farm and cross-site transfers, unexpected as-found field conditions, availability of field resources for competing priorities, and increased respiratory requirements.

Impact: The float for the Project E-525 portion of the Tri-Party Agreement Milestone M-43-00, Complete Tank Farm Upgrades, has been reduced, but is still positive.

Corrective Action: Assessments are in progress to accelerate work to meet FY 2004 schedule commitments and the project is exploring options to defer work to FY 2005.

COST VARIANCE

Description and Cause: The fiscal year-to-date favorable cost variance (-\$0.6M; -11.2%) is within threshold.

Impact: No impact.

Corrective Action: None required.

FY 2004 Cumulative Performance – SST Retrieval East Area						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.06	20,845.7	12,458.0	22,221.8	(8,387.7) -40.2%	(9,763.8) -78.4%	25,001.8

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$8.4M; -40.2%) is due to delays in awarding two blanket master agreements for engineering services in support of C-103 and C-105 designs; increased respiratory requirements has restricted work in the tank farms; retrieval of the four B-200 series tanks has been placed on hold, consistent with delays in the CH-TRU Packaging project; and C-104 retrieval is on hold consistent with the Tri-Party Agreement M-45-00C negotiations.

Impact: The variance for the C-103 and C-105 retrievals is expected to improve by fiscal year-end. The variance for the B-200 series retrievals is not expected to be recovered; however there is no anticipated impact on the delivery of waste to the CH-TRU Packaging project.

Corrective Action: Activities related to B-200 series retrievals will be replanned as part of the FY 2005 baseline update.

COST VARIANCE

Description and Cause: The fiscal year-to-date unfavorable cost variance (-\$9.8M; -78.4%) is primarily due to C-Farm retrievals experiencing higher than planned equipment and pump disposal costs, increased special equipment and engineering costs, weather delays resulting in work stoppages, and costs related to vapor issues. In addition, the engineering activity for B-201 Retrieval cost more than the planned estimates.

Impact: The negative cost variance will continue and is included in the EAC.

Corrective Action: Activities will be replanned as part of the FY 2005 baseline update.

FY 2004 Cumulative Performance – SST Retrieval West Area						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.08.07	18,720.1	6,329.9	15,577.4	(12,390.2) -66.2%	(9,247.5) -146.1%	26,340.4

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$12.4M; -66.2%) is because of delays to C-200 series retrievals as a result of inclement weather, resource availability, and vapor issues. Additionally, progress on U-200 series retrievals is dependent on the completion of retrieval of the C-200 series tanks. Also, S-103, T-111 and T-200 series retrievals are on hold in anticipation of the revised retrieval sequence plan.

Impact: The variances are not expected to recover this fiscal year; however there is no anticipated impact to waste processing.

Corrective Action: The FY 2005 baseline update will include resequencing of the affected SST retrievals, consistent with the Tri-Party Agreement change request and the results of the ongoing replanning of the CH-TRU Packaging project.

COST VARIANCE

Description and Cause: The fiscal year-to-date unfavorable cost variance (-\$9.2M; -146.1%) is primarily due to S and U-Farm Retrievals experiencing higher than planned costs for engineering design and fabrication services, preventive maintenance, and cost related to vapor issues.

Impact: The negative cost variance will continue and is included in the EAC.

Corrective Action: Activities will be replanned as part of the FY 2005 baseline update.

FY 2004 Cumulative Performance – Treat & Dispose Waste (Excluding Projects)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.09	35,234.4	19,027.3	27,133.5	(16,207.1) -46.0%	(8,106.2) -42.6%	53,217.8

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$16.2M; -46.0%) results from delays in CH-TRU Waste Packaging Part B permit. In addition, placement of the supplemental treatment procurements was delayed to allow evaluation of bid estimates that exceed baseline values.

Impact: CH-TRU Packaging permitting issues and regulatory uncertainty have delayed packaging operation planning such that support of 10 tank retrievals has been reduced to 8 through FY 2006. Also, delays in supplemental treatment procurements could potentially impact the startup of the Bulk Vitrification Test and Demonstration Facility, with potential impact to Tri-Party Agreement Milestone M-062-08.

Corrective Action: A CH-TRU Packaging permit action plan was initiated. Though significant acceleration could be achieved by eliminating Revision 1, recovery to the baseline October 2004 startup date is not practical. The revised bid for supplemental treatment procurements was received April 2, 2004, and the contract was awarded in June 2004. However, the variance cannot be recovered this fiscal year. These activities will be replanned as part of the FY 2005 baseline update.

COST VARIANCE

Description and Cause: The fiscal year-to-date unfavorable cost variance (-\$8.1M; -42.6%) results from added costs to mitigate permitting delays, and additional rework associated with NEPA document revision. Also, the packaging vendor has accumulated additional design costs resulting from inadequate design estimation. In addition, Supplemental Technology Development has incurred higher than planned costs associated with Demonstration Bulk Vitrification System RD&D permit and the S-109 function and requirement document.

Impact: Costs for these activities could be above budget at completion.

Corrective Action: An action plan is being prepared by the packaging vendor to identify cost savings in the design, equipment fabrication, and equipment procurement work scopes. Supplemental Technology activities will be replanned as part of the FY 2005 baseline update.

FY 2004 Cumulative Performance – Initial IHLW Storage facility (W-464) (PED)						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.09.03.04	2,281.1	2,303.1	1,567.3	0.0 1.0%	735.8 31.9%	3,163.2

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date favorable schedule variance (\$0.0M; 1.0%) is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The fiscal year-to-date favorable cost variance (\$0.7M; 31.9%) is due to efficiencies realized on the detailed design activity, resulting from favorable contract performance.

Impact: No impact.

Corrective Action: None required.

FY 2004 Cumulative Performance – Analytical/Technical Services						
	<u>BCWS</u>	<u>BCWP</u>	<u>ACWP</u>	<u>SV</u>	<u>CV</u>	<u>BAC</u>
5.10	16,096.3	15,814.0	15,198.4	(282.3) -1.8%	(615.6) -3.9%	21,642.8

SCHEDULE VARIANCE

Description and Cause: The fiscal year-to-date unfavorable schedule variance (-\$0.3M; -1.8%) is within threshold.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The fiscal year-to-date favorable cost variance (-\$0.6M; -3.9%) is within threshold.

Impact: No impact.

Corrective Action: None required.

Milestone M-43-00, Tank Farm Upgrades

I. Near-Term Deliverables:

- **M-43-00**, Complete Tank Farm Upgrades
Due: 06/30/05
Status: On Schedule. Monitoring field conditions.

II. Significant Accomplishments:

- W-314, Phase 2, Completed 244-S Double Contained Receiver Tank (DCRT) bypass Operational Acceptance Tests
- W-314, Phase 2 AP Farm, Completed the AP-04A upgrade turnover to operations
- E-525, Completed COB AW-11
- E-525, Completed excavation for AZ-301

III. Significant Planned Actions in the Next Six Months:

- W-314, Phase 2 AN Farm: Complete operations acceptance testing and turnover.
- W-314, Phase 2 AP Farm: Complete pit upgrades, electrical and instrument construction.
- W-314, Phase 2 AW Farm: Complete operations acceptance testing and turnover.
- W-314, Phase 2 SY Farm: Complete pit upgrades.
- W-314, Phase 2 AY/AZ Farm: Complete upgrades.
- W-314, A-A Valve pit bypass: Install pipe.
- E-525, Complete condensate and drain pipe procurement.
- E-525, Complete SY farm transfer line modifications

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

- None

V. Issues:

- Field work schedules have been impacted by tank vapor issues and implementation of respiratory policy.
Action: CH2M HILL is monitoring plans, schedules and progress for W-314 and E-525 projects, to finish at least 30 days prior to the TPA milestone date.

