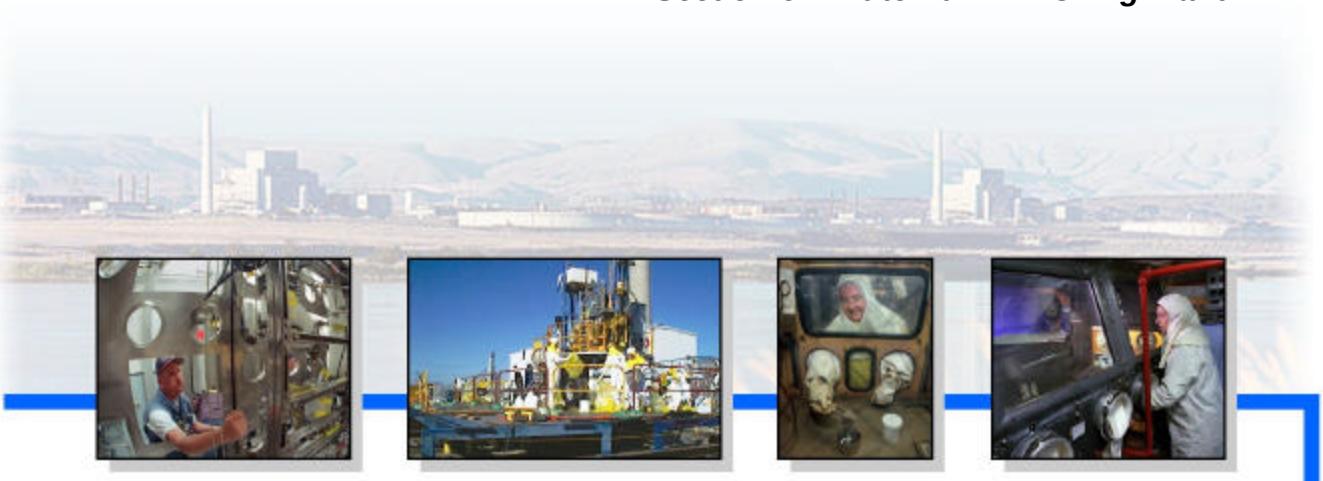


Section J
Plutonium Finishing Plant

PROJECT MANAGERS
P.M. Knollmeyer, RL
(509) 376-7435

G.W. Jackson, FH
(509) 373-6622

DOE/RL-2000-76, Rev. 12

INTRODUCTION

The Plutonium Finishing Plant consists of Project Baseline Summary (PBS) RL-CP03, Work Breakdown Structure (WBS) 3.3.3.

NOTE: The Safety, Conduct of Operations, milestone table and Cost/Schedule data contained herein is as of October 31, 2001. Other information is updated as noted through November 29, 2001.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that no milestones were completed on schedule. One milestone was completed late and one is overdue. Further details can be found in the milestone list following the cost and schedule variance analysis.

NOTABLE ACCOMPLISHMENTS

Maintain Safe & Secure SNM WBS 3.3.3.1

The MBA 213 annual inventory NDA material measurements were reconciled and completed.

Maintain Safe and Compliant PFP WBS 3.3.3.2

The Washington State Department of Ecology's approval of a Tri Party Agreement change request was obtained for disposing of Sand, Slag, and Crucible using pipe and go process. Obtained Washington Department Of Health's (WDOH) and Ecology's approvals for adding Room 227 for direct discard of solutions in lead lined containers (Notice Of Construction revision form and Project Manager Meeting). The WDOH's approval for use of Thermogravimetric Analysis (TGA) unit (NOC rev form) for Project W-460 was also obtained. Construction of 291-Z-1 stack model was completed.

Stabilization of Nuclear Material WBS 3.3.3.3

Residues — During October 27,462 grams were packaged in 19 Pipe Overpack Containers (POCs). Thirty POCs were shipped to the Central Waste Complex (CWC). The Tri-Party Agreement (TPA) Change Request (CR) for Sand, Slag and Crucible (SS&C) was approved. This CR also covered removal of the SS&C material temporarily stored in glovebox HA-20MB. Removal of the last of the SS&C material from this glovebox was completed on November 27, 2001. This material removal clears the way for the installation of the new TGAs in that glovebox and will allow the stabilization of less than pure oxides in the 234-5Z building.

Solutions ¾ The monthly production for the Solutions Stabilization Project was 306 liters. This included a total of 190 liters through the direct discard process and 116 liters through the oxalate precipitation process. The increased monthly production rate average of 6.3 columns precipitated per available working day that was established during September was maintained during October. Testing was initiated by PNNL and PPSL to support the shift from Product Nitrate to Criticality Mass Laboratory (CML) solution in mid-December, 2001. The testing is scheduled to be completed by December 3, 2001 to support PFP preparations and provide lead time for DOE RL to provide authorization to stabilize CML solution by mid-December.

Project W-460 ¾ Following completion of the FH Operational Readiness Review (ORR), the RL ORR was conducted and completed on November 21, 2001 and identified six (6) prestart items. Upon successful completion of these prestart items plant management requested startup authorization from RL on November 26, 2001. RL granted authorization on November 28, 2001 to proceed with startup operation of the 2736-ZB bagless transfer system. Hot startup was achieved on November 29, 2001.

