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Monthly Program Report October 2013

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Report

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LANL Executive Summary

As part of a required Conduct of Operations review, on June 10, several key PF-4 Operation Procedures were paused halting most SNM operations in PF-4. On June 27, Laboratory Director Charlie McMillan issued a temporary pause of all programmatic activities in PF-4. Resumption criteria, prioritization of resumption activities, procedure walk downs, procedure revisions, and approval are in process and are expected to take several months to complete.

In October of 2013 the Plutonium Sustainment program at LANL completed or addressed the following high-level activities:

- 1) Completed Department of Transportation (DOT) Sealed Source Certification on the D01 Heat Source liners at Pacific Northwest National Laboratory (PNNL). Liners have successfully completed all of the required DOT tests. This certification was required to be able to be moved heat sources from PF-4 into the Radioisotope Thermoelectric Generator Assembly and Test Facility (RTG-ATF).
- 2) Planned for the orderly closure of the laboratory in response to the lapse in federal appropriations at the start or fiscal year 2014. Although the closure was narrowly averted, travel was curtailed resulting in the postponement of several program reviews and the delay of the CMM tour at Y-12.
- 3) Submitted the allocation 0.1 matrix with the baseline Primavera schedule. Work packages are in final review and will be signed in November.

Two of the three NNSA Level 2 Milestones (MRT 4962 and 4963) associated with Plutonium Sustainment are on track for success in FY14. MRT 4961 is “yellow” resulting from the operational pause.

The earned value metrics overall for LANL are within acceptable thresholds, so no high-level recovery plan is required.

Each of the four major LANL WBS elements is discussed in detail below.

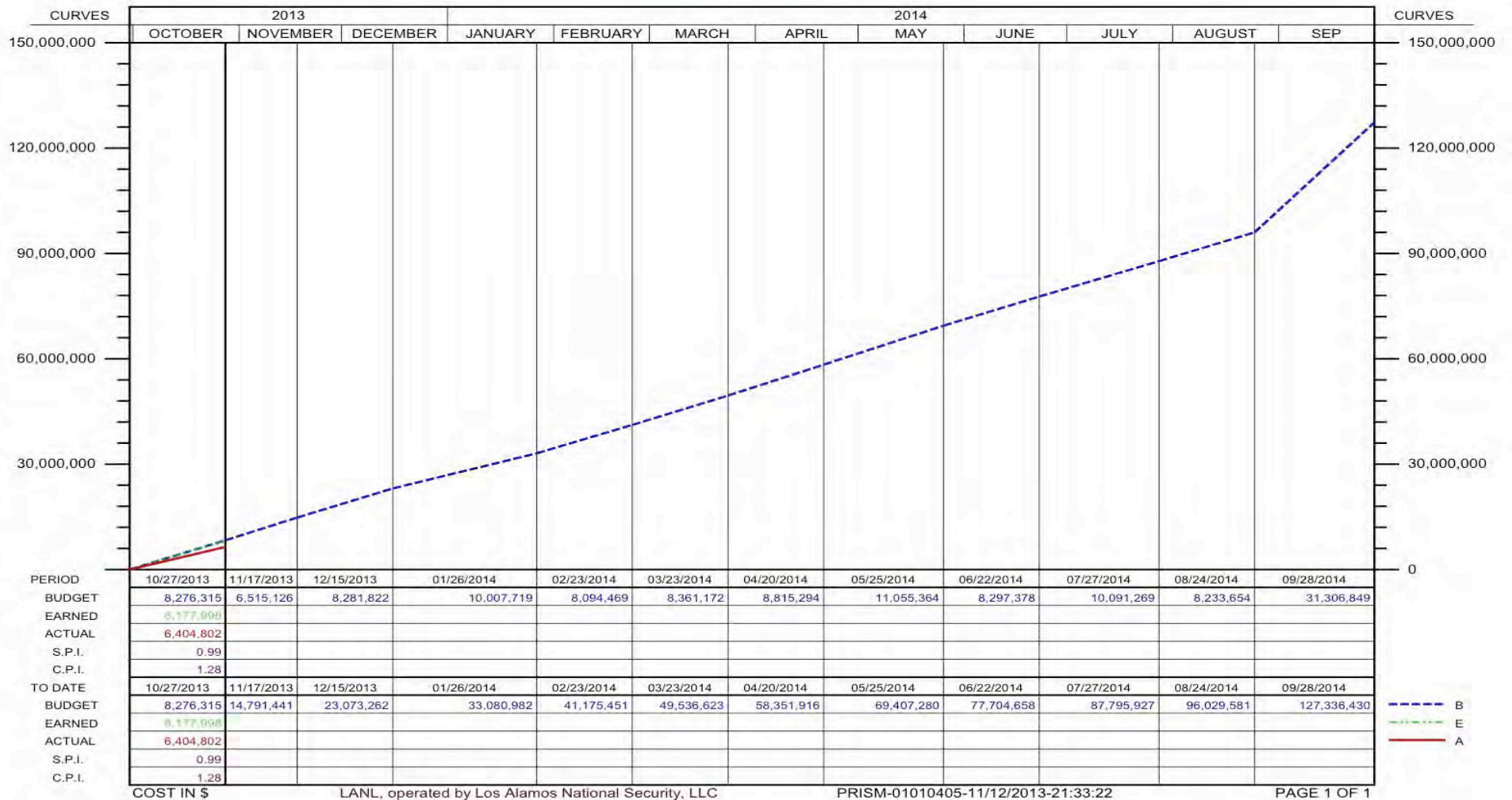
LANL Response to September NNSA Comments