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

I. Deliverables:

- **M-46-00J**, Double-Shell Tank Space Evaluation
Due: 09/30/03
Status: **Complete**. Document was transmitted from ORP to Ecology in Letter 03-TPD-093, R. J. Schepens (ORP) to M. A. Wilson (Ecology), "Completion of Hanford Federal Facility Consent Order (HFFACO) Interim Milestones M-045-02L and M-046-00J, dated September 25, 2003.
- **M-46-01J**, Concurrence of Additional Tank Acquisition
Due: 08/12/04
Status: Ecology is requesting a TPA change for completion of reviews by September 3, 2004.
- **M-46-00K**, Double-Shell Tank Space Evaluation
Due: 09/30/04
Status: On hold in anticipation of M-45 TPA change.
- **M-46-01K**, Concurrence of Additional Tank Acquisition
Due: 11/30/04
Status: On schedule
- **M-46-00L**, Double-Shell Tank Space Evaluation
Due: 09/30/05
Status: On schedule
- **M-46-01L**, Concurrence of Additional Tank Acquisition
Due: 11/30/05
Status: On schedule
- **M-46-00M**, Double-Shell Tank Space Evaluation
Due: 09/30/06
Status: On schedule
- **M-46-01M**, Concurrence of Additional Tank Acquisition
Due: 11/30/06
Status: On schedule
- **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. Preparing to perform UT in AP tank farms 1Q FY05.

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

Status: Complete

(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:

- Controls for waste transfers into tanks with planned WTP feed was approved by ORP, ref: Tank Farm Waste Compatibility Program, HNF-SD-WM-OCD-015, July 28, 2004.

III. Significant Planned Actions in the Next Six Months:

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

IV. Issues:

- None to report.

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

	Jul-03	Aug-03	Mar-04	Apr-05**	May-05**	Jun-05**	Jul-04**	Aug-05**	Oct-05**	Nov-05**
Campaign	2003-03	2003-04	2004-01	2005-01	2005-02	2005-03	2005-04	2005-05	2006-01	2006-02
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	497.0	120.9	185	327*	382*	485*	426*	333*	845*	277*
Campaign Boil-off Actual kGallons	464.6	136.1	164							
Target WVR% (Post-Flush)	40%	20%	19%	TBD						
Actual WVR% (Post-Flush)	39.0%	22.5%	17%							
Specific Gravity	1.46	1.42	1.43							

Data Sources:

Evaporator Schedule from: Historical records, IMES, and HTWOS model
 Campaign Upper Limits: Boil down tests prior to each run, model runs are used for preliminary information
 Actual WVR and SpG: Evaporator instruments, tank instruments and laboratory reports

*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-O2D pit modifications construction. (See M-47-01).

- **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 installed March 2004.
 - Transfer pump jumper installed May 2004.
 - Transfer piping is addressed in M-47-02.
 - AP-101 construction was completed July 2004
 - Operational Acceptance Testing is scheduled for 4Q FY2004.

- **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: Ahead of schedule.
 - AP-101 Transfer pump was installed March 2004.
 - Operational Acceptance Testing of AP-101 Transfer pump is scheduled for 4Q FY2004.

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 nearing completion (w/exception of transfer pump installation)

- AY-102 Title II design is ongoing.
- **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:

- AN-101 transfer pump was received and accepted from vendor (Sulzer)
- AZ-102 transfer pump storage contract established with Sulzer.
- AZ-101 As-built drawings completed

III. Significant Planned Actions in the Next Six Months:

- W-211, AZ-101 Retrieval System, complete construction punch list and project turnover (delayed transfer pump installation to FY08).
- AP-101, transfer pump turnover to operations.

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

- None

V. Issues:

- Field work has been impacted by tank vapors and implementation of respiratory policy.
Action: CH2M HILL is monitoring plans, schedules and field progress for all field projects to support milestone completion.

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

I. SST Retrieval and Closure Program

- **M-45-00C**, "Complete Renegotiation of Second Phase SST Waste Retrieval Activities" (September 30, 2006 through September 30, 2015)
Due: 02/28/04
Status: **Completed**
- **M-45-06-T20A**, "Submit SST System Implementation Plan in Support of Retrieval and Closure Activities"
Due: 06/30/04
Status: On hold pending approval of M-45-04-01 change request.
- **M-45-06-T20B**, "Submit SST System Implementation Plan in Support of Retrieval and Closure Activities"
Due: 06/30/06
Status: On hold pending approval of M-45-04-01 change request.
- **M-45-06-T20C**, "Submit SST System Implementation Plan in Support of Retrieval and Closure Activities"
Due: 06/30/08 (and every two years thereafter)
Status: On hold pending approval of M-45-04-01 change request.
- **M-45-00D**, "Complete Renegotiation of the Remainder of the SST Waste Retrieval and Closure Program"
Due: 06/30/2011
Status: On schedule. TPA Change Request M-45-04-01 proposes change in wording and due date to "initiate negotiation of SST retrieval and closure activities for period from 9/2008 through 9/2013" by 01/31/08.
- **M-45-06-T03**, "Initiate Closure Actions on an Operable Unit or Tank Farm Basis. Closure shall follow completion of the retrieval actions under proposed milestone M-45-05."
Due: 03/31/2012
Status: On schedule. TPA Change Request M-45-04-01 proposed change in wording from "operable unit or tank farm basis" to "waste management area basis."
- **M-45-06-T04**, "Complete Closure Actions on one Operable Unit or Tank Farm"
Due: 03/31/2014
Status: On schedule. TPA Change Request M-45-04-01 proposes change in wording from "operable unit or tank farm basis" to "waste management area basis."

- **M-45-00**, "Complete Closure of all SST Farms"
Due: 09/30/2024
Status: On schedule
- **M-45-06**, "Complete Closure of all SST Farms in Accordance with Approved Closure/Post Closure Plans"
Due: 09/30/2024
Status: On schedule

II. SST Retrieval Sequence Document

- **M-45-02L**, "Submit Annual Updates to SST Retrieval Sequence Document"
Due: 09/30/03
Status: **Completed**. ORP letter 03-TPD-093, dated 09/25/03.
- **M-45-02M**, "Submit Annual Updates to SST Retrieval Sequence Document"
Due: 09/30/04
Status: On hold pending approval of TPA change request M-45-04-01; wording changed from "annual" to "biennial" updates; due date changed from 09/30/04 to 03/01/06 and every two years thereafter.
- **M-45-02N**, "Submit Annual Updates to SST Retrieval Sequence Document"
Due: 09/30/05
Status: On hold pending approval of TPA change request M-45-04-01; wording changed from "annual" to "biennial" updates; due date changed from 09/30/04 to 03/01/06 and every two years thereafter.
- **M-45-02O**, "Submit Annual Updates to SST Retrieval Sequence Document"
Due: 09/30/06
Status: On hold pending approval of TPA change request M-45-04-01; wording changed from "annual" to "biennial" updates; due date changed from 09/30/04 to 03/01/06 and every two years thereafter.
- **M-45-02P**, "Submit Annual Updates to SST Retrieval Sequence Document"
Due: 09/30/07 (and annually thereafter)
Status: On hold pending approval of TPA change request M-45-04-01; wording changed from "annual" to "biennial" updates; due date changed from 09/30/04 to 03/01/06 and every two years thereafter.