234-5Z Thermal Stabilization & Bagless Transfer System (BTS) ¾ Thirty-three (33) BTS cans containing stabilized plutonium oxalate product were welded. Agreement was reached with Dr. Cox of the Confederated Tribes of the Umatilla Indian Reservation on the potential for emissions from thermal stabilization of polycubes and Dr. Cox withdrew his appeal to the Washington State Department of Ecology related to their approval of processing. PNNL completed the test system for thermal stabilization of high chloride oxides and initiated testing.

Disposition of Nuclear Material WBS 3.3.3.4

Actively participated in the 'Alternate Vault Study', a multi-organizational study aimed at determining if a low cost storage method could be found if the plutonium could not be shipped offsite in an expedited manner. Thermal calculations to verify that Pu packages would not exceed the thermal heat specification were performed on over a hundred items this month. Shipped 75 waste containers including 32 Hanford Ash POCs, and 43 TRU, TRU-Mixed, Low-Level, and Low-Level Mixed Waste during the month of October.

Disposition PFP Facility WBS 3.3.3.5

Interface with Safeguards and Security to establish criteria and approach for Protected Area Reduction, SNM relocation, 232-Z and PPSL office demolition, and Legacy Holdup Removal end point continues.
The alternate Special Nuclear Material Storage Options Study team was formed and initiated efforts to support development of an Implementation Plan. RL and Ecology initiated TPA negotiations on PFP Decommissioning on October 31, one day ahead of the TPA commitment. The 241-Z-361 area communication lines have been restored to service.

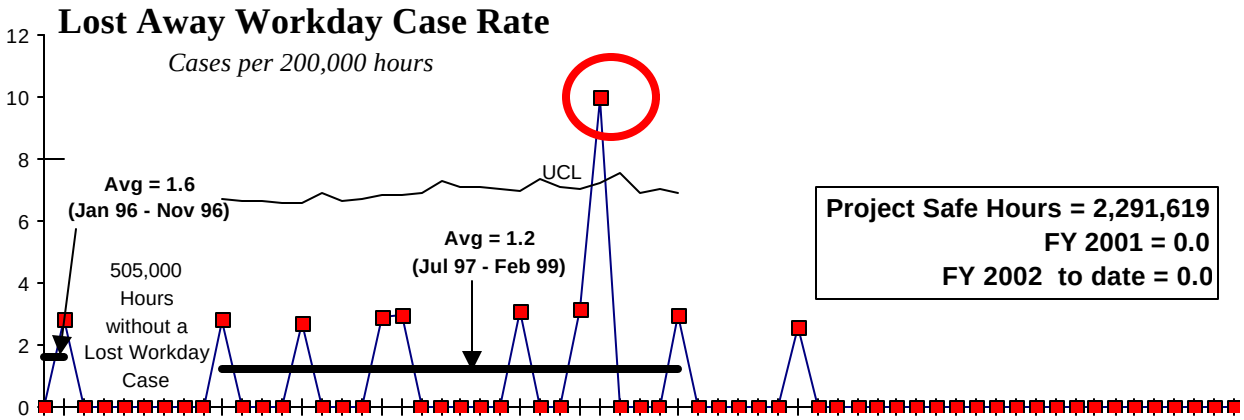
PFP Project Management WBS 3.3.3.6

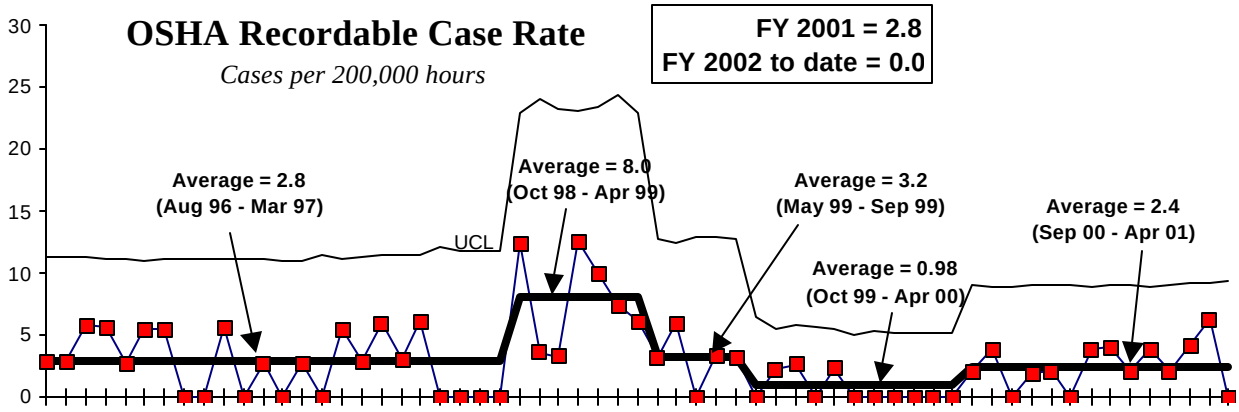
Initiated the U.S. Army Corps of Engineers validation kickoff of the September 30th, 2001 baseline on October 17th.