none.

Earned Value Metrics

PERFORMANCE S-CURVE

Plutonium Sustainment



[NOTE: September 2014 includes 6% FY15 carryover holdback of \$7.640M in addition to the four major WBS elements.]

1.0 LANL - Pit Development

MRT 4961		YELLOW	Perform Activities to Sustain Base Pit Material		
			(b) (7)(F)		
1.		(b) (7)(F)			
2.		(b) (7)(F)			
Activity	Baseline Date	Status/Comments	Completion Date	RGYB	
(b) (7)(F)					
MRT 4962		GREEN	Continue Key Equipment Upgrade and Replacement Activities		
1. Complete ER Line Upgrades construction punchlist and execute successful cold test.					
2. Complete Pu Foundry GB 1 mechanical and electrical construction complete.					
3. Foundry GB 2 upgrade approved for installation.					
4. Perform factory acceptance test of CMM #1 and #2					
5. Complete CMM GB 30% design review and GB installation 30% design review.					
6. Complete CDS installation 60% design review.					
7. Finish installation (not including FCRs) on PML – Phase 2.					
ER Line Dry Run/Cold Test Complete	April 26, 2014			GREEN	
ER Line Punchlist Complete	August 15, 2014			GREEN	
Foundry GB1 Cooling Power Supply Received	June 2, 2014			GREEN	
Foundry GB1 Cooling Furnace Housing Installation Complete	July 3, 2014			GREEN	
Foundry GB2 Approved for Installation	September 30, 2014			GREEN	
Complete Factory Acceptance Test of CMM #1 and #2	June 23, 2014			GREEN	
Complete location study for New GB & CMM	February 3, 2014			GREEN	
Complete 30% CMM GB Preliminary Installation Design Review	April 28, 2014			GREEN	
Complete 30% CMM GB Installation Design Review	June 30, 2014			GREEN	
Start CDS Engineering Development	October 1, 2013	Engineering development started. Purchase request prepared.	October 1, 2013	BLUE	
CDS Engineering Contract Awarded	February 16, 2014			GREEN	
CDS 30% Installation Design Complete	June 1, 2014			GREEN	
CDS 60% D&D Design Complete	August 11, 2014			GREEN	
PML DCP Re-Activation Complete	January 10, 2014			GREEN	
PML Construction Planning Complete	May 22, 2014			GREEN	
PML Cold Testing Complete	July 3, 2013			GREEN	

1.1 Technical Progress

- The majority of pit manufacturing development is focused on resumption related activities. It is expected that this will continue at least throughout the first third of FY14. Accordingly, most of the budget and scope through this period is captured in a “level of effort” activity.
- Procedures and criticality safety documents associated with pit manufacturing were reviewed and revised as part of the required operational resumption activities.
- Resumption documents were re-prioritized based on new resumption criteria and FY14 milestones.