III. SST Retrieval Demonstration Projects

- **M-45-00B**, "Complete Near-Term SST Waste Retrieval Activities"
Due: 09/30/06
Status: On schedule per supporting milestones, as noted below.

C-106

- **M-45-06A**, "Submit a Certified (Framework) SST System Closure Plan and C-106 Waste Retrieval and Closure Demonstration Plan
Due: 12/19/02
Status: **Completed**. 12/17/02.
- **M-45-05J-T01**, "Complete C-106 Waste Retrieval and Closure Demonstration Project Design (including all physical systems and design/operating strategies for LDMM)"
Due: 04/30/03
Status: **Completed**. C-106 was pumped week of 03/31/03.
- **M-45-05K-T01**, "Complete C-106 Waste Retrieval and Closure Demonstration Project Construction (including all physical systems and design/operating strategies for LDMM)"
Due: 09/30/03
Status: **Completed**. ORP letter 03-TPD-082, dated 08/21/03.
- **M-45-05L-T01**, "Complete Full Scale C-106 Waste Retrieval"
Due: 11/1/03
Status: **Completed**. C-106 retrieval completed to limits of acid dissolution and modified sluicing technology on 12/31/03. Appendix H exemption request submitted to Ecology on 06/02/04.
- **M-45-05M-T01**, "Submit C-106 Waste Retrieval Results, Analysis of Residual Waste(s), and (if appropriate) Request for Exemption to the Criteria Pursuant to Agreement Appendix H"
Due: 02/27/04
Status: **Completed**. RPP-20110, "Retrieval Data Report for Tank 241-C-106" transmitted to ORP on 02/26/04 partially satisfying M-45-05M-T01. The C-106 residual waste analysis, risk assessment, and the Appendix H exemption request were transmitted to Ecology on 06/02/04.
- **M-45-05H**, "Interim Completion of Tank C-106 SST Waste Retrieval and Closure Demonstration Project"
Due: 06/30/04
Status: **Completed**. All supporting documents have been submitted to Ecology.
- **M-45-05N-T01**, "Final Completion of Tank C-106 SST Retrieval and Closure Demonstration Project"
Due: 06/30/05
Status: On schedule. Due date revised per M-45-04-02, approved on 04/30/04. Due date changed from 12/31/04 to 06/30/05.

Significant Accomplishments:

- Released C-106 tank fill design.
- Procured C-106 construction contract for tank isolation.
- Issued RPP-20110, Rev 1, "Stage I Retrieval Data Report for 241-C-106."
- Issued RPP-20577, Rev 0, "Stage II Retrieval Data Report for 241-C-106."
- Issued RPP-20658, "Basis for Exception to the Hanford Federal Facility Agreement and Consent Order Waste Retrieval Criteria for Single-Shell Tank 241-C-106."
- Completed PNNL efforts on the C-106 Release Rate Studies.
- Generated the Tank Characterization Report (TCR) for C-106.
- Submitted C-106 residual waste analysis, risk assessment, closure plan, and Appendix H exemption request to Ecology on completing TPA target milestones M-45-05L-TO1 and M-45-05M-T01; and TPA milestone M-45-05H.
- Updated RPP-19659, "Calculation for the Transuranic Waste Determination for Tank 241-C-106."

Significant Planned Activities in the Next Six Months:

- Continue preparations for C-106 interim closure.
- Receive Ecology approval for C-106 Appendix H.
- Issue C-106 Release Rate Studies Data Report.
- ORP approval of C-106 Activity Description.
- ORP approval of C-106 Safety Evaluation and Safety Basis Amendment.

Issues:

- Completeness determination on C-106 closure plan application expected from Ecology by August 31, 2004. All other Closure Plan submittals are on hold pending the C-106 completeness determination, except for S-102 and S-112 which have associated TPA milestone commitments.
- Due to air respirator requirements in tank farms, C-106 isolation field work has been delayed into FY 2005.

S-112

- **M-45-03D**, "Complete S-112 Saltcake Waste Retrieval Technology Demonstration Design" (all physical systems including LDMM provisions)
Due: 05/31/03
Status: **Completed**. ORP letter 03-TPD-048, dated 05/22/03.
- **M-45-03E**, "Complete S-112 Saltcake Waste Retrieval Technology Demonstration Construction (all physical systems including LDMM provisions)"
Due: 03/31/04
Status: **Completed**. ORP letter 03-TPD-112, dated 11/7/03.
- **M-45-06B**, "Submit a Certified (Framework) SST System Closure Plan and S-112 Waste Retrieval and Closure Demonstration Plan

Due: 09/30/04

Status: On schedule. TPA Change Request M-45-04-01 proposes changes in the wording to require a "Certified S-112 Component Closure Activity Plan."

- **M-45-03C**, "Complete Full-Scale Saltcake Waste Retrieval Technology Demonstration at Tank S-112 (all physical systems including LDMM provisions)"
Due: 03/31/05
Status: On accelerated schedule. Forecast completion by 10/31/04.
- M-45-13, "Interim Completion of Tank S-112 Waste Retrieval and Closure Demonstration Project"
Due: 12/31/05
Status: On accelerated schedule. Forecast completion by 09/30/05.
- M-45-13-T01, "Final Completion of Tank S-112 SST Retrieval and Closure Demonstration Project"
Due: 12/30/06
Status: On accelerated schedule. Forecast completion by 11/09/05.

Significant Accomplishments:

- Retrieval is at 90.2% (554 Kgal of 614 Kgal).
- Completed CH2M HILL certification for S-112 closure plan and submitted to ORP.
- Issued tank isolation design for S-112.
- Resolved volume measurement errors issue.
- Issued clamshell test summary report.
- Prepared risk assessment for RCRA Closure Plan.
- Awarded contract for S-112 off-riser sampler.
- Initiated procurement of construction contract for S-112 isolation.

Significant Planned Activities in Next Six Months:

- Complete retrieval of S-112.
- Conduct post retrieval sampling of S-112 for closure.
- Issue retrieval data report and other information documenting completion of retrieval operations.
- Incorporate ORP comments into S-112 DQO and submit to ecology.
- Initiate S-112 off-riser procurement and system delivery.
- Incorporate comments and issue S-112 Tank Fill Design.
- Incorporate risk assessment and submit a Certified (Framework) SST System Closure Plan Modification and Waste Retrieval and Closure Demonstration Plan for S-112 to Ecology for review and approval by 09/30/04 (M-45-06B).
- Completed Full-Scale Saltcake Waste Retrieval Technology Demonstration at Tank S-112; all physical systems including LDMM provision (M-45-03C).

Issues:

- Retrieval currently shutdown. Restart following S-A valve pit manifold installation and SY-102 drop leg replacement.
- All field work delayed pending incorporation of compensatory measures in work packages for performance of radiological controls.
- Work on S-112 Closure Plan continuing at risk pending Ecology approval of C-106 Closure Plan.