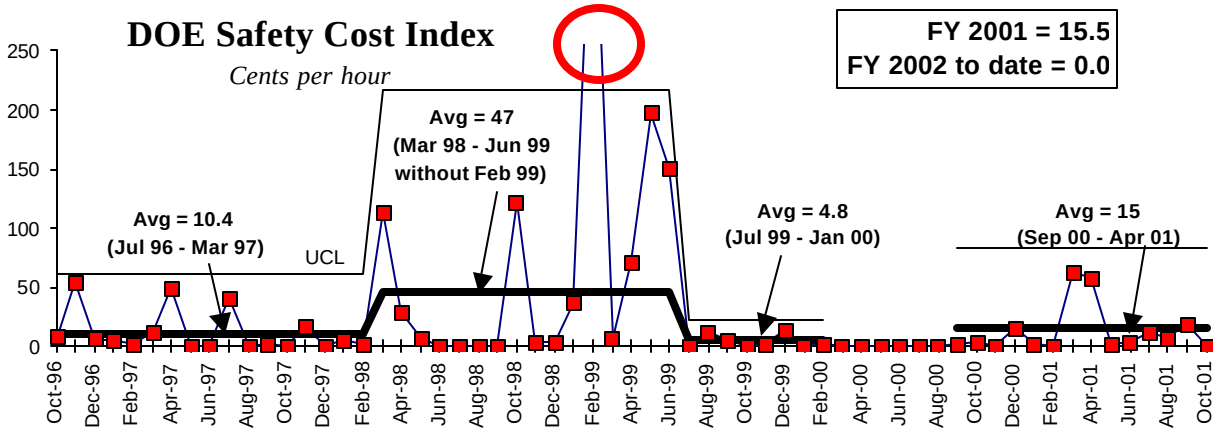
SAFETY

Green

Through October, the subproject is approaching 2.3 million staff hours since the last recorded lost workday injury. There has however, been an increase in the OSHA recordable case rate. Management has increased its presence in the field during all shifts to address this recent trend.

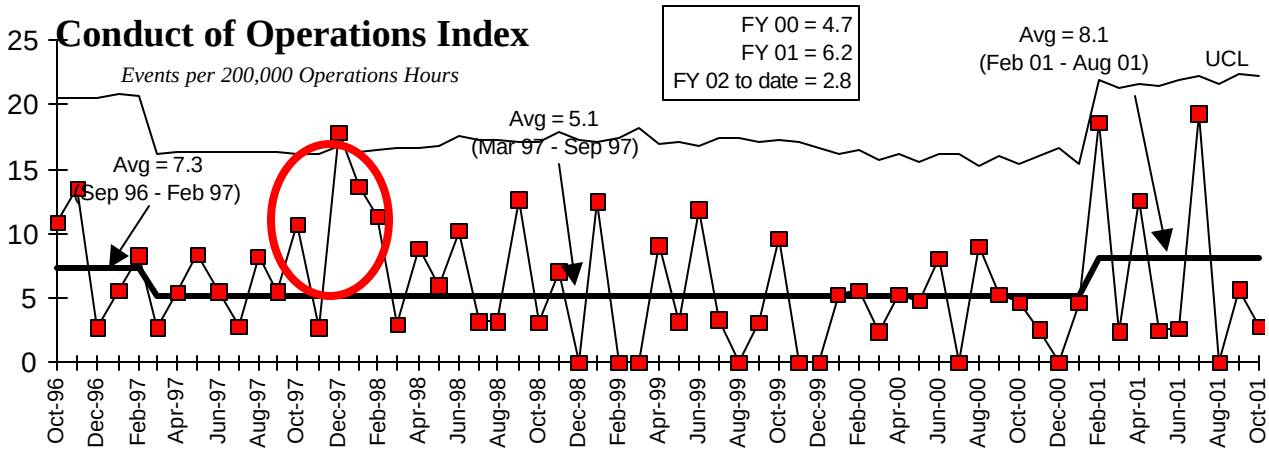






CONDUCT OF OPERATIONS

An all day production pause was held November 2, 2001 to reemphasize the Integrated Safety Management System (ISMS) theme in completing work safely.



BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

Breakthroughs

Nothing to report.

Opportunities for Improvement

Residues Stabilization ¾ The Residues Project staff is working with the Thermal Project on the cleanout of glovebox HA-20MB. Clean out of the glovebox will provide data to validate the use of the Segmented Gamma Scan Assay System (SGSAS) for sand, slag, and crucible (SS&C) measurement, and provide the Thermal Project a location for installation of the Thermogravimetric Analyzer (TGA). The TPA CR for SS&C was approved. *No further status will be provided.*

Sampling Analysis ¾ "Data Quality Objective Process Summary and Sampling and Analysis Plan and Quality Assurance Project Plan in Support of Group 2B Waste Disposition" was transmitted to the State of Washington Department of Ecology (Ecology). If acceptable, most of the sampling and analysis requirements for the Group 2b Pu/Al alloys will be eliminated.

UPCOMING ACTIVITIES

Nothing to report.