1.2 Equipment

- The plan to meet the grading criterion L2 milestone MRT 4962 includes the following by September 30, 2014:
 1. Complete ER Line Upgrades construction punch list and execute successful cold test.
 2. Complete Pu Foundry GB 1 mechanical and electrical construction complete.
 3. Foundry GB 2 upgrade approved for installation.
 4. Perform factory acceptance test of CMM
 5. Complete CMM GB 30% design review and GB installation 30% design review.
 6. Complete CDS installation 60% design review.
 7. Finish installation (not including FCRs) on PML – Phase 2.
- Electro-Refining Line Upgrade (b) (3)
 - o Engineering and ER control system contracts renewed.
 - o Completion of glovebox leak testing planned.
- Foundry Upgrade (b) (3)
 - o Continued cold testing.
 - o GB 1 limited volume cooling water system skid released for installation.
 - o GB 1 well released for installation.
 - o D&D of GB 2 continued.
- Coordinate Measuring Machine (b) (3)
 - o Started engineering evaluation of CMM location environments
- Chlorine Distribution & Detection System (b) (3)
 - o Engineering development started.
 - o Purchase request prepared and submitted for LISC approval.

1.3 Issues

- None

1.4 Variance Analysis and Recovery Plan

- None

1.5 BCRs

- None

1.6 Risk Table

Work	Description	Handling Strategy	Status
(b) (7)(F)	Programmatic operations in PF-4 are paused beyond January 1, 2014	(b) (7)(F) the workforce will continue to: focus on resuming operations, supporting equipment investments, and exercising the flow sheet with surrogates if possible. (b) (7)(F)	The (b) (7)(F) plan is being revised. The new revision will be released by December 30, 2013.
Completion of DCP	Equipment projects all require new or revised CSEs and procedures. Without CSEs these DCPs cannot be closed.	Identify all installation project CSEs & related DOPs, and prioritize by schedule/complexity. Complete supporting activities and request project resources available when needed. If resources are unavailable due to conflict with PF-4 Resumption, then the DCP closure will be removed for the L2 milestone requirement.	
Equipment Upgrades	The resumption process and related demands on criticality engineering and other project support create significant uncertainties for the FY14 equipment execution. - ER Line activities that may be impacted include cold testing, Zone 1 tie-in, and NPCCW tie-in. - Foundry Upgrade activities include criticality design/construction support and waste management processes.	Equipment project resource requirements will be reviewed and prioritized by Program. The projects will alternate work methods as contingencies. If necessary the milestone may be renegotiated.	

(b) (5)