S-102

- **M-45-05B**, "Complete S-102 Initial Retrieval Project Design (all physical systems including LDMM provisions)
Due: 05/31/03
Status: **Completed**. ORP letter 03-TPD-048, dated 05/22/03.
- **M-45-05C**, "Complete S-102 Initial Waste Retrieval Project Construction (all physical systems including LDMM provisions)"
Due: 03/31/04
Status: **Completed** 03/1/04.
- **M-45-06C**, "Submit a Certified (Framework) SST System Closure Plan and S-102 Waste Retrieval and Closure Demonstration Plan
Due: 09/30/04
Status: On schedule. TPA Change Request M-45-04-01 proposed changes in the wording to require a "Certified S-102 Component Closure Activity Plan."
- **M-45-05A**, "Complete Initial Waste Retrieval from SST S-102"
Due: 03/31/05
Status: On accelerated schedule. Forecast completion by 12/1/04.
- **M-45-15**, "Interim Completion of Tank S-102 SST Waste Retrieval and Closure Demonstration Project"
Due: 12/31/05
Status: On accelerated schedule. Forecast completion by 09/03/05.
- **M-45-15-T01**, "Final Completion of Tank S-102 SST Retrieval and Closure Demonstration Project"
Due: 12/31/06
Status: On accelerated schedule. Forecast completion by 12/15/05.

Significant Accomplishments:

- Completed Operations Acceptance Tests for waste retrieval system and portable exhauster.
- Continued testing of High Resolution Resistivity leak detection and monitoring system on S-102 (baseline measurements).
- Initiated S-102 cascade line isolation grout test.
- Completed S-102 cascade line isolation RWDD Test Report.

- Awarded a design contract for tank preparation and Phase I tank fill for S-102.
- Completed CH2M HILL certification for the S-102 closure plan and submitted to ORP.
- Issued tank isolation design for S-102.
- Initiated installation of manifold for S-A valve pit to allow concurrent S-102 and S-112 waste retrieval.
- Continuing with replacement of SY-102 drop leg.
- Prepared hose-in-hose transfer line removal work packages.
- Issued cascade line isolation design.

Significant Planned Activities in Next Six Months:

- Complete Tank Volume Measurement System equipment evaluation at the Cold Test Facility.
- Incorporate comments and release S-102 Tank Fill Design.
- Complete work package closeout required for startup.
- Initiate retrieval operations by 9/15/04.
- Complete retrieval operation by 12/1/04.
- Submit a Certified (Framework) SST System Closure Plan Modification and Waste Retrieval and Closure Demonstration Plan for S-102 to Ecology (M-45-06C).

Issues:

- The tendency for sodium phosphate to solidify in S-102, DST, and evaporator systems may cause problems with retrieval. Evaluating the waste process impacts of sodium phosphate on the DST system. Results expected in mid-August.
- All field work delayed pending incorporation of compensatory measures in work packages for performance of radiological controls.
- Work on S-102 Closure Plan continuing at risk pending Ecology approval of C-106 Closure Plan.
- Drop leg at SY-102 plugged; replacement underway.

C-104

- **M-45-03G**, "Complete C-104 Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Cold Demonstration"
Due: 06/30/04
Status: **Completed** (11 months ahead of schedule); ORP letter 03-TPD-074, 08/13/03
- **M-45-03H**, "Complete C-104 Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration Design (all physical systems including LDMM provisions)"
Due: 09/30/04
Status: Due date being revised as a result of recent TPA milestone negotiations.

- **M-45-03I**, "Complete C-104 Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration Construction (all physical systems including LDMM provisions)"
Due: 09/30/06
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-06D**, "Submit a Certified (Framework) SST System Closure Plan and C-104 Waste Retrieval and Closure Demonstration Plan"
Due: 06/30/07
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-03F**, "Complete Full-Scale Sludge/Hard Heel, Confined Sluicing and Robotic Technologies, Waste Retrieval Demonstration a SST C-104"
Due: 09/30/07
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-14**, "Interim Completion of Tank C-104 SST Waste Retrieval and Closure Demonstration Project"
Due: 06/30/08
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-14-T01**, "Final Completion of Tank C-104 SST Retrieval and Closure Demonstration Project"
Due: 06/30/09
Status: Due date being revised as a result of recent TPA milestone negotiations.

Significant Accomplishments (C-Farm Acceleration):

- Supported C-Farm Acceleration Closure Project.
- Continued development of cost, scope, schedule, and technical baselines for C-Farm acceleration.
- Completed detailed cost estimate for C-Farm acceleration for review and validation.
- Approved C-Farm Statement of Work for ventilation system design and engineering support.
- Awarded contract for C-Farm ventilation system design and engineering support; commenced installation design for new exhausters in C-Farm.
- Commenced installation design contract for new exhausters in C-Farm.
- Received 30% Final Design Review Package for review for C-109.
- C-109 TWRWP submitted to Ecology for review.
- Released an approved Statement of Work for a heating, ventilation, and air conditioning (HVAC) procurement specification.
- Statement of Work for final design for C-101 was approved; Engineering Change Notice to Level II Specification and In-Tank Vehicle/Umbilical Management System was approved.
- Completed review of the 30% Design Review Package for equipment removal and installation for C-102.

Significant Planned Activities in Next Six Months:

- C-104 retrieval and closure project milestones are being revised as a result of recent TPA milestone renegotiations; TPA change request being prepared.
- Continue efforts to accelerate C-Farm retrieval and interim closure.
- Complete retrieval system designs for C-101, C-102, C-108, and C-109.

Issues:

- None

S-105/S-106/S-103

- **M-45-05-T17**, "Submit S-105, S-106, and S-103 Waste Retrieval and Closure Demonstration Functions and Requirements Document"
Due: 04/30/05
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-05E**, "Complete S-105, S-106, and S-103 Waste Retrieval and Closure Demonstration Project Design (including all physical systems and design/operating strategies for LDMM for each tank)"
Due: 06/30/07
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-05F**, "Complete S-105, S-106, and S-103 Waste Retrieval and Closure Demonstration Project Construction (including all physical systems and design/operating strategies for LDMM for each tank)"
Due: 09/30/08
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-06E**, "Submit a Certified (Framework) SST System Closure Plan Modification for Tanks S-105, S-106, and S-103 Closure Demonstration Plan"
Due: 09/30/08
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-05G-T01**, "Complete S-105, S-106, and S-103 Waste Retrieval"
Due: 10/31/09
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-16**, "Interim Completion of Tank S-105, S-106, and S-103 SST Waste Retrieval and Closure Demonstration Project"
Due: 07/31/10
Status: Due date being revised as a result of recent TPA milestone negotiations.
- **M-45-16-T01**, "Final Completion of Tank S-105, S-106, and S-103 SST Retrieval and Closure Demonstration Project"
Due: 07/31/11
Status: Due date being revised as a result of recent TPA milestone negotiations.

Significant Accomplishments

- None. Activities are planned in out-years.

Significant Planned Activities in the Next Six Months:

- Due dates being revised as a result of recent TPA milestone renegotiations.