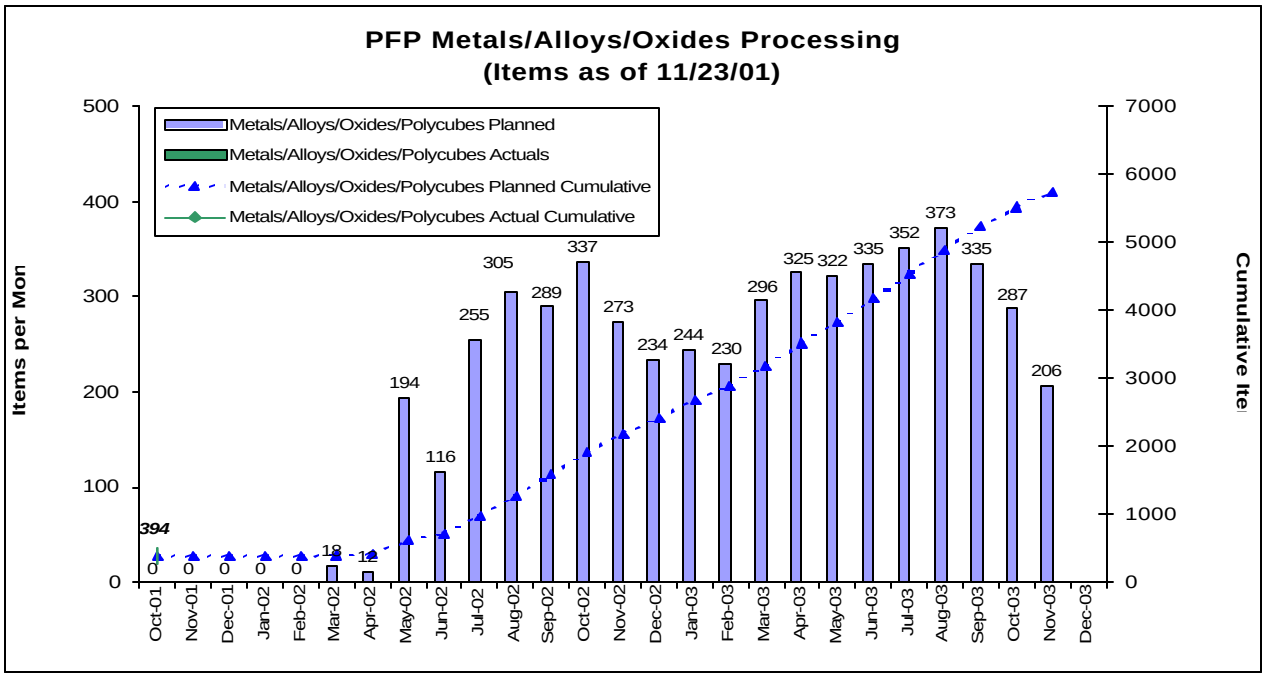
MILESTONE ACHIEVEMENT

FH Contract Milestones

Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
Package Alloys for disposition to WIPP or stabilize & package per DOE-STD-3013 criteria	HQ	6/30/01		Moisture Measurement Resolution +60 Days	
Hot Startup of the 2736-ZB Stabilization & Packaging System	RL	11/12/01	11/27/01	11/27/01	*Complete*
Complete Stabilization & Packaging of Plutonium Solutions	HQ	12/31/01		10/16/02	BCR NMS-02-003
Complete Stabilization & Packaging of Polycubes	HQ	8/31/02		3/21/03	BCR NMS-02-003
Complete Repackaging & Shipment of Hanford Ash to CWC	HQ	8/31/02			On Schedule
Completion of all PU Stabilization & Packaging	RL	11/30/03		2/18/04	BCR NMS-02-003
Complete Stabilization & Packaging of Residues	HQ	4/30/04			On Schedule
Complete Stabilization & Packaging of Oxides >30% Pu/U	HQ	5/31/04			On Schedule
Dismantlement NEPA/ CERCLA Decision Document Complete	RL	9/30/05			On Schedule
Complete 100% of Legacy Pu Holdup Removal & Disposition	RL	9/30/06			On Schedule
232-Z & PPSL Annex Demolished to Slab-on-Grade	RL	9/30/06			On Schedule
Protected Area Reduced to 2736-Z/ZB and Yard Storage	RL	9/30/06			On Schedule
Relocate SNM Required to Reduce the PFP Protected Area	RL	9/30/06			On Schedule