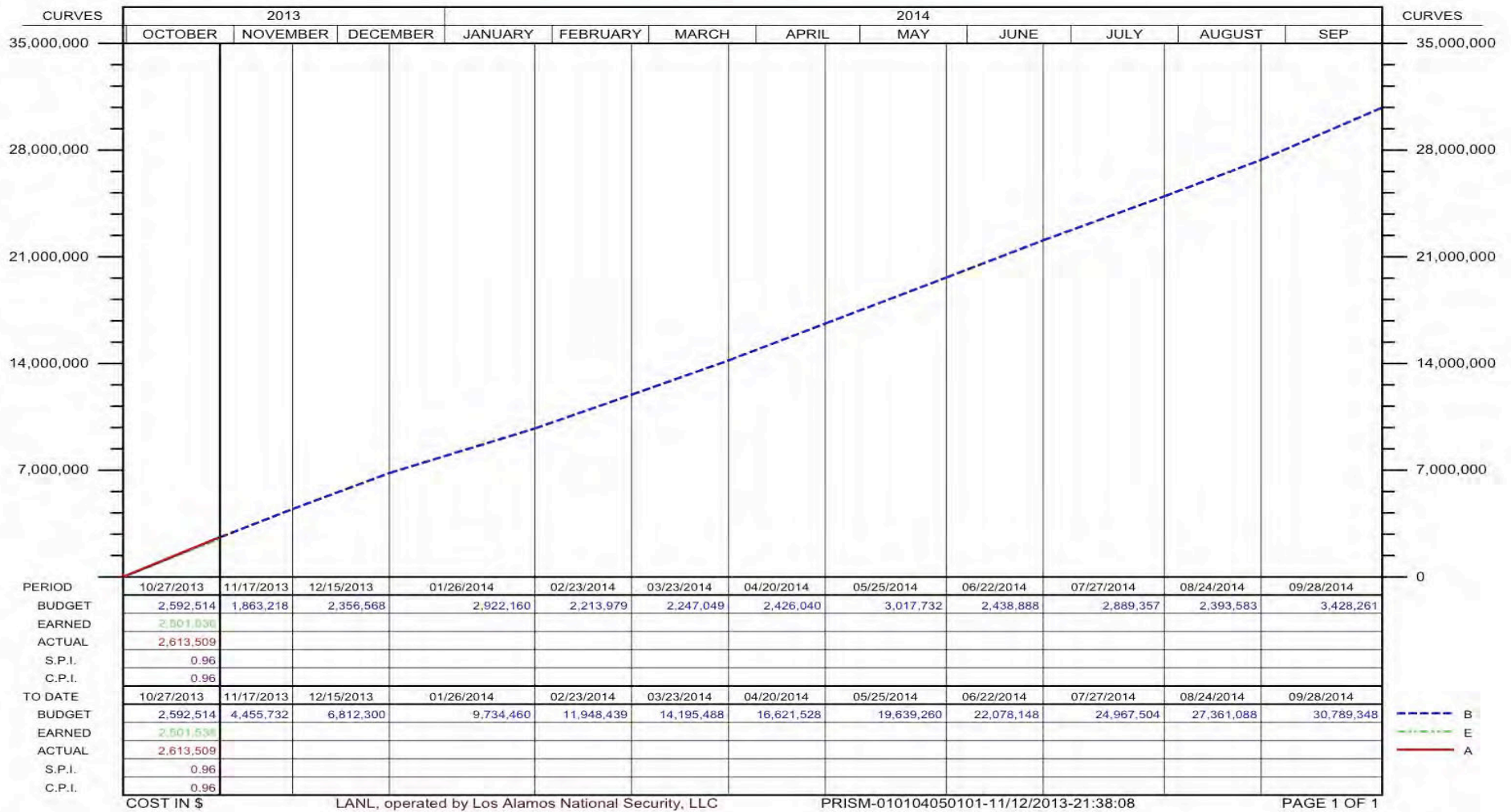
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Work	Description	Handling Strategy	Status
(b) (7)(F)			