Issues:

- None

Non-TPA Milestone Tanks (forecast completion dates per IMES 8/1/04)**C-200s**

- Submit F&R Document to Ecology (for approval)
Due: 12/23/03
Status: **Completed**
- Submit Closure Plan to Ecology (for review)
Due: 02/10/04
Status: **Completed**. CH2M HILL certification of closure plan completed on 03/3/04 and document was submitted to ORP
- Complete Retrieval System Design
Due: 02/12/04
Status: **Completed**
- Complete Retrieval System Construction
Due: 03/10/04
Status: **Completed**
- Complete Retrieval Operations
Due: 11/30/04
Status: Retrieval of C-203 was initiated in July 2004. Other C-200 series tanks will initiate retrieval in September 2004. C-200 series tanks forecasted for completion of retrieval in November 2004.
- Complete Interim Closure
Due: 12/20/05
Status: On schedule

Significant Accomplishments:

- Awarded a design contract for tank preparation and Phase I tank fill for C-200 tanks.
- Completed CH2M HILL certification for C-200 tanks closure plan and submitted to ORP.

- Received Washington State Department of Health (WDOH) approval of the C-200 series Notice of Construction (NOC) revision.
- Completed operational configuration hookup.
- Initiated retrieval operations in C-203 in July 2004; retrieval operations roughly 70% complete in Tank 241-C-203.
- Received approval of Documented Safety Analysis change to close "Potentially Inadequate Safety Analysis" (>25 volume % solids).
- Completed C-200 series tanks laboratory data package validation/verification.
- Completed C-200 series tanks release rate studies.
- Initiated pre-retrieval inventory and vadose zone inventory data packages in support of C-200's risk assessment.
- Initiated C-200's DQO revision with Ecology.
- Continued work with Ecology to finalize C-200's F&R document.
- Completed C-200's BBI updates.
- Generated C-200's Auto Tank Characterization Report In-Tank Data
- Released C-200's Tank Fill Design.

Significant Planned Activities in the Next Six Months:

- Place C-200's pre-retrieval inventory into Decision Management Tool.
- Complete C-200's BBI/vadose zone inventory data package.
- Issue C-200's risk assessment for Interim Closure Data Report.
- Complete C-200's Data Quality Objective document.
- Complete C-200's certified Closure Plan and submit to Ecology.
- Commence and complete retrieval operations for C-201, C-202, C-203, and C-204.
- Complete post-retrieval closeout documentation.

Issues:

- Retrieval shutdown to repair high liquid level switch.
- Work has been impacted by vapor concerns and breathing air requirements, and work stoppage to address radiological compensatory measures.

C-103

- Submit F&R Document to Ecology (for review)
Due: 02/18/04
Status: **Completed**
- Submit Closure Plan to Ecology (for review)
Due: 2/23/05
Status:
- Complete Retrieval System Design
Due: 05/18/04
Status: **Completed**
- Complete Retrieval System Construction
Due: 05/25/04

- Status: Forecast completion by 1/31/05
- Complete Retrieval Operations
Due: 12/23/04
Status: Forecast completion by 10/31/05
 - Complete Interim Closure
Due: 07/26/05
 - Status: Forecast completion by 05/31/06

Significant Accomplishments:

- Approved quality assurance inspection procedure and fabrication Statement of Work, Revision 3.
- Performed lifting bail assessment for Pits 03A and 03C.
- Approved installation design for C-103 leak detection, monitoring, and mitigation; installed High Resolution Resistivity LDMM equipment.
- Completed the Industrial Hygiene Monitoring Plan.
- Completed factory acceptance testing of 3i sluicing equipment; received 3i sluicers, control consoles, and hydraulic power units; completed testing of sluicer nozzles.
- Approved criticality safety evaluation report for operational acceptance checklist
- Approved the Operational Acceptance Checklists.
- Installed hose-in-hose transfer line and shield pits from C-Farm to AN-Farm.
- Received and tested Gorman Rupp pump assemblies for pits 03B and 05B.
- Completed cut-up of saltwell pump and screen.
- Updated criticality safety evaluations and criticality safety manual process control plan.
- Installed hose-in-hose transfer line from AN-Farm to C-Farm.
- Developed sub-test and test plans.
- Approved work package for sluice nozzle installation.
- Submitted C-103 TWRWP to Ecology for review.

Significant Planned Activities in the Next 6 Months:

- Complete retrieval system procurement.
- Initiate retrieval system installation, startup, and readiness.

Issues:

- Approval to use supernatant recirculation; retrieval system design proceeding at risk.

C-105

- Submit F&R Document to Ecology (for review)
Due: 02/9/04
Status: **Completed**

- Submit Closure Plan to Ecology (for review)
Due: 10/20/04
Status: On schedule
- Complete Retrieval System Design
Due: 03/15/04
Status: **Completed**
- Complete Retrieval System Construction
Due: 05/17/04
Status: Forecast completion by 1/31/05
- Complete Retrieval Operations
Due: 02/21/05
Status: Forecast completion by 12/31/05
- Complete Interim Closure
Due: 11/30/05
Status: Forecast completion by 10/31/06

Significant Accomplishments:

- Retrieval technology has changed from Modified Sluicing to Mobile Retrieval System. Design work will start in early FY 2005.

Significant Planned Activities in the Next 6 Months:

- Initiate design for Mobile Retrieval System.
- Submit closure plan to Ecology for review.
- Submit TWRWP to Ecology, to supersede F&R.

Issues:

- Retrieval technology has changed from Modified Sluicing to Mobile Retrieval System. Design work will start in early FY 2005.

U-200s

- Submit TWRWP to Ecology (for review)
Due: 02/24/04
Status: Forecast for completion by August 2004; impacted by delays in C-200 series tank retrievals and associated documentation.
- Submit Closure Plan to Ecology (for review)
Due: 12/28/04
Status: On schedule
- Complete Retrieval System Design
Due: 07/22/04
Status: **Completed**

- Complete Retrieval System Construction
Due: 07/7/04
Status: Forecast for completion by January 2005; impacted by delays in C-200 series tank retrievals and associated documentation.
- Complete Retrieval Operations
Due: 09/23/04
Status: Completion date under negotiation.
- Complete Interim Closure I
Due: 10/25/05
Status: On schedule

Significant Accomplishments:

- Completed the final design for the new layout of the U-200 retrieval system.
- Received four in-tank articulated mast systems.
- Completed U-200 Best Basis Inventory/Vadose Zone Inventory Data Package.
- Completed ORP review of the TWRWP.
- Completed the redesign and fabrication of the SY-102 slurry distributor.
- Awarded the U-200 Phase II construction contract.
- Completed revision of U-200's Decision Management Tool (DMT) including insertion of WMA inventory into DMT.
- Completed fabrication and delivery of articulated mast containment boxes.
- Completed procurement and delivery of U-200's vacuum hose-in-hose transfer lines.
- Completed fabrication and delivery of ventilation system demisters and associated ducting.
- Continued installation of U-SY transfer line.
- Completed mockup for the replacement and flushing of the SY-102 slurry drop leg.

Significant Planned Work for the Next 6 Months:

- Complete replacement for the slurry distributor in SY-102.
- Complete work package development.
- Complete layout of hose-in-hose transfer line between U-Farm and SY-Farm.
- Complete retrieval system procurement and fabrication activities.
- Complete retrieval system installation.
- Submit TWRWP document to Ecology for review.
- Submit closure plan to Ecology for review.

Issues:

- U-200 construction schedule continuing to be negatively impacted due to schedule impacts incurred for the C-200 tanks.
- Work has been impacted by vapor concerns and breathing air requirements, and work stoppage to address radiological compensatory measures.