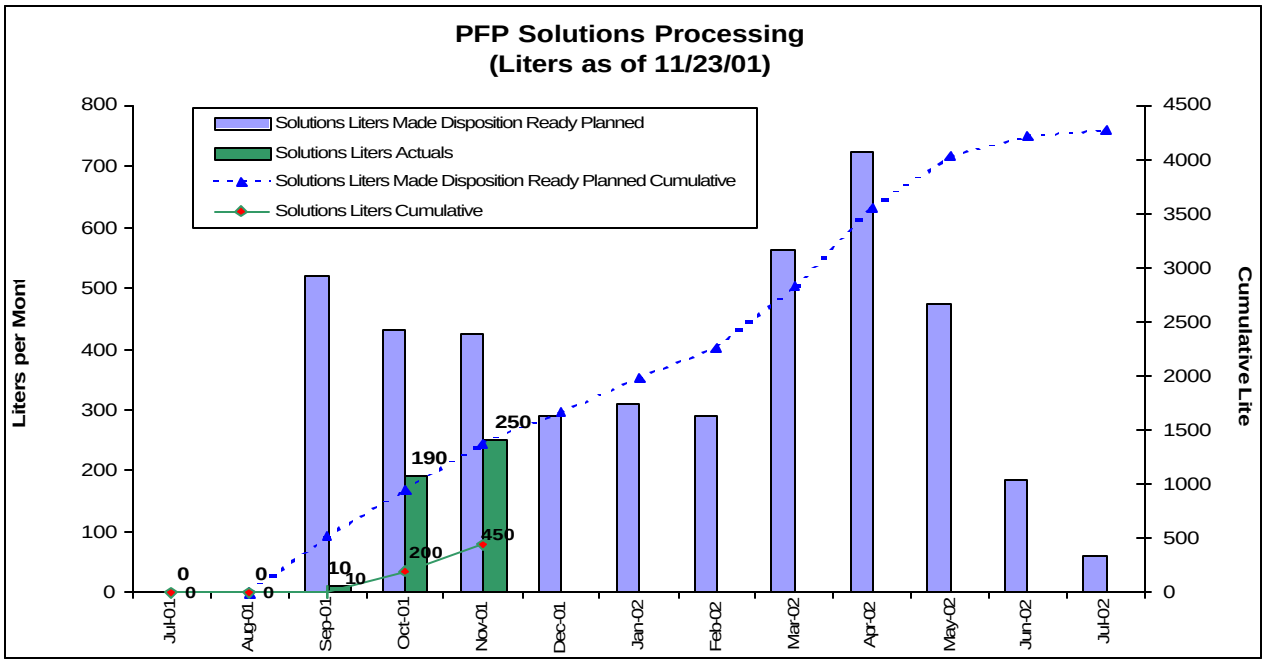
PERFORMANCE OBJECTIVES

METALS/ALLOYS/OXIDES STABILIZATION



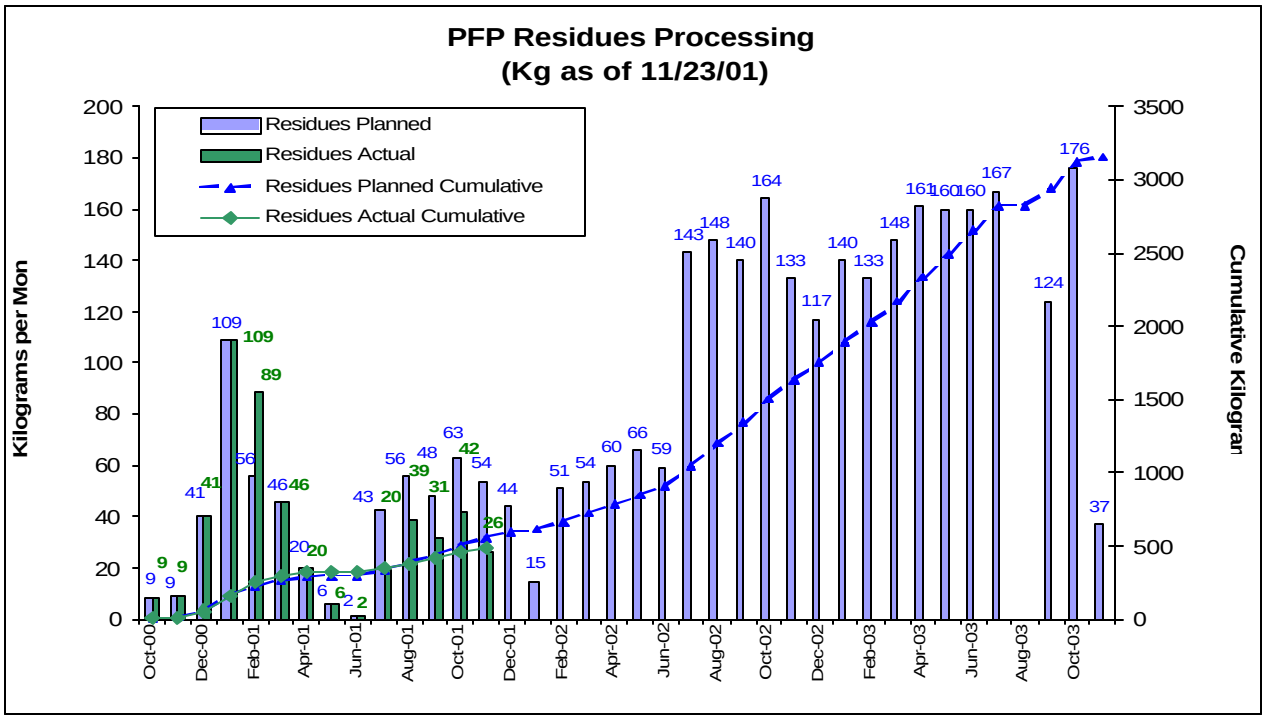
Slightly behind schedule due to the lack of an approved moisture measurement method for impure oxides that prevented the completion of stabilization and packaging of alloys and the thermal stabilization and packaging of magnesium oxide precipitated plutonium solutions.

SOLUTIONS STABILIZATION



Solutions Stabilization is currently behind schedule to the DNFSB milestone completion date of July 31, 2002 due to a lack of an approved moisture measurement system.