B-200s

- Submit TWRWP to Ecology (for review)
Due: 03/18/04
Status: Forecast completion by 2/28/05.
- Submit Closure Plan to Ecology (for review)
Due: 5/30/06
Status: On schedule.
- Complete Retrieval System Design
Due: 08/03/05
Status: **Completed.**
- Complete Retrieval System Construction
Due: 8/31/05
Status: On schedule. Activities aligned with overall transuranic retrieval and packaging schedule.
- Complete Retrieval Operations
Due: 5/31/06
Status: On schedule. Activities aligned with overall transuranic retrieval and packaging schedule.
- Complete Interim Closure
Due: 2/28/07
Status: On schedule. Activities aligned with overall transuranic retrieval and packaging schedule.

Significant Accomplishments:

- Completed the final design of the B-200 vacuum retrieval system.
- Continued the fabrication and factory acceptance testing of the B-200 vacuum retrieval system; estimated arrival at Hanford by 9/30/04.
- Initiated revision of the Decision Management Tool.

Significant Planned Work in the Next 6 Months:

- Complete fabrication of the B-200's retrieval system and commence vacuum retrieval system installation
- Submit TWRWP document to Ecology for review.
- Submit closure plan to Ecology for review.
- Complete revision of the Decision Management Tool (DMT) including insertion of Waste Management Area B inventory into the DMT.

Issues:

- None

T-200s

- Submit TWRWP Document to Ecology (for review)
Due: 2/28/05
Status: On schedule.
- Submit Closure Plan to Ecology (for review)
Due: 8/10/06
Status: On schedule.
- Complete Retrieval System Design
Due: 4/30/05
Status: On schedule. Activities aligned with overall transuranic retrieval and packaging schedule.
- Complete Retrieval System Construction
Due: 2/28/06
Status: On schedule. Activities aligned with overall transuranic retrieval and packaging schedule.
- Complete Retrieval Operations
Due: 9/30/06
Status: On schedule. Activities aligned with overall transuranic retrieval and packaging schedule.
- Complete Interim Closure
Due: 03/15/07
Status: On schedule. Activities being planned to align with overall transuranic retrieval and packaging schedule.

Significant Accomplishments:

- Continued fabrication and factory acceptance testing of the T-200 vacuum retrieval system; forecast completion by 11/30/04.

Significant Planned Work in the Next 6 Months:

- Complete fabrication of the T-200 vacuum retrieval system.
- Commence with retrieval system installation and startup testing.
- Submit TWRWP document to Ecology for review.

Issues:

- None

IV. SST Retrieval from Remaining Tanks

- **M-45-05-T05, "Initiate Tank Retrieval from 5 Additional SSTs"**
Due: 09/30/07
Status: On schedule.

- **M-45-05-T06**, "Initiate Tank Retrieval from 5 Additional SSTs" by 09/30/08
Due: 09/30/08
Status: On schedule.
- **M-45-05-T07**, "Initiate Tank Retrieval from 7 Additional SSTs" by 09/30/09
Due: 09/30/09
Status: On schedule.
- **M-45-05-T08**, "Initiate Tank Retrieval from 8 Additional SSTs" by 09/30/10
Due: 09/30/10
Status: On schedule.
- **M-45-05-T09**, "Initiate Tank Retrieval from 10 Additional SSTs" by 09/30/2011
Due: 09/30/2011
Status: On schedule.
- **M-45-05-T10**, "Initiate Tank Retrieval from 12 Additional SSTs" by 09/30/2012
Due: 09/30/2012
Status: On schedule.
- **M-45-05-T11**, "Initiate Tank Retrieval from 14 Additional SSTs" by 09/30/2013
Due: 09/30/2013
Status: On schedule.
- **M-45-05-T12**, "Initiate Tank Retrieval from 17 Additional SSTs" by 09/30/2014
Due: 09/30/2014
Status: On schedule.
- **M-45-05-T13**, "Initiate Tank Retrieval from 20 Additional SSTs" by 09/30/2015
Due: 09/30/2015
Status: On schedule.
- **M-45-05-T14**, "Initiate Tank Retrieval from 20 Additional SSTs" by 09/30/2016
Due: 09/30/2016
Status: On schedule.
- **M-45-05-T15**, "Initiate Tank Retrieval from 20 Additional SSTs" by 09/30/2017
Due: 09/30/2017
Status: On schedule.
- **M-45-05**, "Retrieve Waste from All Remaining SSTs" by 09/30/2018
Due: 09/30/2018
Status: On schedule.

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: 1/31/05
Status: Fieldwork completed, 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: 1/31/06
Status: Field work to be completed in FY04 and FY05, lab work to begin after 1/04, 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: 1/31/07
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:

- A new Vadose Zone characterization borehole was completed near C-105.
- Study is continuing to determine the cause of corrosion of two groundwater monitoring wells at WMA A-AX. Samples of casing corrosion and adjacent soil were taken to determine the cause of the corrosion.
- RCRA Groundwater monitoring detection wells are being installed at SST WMA's.

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.

IV. Issues:

- Plan work to incorporate new respiratory procedures at Vadose zone sites in Tank Farms.
- Change in due dates for M-45-55-T03 and T-04.

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: On schedule

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:

- Initiated IDF construction of non-critical systems – July 2004.
- Completed IDF Performance Assessment Maintenance Plan – August 2004.

III. Significant Planned Actions in the Next Six Months:

- Complete IDF operation support documents (i.e. Operations and Maintenance Philosophy, System Design Description) – August 2004.
- Initiate IDF excavation of non-critical systems (M-90-08) – August 2004.
- Update the IDF Pre-Operation Monitoring and Closure Plans – September 2004.
- Complete IDF pre-operational soil sample analysis - September 2004.
- Draft Tank Farm DSA modification to incorporate IDF – September 2004.

- Drafty Operations Performance Specification – September 2004.
- Issue FY04 Performance Assessment Annual Summary– September 2004.
- Issue IDF Waste Acceptance Criteria document – September 2004.
- Complete IHLW Shipping/Storage Pre-conceptual Studies – September 2004.
- Begin IHLW Permit NOD Workshops – September 2004.
- Construct two additional groundwater monitoring wells for IDF – October 2004.
- Ecology issues a RCRA Part B Permit for IDF to DOE –TBD.
- Complete IDF excavation and initiate construction of Critical Systems – December 2004 (RCRA permit dependent).
- Draft Air Permit for IDF Operations – December 2004.

IV. Issues

- Further delay in issuance of an IDF final status RCRA permit will impact the schedule for construction of critical systems.

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
Status: On schedule; due date changed from 09/30/04 to 03/31/05 per TPA Change Request M-23-04-01 (LOWs for C-102, C103, C-105, and C-112 which are under accelerated retrieval)
- **M-23-27**, Complete 244-CR Liquid Level Assessments
Due: 12/30/04
Status: On schedule

II. Significant Accomplishments:

- M-23-25F completed; LOWs installed in SX112, T-101, TX-103, and TX-104.

- Completed installation of the TX-116 replacement LOW and initiated liquid level measurements.

III. Significant Planned Actions in the Next Six Months:

- Continue monitoring LOWs installed under M-23-25F.
- Continue LOW installation work under M-23-25G, as amended by TPA Change Request M-23-04-01, for C-102, C-103, C-105, and C-112 (C Farm tanks under accelerated retrieval).

IV. Issues:

- None.