RESIDUE STABILIZATION



Hanford Ash processing is currently behind schedule due to intermittent calibration problems with the Segmented Gamma Scan Assay System (SGSAS). Processing of Rocky Flats Ash was completed three months ahead of schedule in April 2001.

FY 2002 SCHEDULE / COST PERFORMANCE – ALL FUND TYPES
FY TO DATE STATUS – ($000)

WBS	Description	FYTD BCWS	FYTD BCWP	FYTD ACWP	FYTD Schedule Variance	FYTD Cost Variance	FYTD Schedule Variance %	FYTD Cost Variance %
3.3.3	Plutonium Finishing Plant							
3.3.3.1	Maintain Safe & Secure SNM	406.6	387.3	258.9	(19.3)	128.5	-5%	33%
3.3.3.2	Maintain Safe & Compliant At PFP	2,138.7	2,135.6	1,916.2	(3.1)	219.4	0%	10%
3.3.3.3	SNM Stabilization	3,259.1	1,699.6	1,689.2	(1,559.5)	10.4	-48%	1%
3.3.3.4	Disposition SNM	331.7	426.7	181.7	95.0	245.0	29%	57%
3.3.3.5	Disposition PFP Facility	137.4	93.3	26.9	(44.1)	66.4	-32%	71%
3.3.3.6	PFP Project Management and Support	1,352.4	1,376.4	1,172.6	24.0	203.8	2%	15%
	Subtotal Expense	7,625.8	6,118.9	5,245.5	(1,506.9)	873.4	-20%	14%
3.3.3.3.7.4	W460 Push Line Item Support	26.3	149.6	394.5	123.2	(244.9)	468%	-164%
3.3.3	Total	7,652.2	6,268.5	5,640.0	(1,383.7)	628.5	-18%	10%

Due to technical difficulties, these performance numbers have been manually adjusted and may not align with HANDI reports.

FY TO DATE SCHEDULE / COST PERFORMANCE

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

SCHEDULE VARIANCE ANALYSIS: (-$1,384K)

3.3.3.1 Maintain Safe & Secure SNM (-$19K)
Description and Cause: The current five percent unfavorable schedule variance is within the reportable threshold.
Impact: None.
Corrective Action: None.

3.3.3.2 Maintain Safe & Compliant PFP (-$3K)
Description/Cause: The current zero percent schedule variance is within the reportable threshold.
Impact: None.
Corrective Action: None.

3.3.3.3 SNM Stabilization (-$1,436K)
Description and Cause: The unfavorable schedule variance is primarily attributable to a lack of an approved moisture measurement system that has impacted stabilization and packaging of alloys and magnesium precipitated plutonium solutions. Also contributing was the later than planned procurement of Pipe Overpack Containers (POC) supporting the Residue Stabilization project.
Impact: Thermal drying of $Mg(OH)_2$ has been initiated and will be completed on a capacity available basis. Alloys stabilization will be completed upon approval of the alternate Thermogravimetric Analysis moisture measurement system. There is no impact as a result of the delay in procurement of POCs.

Corrective Action: The $Mg(OH)_2$ precipitate will be thermally stabilized and packaged in the inert atmosphere of the 2736-ZB stabilization line. All remaining alloys will be stabilized sixty days after approval of the TGA as an alternate moisture measurement system. Procurement of the POCs has now been initiated.

3.3.3.4 Disposition SNM (+$95K)

Description and Cause: The primary cause of the positive variance is attributable to an overstatement of the budgeted cost of work performed (BCWP). The cost account is actually $44.1K behind schedule due to the Hanford ash packaging being behind schedule.
Impact: None.
Corrective Action: A programming change has been implemented to correct the BCWP .

3.3.3.5 Disposition PFP Facility (-$44K)

Description and Cause: The unfavorable variance is primarily attributable to delays in initiating deactivation work due to staff support being directed to construction and installation of the 2736-ZB stabilization line. (Project W-460)
Impact: None. Now that the 2736-ZB stabilization line is operational, additional resources are expected to become available to support Deactivation workscope.
Corrective Action: None required.

3.3.3.6 PFP Project Management & Support (+$24K)

Description and Cause: The current two percent favorable variance is within the reportable threshold.
Impact: None.
Corrective Action: None.

COST VARIANCE ANALYSIS: (+$629K)

3.3.3.1 Maintain Safe & Secure SNM (+$129K)

Description and Cause: The favorable cost variance is primarily due a staffing underrun attributable to postponement of the planned annual IAEA Physical Inventory Verification (PIV) and delays in qualifying contractors for manufacture and delivery of components supporting the Canister Monitoring System Upgrade.
Impact: The impact of delaying the annual PIV is expected to be minimal to W-460 operations. Qualification of contractors supporting the Canister Monitoring system upgrade could potentially extend the completion of this multi-year upgrade.
Corrective Action: The annual PIV is currently scheduled for December 17-21, 2001. FH has assigned a project manager to resolve the contractor qualification in support of the Canister Monitoring System Upgrade.

3.3.3.2 Maintain Safe & Compliant PFP (+$219K)

Description/Cause: The favorable cost variance is attributable to a later than planned issuance of FY 2002 contracts, staff underruns and resources directed to Direct Discard processing.
Impact: None.
Corrective Action: Staffing levels are expected to increase upon hiring of permanent staff. In the interim, workscope will be transferred to either a managed task or staff augmentation contract to offset the staff shortage.