Interim Stabilization Consent Decree

I. Near-Term Deliverables:

- Reduce Total Liquids to 2% of Total Volume from SSTs (D-001-00V)
Due: 09/30/03
Status: **Completed.** Letter sent to Ecology 09/10/03.
- Complete Interim Stabilization of all 29 SSTs (D-001-00)
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: Eleven 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, 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). Three tanks are in evaluation to document completion of pumping and satisfaction of interim stabilization criteria (BY-106, S-111, and U-108).
- Completed Consent Decree Milestone D-001-00-R20, "Single-Shell Tank Interim Stabilization Activity Report for the Second Quarter of Fiscal Year 2004." Final report was transmitted from ORP to Ecology on 04/28/04 ahead of the 04/30/04 due date.
- Completed Consent Decree Milestone D-001-00-R21, "Single-Shell Tank Interim Stabilization Activity Report for the Third Quarter of Fiscal Year 2004." Final report was transmitted from ORP to Ecology on 7/19/04 (Letter #04-TOD-048).
- Issued the Single-Shell Tank Interim Stabilization Evaluation Form for Tank 241-A-101 documenting completion of pumping and satisfaction of interim stabilization criteria.
- Issued the Single-Shell Tank Interim Stabilization Evaluation Form for Tank 241-SX-102 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).

III. Significant Planned Actions in the Next 6 Months:

- Complete and issue the Interim Stabilization Evaluation Forms for the three tanks in evaluation mode (BY-106, S-111, and U-108) documenting completion of pumping and satisfaction of interim stabilization criteria.
- Issue the last quarterly Single-Shell Tank Interim Stabilization Activity Reports to Ecology by 10/31/04 (Consent Decree Milestone D-001-00-R22).

IV. Issues:

- Interim stabilization of S-102 and S-112 held in "abeyance" by third amendment to Consent Decree provided both tanks are retrieved by 3/31/05. S-112 retrieval forecasted for completion by 10/31/04. Completion of retrieval of S-102 by 3/31/05 may be in jeopardy given delays due to phosphate formation, breathing air requirements, and work stoppage to address radiological compensatory measures.

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: On schedule
- **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:

- All UT Field work is complete with exception of AP-104 UT bottom exam and TSAFT UT exam of SY-101 lower knuckle region.
- Approved and issued M-48-12 examination report for tank SY-103.

III. Significant Planned Actions in the Next Six Months:

- Complete and Issue the M-48-12 examination reports for SY-101, SY-102, and AP-104.
- Complete video inspections of AP-106.

IV. Issues:

- New respiratory requirements in all of the tank farms have slowed the pace of the work resulting in some work having to be deferred to FY05. A recovery plan is being implemented to bring on a second UT crew for FY05 to complete the deferred work and complete the M-48-13 milestone work.

In Tank Characterization and Summary

As of August 5, 2004

I. Significant Accomplishments:

- Sampling Activities:

Program	Tank Sampled			
	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
Cross-Site Transfer/ Compatibility		AN-106 (G)*		
Chemistry Control	AY-102 (C)	AZ-102 (C) AN-106 (G)*	AW-105 (G)	
SST Retrieval/Closure	SY-101 (G) C-106 (G) SY-102 (G) C-202 (G) C-201(G)	C-106(G) SY-102(G)		
Evaporator Operations	AN-101 (G) AW-102 (G)	AP-107 (G)	AP-101 (G) AP-108 (G)	
Supplemental Technology	S -112 (G)	S-112 (G)		
Industrial Hygiene			C-102 (V), C-103 (V) C-104 (V), C-106 (V) C-107 (V), C-108 (V) C-110 (V), C-111 (V) C-203 (V), C-204 (V)	C-112 (V)

* Same sampling event for multiple programs.

BBI Updates:

- Completed 32 BBI updates during the 1st Quarter of FY 2004.
- Completed 20 BBI updates during the 2nd Quarter of FY 2004.
- 177 SSTs and DST Tanks Updated & Published to TWINS on July 28, 2004.

DQO:

- Component Closure DQO for C-200 Tanks, IH Vapor DQO, SST Retrieval DQO and Bulk Vitrification DQO are in progress. Representatives from Ecology participated in the development of these DQOs.

II. Planned Action Within the Next Six Months:

- Continuation of BBI updates.

III. Issues:

- None

Hanford Waste Treatment and Immobilization Plant (WTP) 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. A brief status is provided below for each facility. Status of these individual facilities is provided during the monthly Program Manager's Meeting. This status reflects June 2004 data.

Pretreatment (PT) Facility: The PT Facility mission is to separate radioactive tank waste into Highly Radioactive Waste and Low Activity Waste fractions and transfer each waste to its respective vitrification facilities. Construction of the facility began November 2002 and is scheduled to be completed in January 2008. This project is approximately 33% complete.

High Level Waste (HLW) Facility: The HLW Facility will receive the HLW fraction from the PT Facility and vitrify it to immobilize this HLW. Construction began July 2002 and is scheduled for completion in November 2007. This Project is approximately 29%.

Low-Activity Waste (LAW): The LAW Facility will receive the LAW fraction from the PT Facility and vitrify it to immobilize this LAW. Construction began July 2002 and is scheduled for completion November 2007. This facility is approximately 33% complete.

Analytical Laboratory (LAB): The LAB Facility will 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. The LAB will outsource low level and non-radioactive (environmental) samples. This project as a whole is approximately 13%.

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. The project is approximately 40%.

Project Baseline Cost: Through June 2004, the project cost is provided in the table below. The contingency is \$466 million which allows 14.8% contingency for remaining to go work (down from 18.4% in May). BNI submitted the 2004 Estimate at Completion (EAC) package on July 29, 2004 (last column in the table).

	March 2003 Approved Baseline	Current June 2004	Estimate at Completion July 29, 2004*
PMB	4,856M	4,940M	5,045M
Contingency	550M	466M	422M
Fee	225M	225M	225M
Transition Costs	50M	50M	50M
TPRA	100M	100M	88M
TOTAL	5.781 B	5.781	5,830M

* EAC increased potential costs; contingency by \$48 million in commissioning; increased contingency in schedule by \$25 million; maintained 80% confidence level.

Baseline Schedule

Engineering is approximately 67 percent complete; construction is 30 percent complete; and the overall Project is approximately 37 percent complete (based on dollars). The tank mixing and hydrogen control issue could have a 3-5 month impact to the facilities schedules. The PT Facility developed a recovery schedule for production of piping drawings in May and currently is staying close to the production required to meet this recovery plan. However, PT is still about 80,000 linear feet behind schedule. PT and High Level Waste (HLW) facilities continue to be 6-9 weeks behind the contractor's concrete wall-placement working schedule.

Project Summary

Construction installation is about 25% complete compared to 22% planned (based on craft hours), and is 30% spent compared to a 30% planned expenditure (based on dollars). [Construction dollars include craft labor, management, supervision, field engineering, QC, subcontracts, and other support functions.] The summary is for the data reported through June 2004.