3.3.3.3 SNM Stabilization (-$235K)

Description and Cause: The favorable cost variance is within the reportable threshold.
Impact: None.
Corrective Action: None.

3.3.3.4 Disposition SNM (+$245K)

Description and Cause: The favorable cost variance is attributable to a staff shortage and late issuance of contracts for procurement of burial boxes and development of a Safety Analysis Report for Packaging (SARP) engineering change notice (ECN).

Impact: None.

Corrective Action: Efforts are now underway to initiate planned contracts and increase staffing levels.

3.3.3.5 Disposition PFP Facility (+$66K)

Description and Cause: The favorable cost variance is directly attributable to a temporary staff shortage.

Impact: None.

Corrective Action: The current staff underrun will self correct as personnel become available upon completion of Project W-460 and are reassigned to the Deactivation Project.

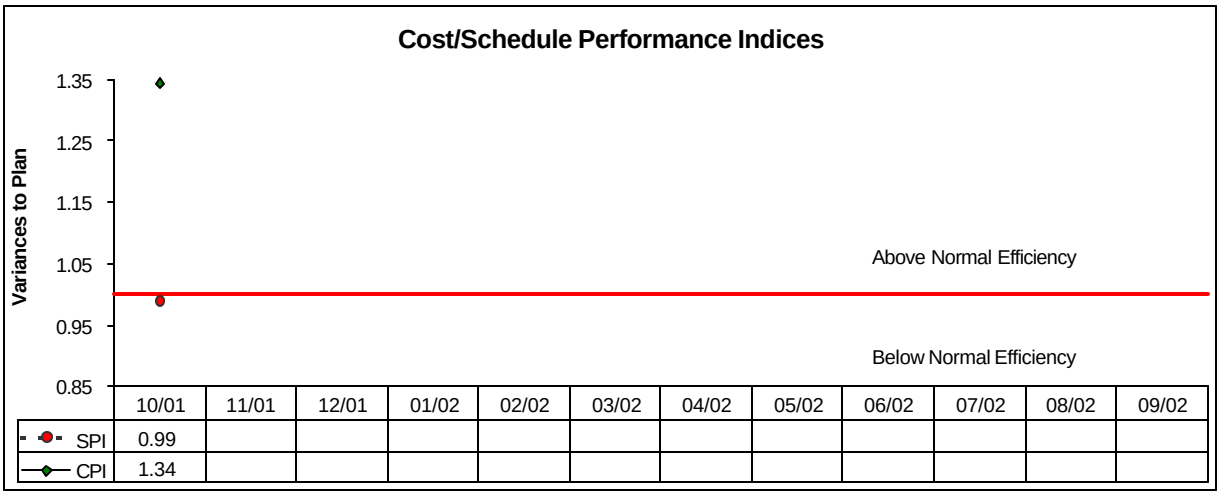
3.3.3.6 PFP Project Management & Support (+$204K)

Description and Cause: The favorable cost variance is attributable to dosimetry costs not being completely distributed in October.

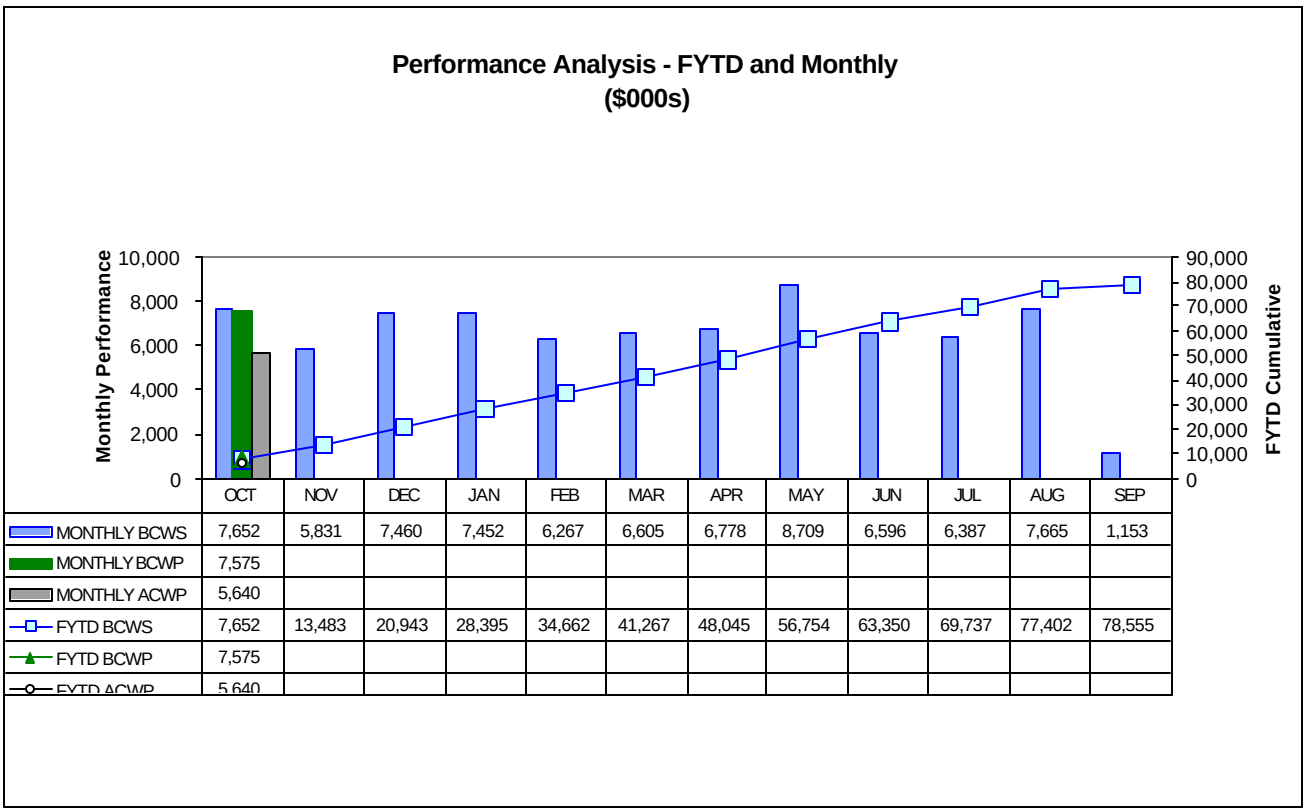
Impact: No impact, the corrections for dosimetry services should be distributed properly in future cost processing.