Total Project Commodity Summary							
Commodity	Engineering		Vendor		Construction		Total Project
	Released	Scheduled	Delivered	Scheduled	Installed	Scheduled	Budgeted
Concrete (yd3)	154,460	201,170	-	-	110,960	124,200	256,810
Structural Steel (ton)	12,756	10,401	3,262	0	899	1,562	24,838
Piping (LF) ¹	319,190	374,900	55,140	0	85,710	37,570	984,470
Conduit (LF) ²	237,230	294,910	-	-	160,620	109,640	1,017,610
Cable Tray (LF)	16,320	17,470	-	-	1,300	2,770	102,560
Cable (LF)	197,670	111,820	-	-	34,510	5,550	4,762,630
HVAC Duct (lb.)	730,150	700,310	-	-	94,500	133,680	3,516,560

- (1) Includes above and underground pipe.
- (2) Include building and underground conduit

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. Revision 3 will be issued this fall. The WTP is designed with the capacity and is progressing to support this milestone.
- **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. Revision 3 will be issued this fall. The WTP is designed with the capacity and is progressing to support this milestone.
- **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. Revision 3 will be issued this fall. The WTP is designed with the capacity and is progressing to support this milestone.
- **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. Revision 3 will be issued this fall. The WTP is designed with the capacity and is progressing to support this milestone.
- **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. Revision 3, will be issued this fall. The WTP is designed with the capacity and is progressing to support this milestone.
- **M-62-01**, Submit Semi-Annual Project Compliance Report
Due: Semi-Annual Beginning July 31, 2000
Status: Ongoing and on schedule. Report M-62-01I submitted July 29, 2004. M-62-01J will be due January 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. Melter awards were made August 2004.
- **M-62-09**, Start Cold Commissioning –Waste Treatment Plant
Due: February 28, 2009
Status: On Schedule.
- **M-62-10**, Complete Hot Commissioning - Waste Treatment Plant
Due: January 31, 2011
Status: On Schedule.

II. Significant Accomplishments (last three months):

- Analytical Laboratory began excavation on July 12, 2004. Full construction authorization and PSAR SER were approved on July 29, 2004.
- PT set Feed Receipt Vessels (3 of 4) in August 2004, anticipate placing the last vessel in August 2004.
- Received, assembled, tested and put into operation the 600 ton crane at the site.
- Contract awarded for melter fabrication (LAW and HLW melter) in August 2004.
- HLW started 0' slab construction in May 2004.
- LAW completed +3' elevation slab in March 2004.
- PT started pipe module preassembly in August 2004.
- Completed black cell, ultrafilter, ion exchange, and evaporator oversight assessments.
- Completed underground utilities and foundation slab for the Steam Plant Facility. The subcontractor mobilized on site to start equipment installation and building erection for the Steam Plant Facility. Six steam boilers were set in place on the foundation and the structural steel for the building was started.
- Started installation of reinforcement steel and perimeter forms for the Chiller Compressor Plant basemat.
- Received bids for the Water Treatment Plant equipment and the Glass Former Facility equipment.
- Conducted and documented 64 site inspections of construction activities and issued an integrated report to BNI with two findings regarding an error on an electrical drawing which resulted in an NEC electrical violation for exceeding the 25-foot maximum tap rule, and the material testing subcontractor not recording required initial cure temperatures in the concrete curing lab.
- Conducted a program assessment of installation activities for the HVAC site subcontractor. Identified a number of quality program issues that were addressed in a timely manner.
- Conducted a vendor inspection of tank fabrication activities at Northwest Copper Works, Inc. in Portland, Oregon. The vendor had an acceptable quality

assurance program and welding and fabrication work was being performed in accordance with required codes, standards, and QA requirements. BNI's vendor inspection oversight program was also reviewed for this facility, and was determined to be adequate for the task being performed by the vendor.

III. Significant Planned Actions (next six months):

- Complete placement of all 4 Pretreatment Feed Receipt Vessels.
- HLW will set the second Submerge Bed Scrubber (SBS) Condensate Receiver Vessel (CRV) in August 2004 and start SBS CRV piping installation in September 2004.
- HLW will finish -21' level walls in September 2004.
- HLW will start 0' level walls in September 2004.
- HLW start fabrication of first wall module in October 2004.
- LAW will set all +3' elevation major process vessels by November 2004.
- Award procurement contracts for Diesel Generators, Water Treatment Plant equipment, and Glass Former Facility equipment.
- Complete construction of BOF Switchgear Building.
- Plan to conduct a vendor inspection of Harris Thermal, another Portland, Oregon tank fabricator to determine vendor and BNI vendor inspector oversight performance similar to the Northwest Copper Works inspection performed above. Plan to conduct a vendor inspection of a Salt Lake City pipe fabricator later this year and another vendor early in 2005.

IV. Issues:

- **Quality:** BNI reports overall improvement in supplier-delivered material, 2% to 0.7% cumulative nonconformance rate. BNI QA continues the NQA-1 surveillances of each subcontractor (surveillances, full audits, and annual evaluation to keep subcontractors on NQA-1 approved supplier list). ORP continues onsite vendor inspections and monitor QA performance metrics.
- **Mixing and Hydrogen Control:** Thirty-nine WTP tanks use pulse jet mixers. Five Pretreatment vessels contain non-Newtonian fluids. The test program has optimized configurations for mixing. Now a near full-scale (one-half scale tank size) demonstration of normal and post-Design Basis Event (DBE: loss-of-power and the associated normal plant air supply to the fluidics equipment) non-Newtonian slurry vessel operations are needed to demonstrate safe gas release under normal and post-DBE operating conditions. Testing is scheduled for completion before December 2004.
- **Black Cells Review:** The report clarified the material selection process, reaffirmed erosion wear rates, and determined the need to provide openings for access (July report). To date, BNI closed 31 of 31 Black Cell Review actions. ORP has closed 13 of 31 actions. All scheduled for closure by September 2004.

- **Qualification of Alternative Cs-137 Ion Exchange Media:** The first series of Cs Ion Exchange tests were completed with 4-quart batches of resin received from Microbeads. Each of these batches was manufactured under different conditions to optimize the manufacturing process. Additional tests to assess the stability of these new batches will continue over the next several weeks. Results are expected in mid September. A 100-gallon batch is expected in several months to begin large scale testing. The first batches from the scale-up production methods are expected in November 2004. Successful testing of the alternate resin would provide a resin resource that is expected to reduce annual operating costs by an order of magnitude.
- **Pretreatment Plant Vessel Wear Plates:** The original permit submittals for the Feed Receipt Vessels included wear plates under the Pulse Jet Mixers (PJMs). Upon a field inspection, Ecology discovered a design change had been made to delete the plates. ORP and Ecology expressed concern over need for wear plates in the FRP vessels and other vessels with PJMs. Ecology issued in a Notice of Non-Compliance on July 1, 2004 to document these concerns. ORP analyzed the design data and intended operation for the FRP vessels. ORP determined that the design was sufficiently robust to preclude the need for wear plates even if the vessels are operated at higher than anticipated concentrations of solids and/or PJM operating times.
- **B31.3 Compliance:** The RCRA Permit for the WTP facility requires the construction of tank systems in compliance with the ASME B31.3 design and fabrication code. Ecology issued a Notice of Non-Compliance on July 2, 2004 indicating the design of some of the piping systems within the Pretreatment Facility was not in compliance with ASME B31.3 –specifically, the calculation of the corrosion allowance and the associated longitudinal stress for piping. ORP and BNI have reviewed the issue. Although the applicable portion of ASME B31.3 is subject to interpretation, both believe the design methodology currently used is conservative and in compliance with the code. To demonstrate the inherent conservatism of the design, a confirmatory calculation with pipe wall thicknesses reduced to emulate corrosion and erosion was performed for all of the committed and confirmed calculations to date. This confirmatory calculation will be utilized for all future pipe stress calculations.

Performance Measurement Baseline, June 2004