Corrective Action: None.

SCHEDULE / COST PERFORMANCE (MONTHLY AND FYTD)



	10/01	11/01	12/01	01/02	02/02	03/02	04/02	05/02	06/02	07/02	08/02	09/02
SPI	0.99											
CPI	1.34											



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY BCWS	7,652	5,831	7,460	7,452	6,267	6,605	6,778	8,709	6,596	6,387	7,665	1,153
MONTHLY BCWP	7,575											
MONTHLY ACWP	5,640											
FYTD BCWS	7,652	13,483	20,943	28,395	34,662	41,267	48,045	56,754	63,350	69,737	77,402	78,555
FYTD BCWP	7,575											
FYTD ACWP	5,640											

ISSUES

Technical Issues

Issue: Moisture measurement of stabilized oxides via supercritical fluids extraction was disapproved for use by RL. Completion of stabilization and packaging of plutonium alloys and impure oxides is contingent upon installation and testing of alternate moisture measurement equipment.

Impact: As a result, there is no approved method for moisture testing of all the various categories of stabilized oxides. Completion of alloy processing will be completed within 60 days on approval of a moisture measurement method. Analysis is continuing to determine the full impact of this change.

Corrective Action: The Thermogravimetric Analyzer (TGA) has been identified as an alternative plutonium oxide moisture measurement system replacing the Supercritical Fluid Extraction system for pure oxides. To date, two TGAs have been delivered and installed in 2736-ZB. RL has approved these TGAs for use in moisture measurement of high purity oxides. In addition, the cost and schedule impact due to the absence of an approved moisture measurement methodology for impure oxides is documented in Baseline Change Request NMS-02-003 that is currently in the approval process. Use of the TGAs for determining moisture measurement of impure oxides has yet to be approved by RL. Three additional TGAs have been procured with delivery is expected in late December 2001. These TGAs, to be installed in glovebox HA20-MB, are expected to be available for service in late March 2002.

Issue: The surface weld porosity of 3013 outer containers exceeds American Society of Mechanical Engineer (ASME) Boiler and Pressure Vessel Code, Section VIII standards of .040-inch diameter for this material.

Impact: A number of 3013 outer containers may need to be repackaged to meet ASME standards.

Corrective Action: Savannah River Technology Center (SRTC) performed testing on the Outer Can Welder (OCW) system. The initial testing identified the gap distance between the lid and the 3013 container may contribute/cause porosity in the weld. Additional field-testing was completed in October. Field-testing identified a direct correlation between lid/can fit tolerances and porosity. A final report with recommendations was issued by SRTC on November 26. OCW operations resumed December 3, 2001. At this time repackaging of 3013 containers is not expected. *(No further status to be provided)*

Regulatory, External, and DOE Issues and DOE Requests

Issue: No other issues identified at this time.

Impact: None at this time.

Corrective Action: None at this time.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

BCR No.	Date Originated	Description	FY02 Impact		Date Approved	Status
			Days	Dollars ($000s)		
NMS-02-001	08/13/2001	FY 2002 MYWP Bridge	--	--		At DOE
NMS-02-002	---	Project W-460 Hot Startup Date	---------- Cancelled; Included in NMS-02-003 ----------			
NMS-02-003	10/29/2001	Moisture Measurement Impacts	54	$294		At DOE
NMS-02-004	10/29/2001	HEPA Filter 100% QA Testing	--	$12		At FH
NMS-02-005	11/01/2001	Remap Solutions Budget	--	--	11/05/2001	Complete
NMS-02-006	11/05/2001	Solutions Milestone	--	--		At DOE
NMS-02-007	---	Weld Porosity - SRS Support	---------- Cancelled; Letter Sent to DOE-RL ----------			
NMS-02-008	11/08/2001	DNFSB 2000-2, Phase 2	--	$78		At FH
NMS-02-009	11/13/2001	Project W-460 TPC Change	--	--		At DOE