1.7 Earned Value Metrics

PERFORMANCE S-CURVE

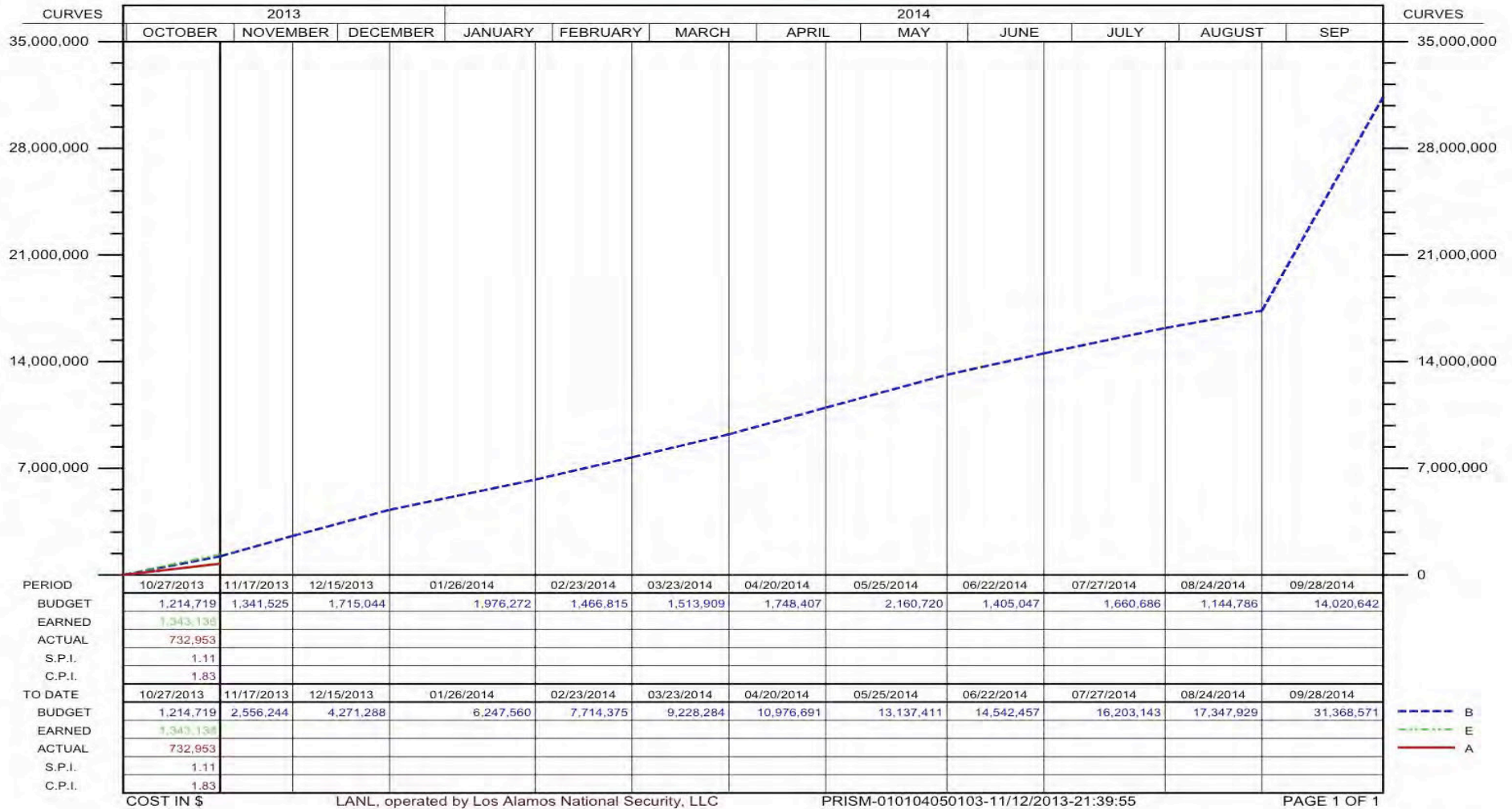
Pit Manufacturing & Design Development



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PERFORMANCE S-CURVE

Pit Manufacturing Equipment



(b) (7)(F)

[NOTE: Several projects (ER Line, (b) (7)(F) and associated D&D) have not been scheduled yet. Budget is currently pushed to year-end and will be scheduled in the first quarter (November and December BCRs).]

2.0 LANL - Power Supply

MRT 4963		GREEN	Progress Power Supply Development		
1. Complete (b) (7)(F) of inert heat sources.					
2. Start (b) (7)(F) of assembled Power Supplies.					
L3 Milestone	Baseline Date	Status/Comments	Completion Date	RGYB	
(b) (3)	January 13, 2014			GREEN	
	February 17, 2014			GREEN	
	March 10, 2014			GREEN	
	June 20, 2014			GREEN	
	August 29, 2014			GREEN	
	December 10, 2013			GREEN	
	February 25, 2014			GREEN	
	May 25, 2014			GREEN	
	January 9, 2014			GREEN	
	February 16, 2014			GREEN	
	March 2, 2014			GREEN	
	June 15, 2014			GREEN	
	August 29, 2014			GREEN	

2.1 Technical Progress

- ☐ (b) (7)(F) (b) (3)
 - ☐
 - ☐
 - ☐
- ☐ (b) (7)(F) (b) (3)
 - ☐
 - ☐

- Tooling Development:
 - o Completed:
 - (b) (3)
 -
 -
 -
 - o In Design/Fabrication:
 - Vertical RTG position fixture that allows weld access to the base plate backfill cap
 - Fit-up gage that establishes sharp focus distance from a fixed point
 - Fiber inspection video system
- Completed Department of Transportation (DOT) Sealed Source Certification on the D01 Heat Source liners at Pacific Northwest National Laboratory (PNNL). Liners have successfully completed all of the required DOT tests. This certification was required to be able to be moved heat sources from PF-4 into the Radioisotope Thermoelectric Generator Assembly and Test Facility (RTG-ATF).

2.2 Equipment

- Continued operations training on the shock towers and thermal chambers located in the RTG-ATF. Matrices of runs are being made to show reliability and repeatability of all of the environmental testing pieces of equipment in the facility.

2.3 Issues

- None

2.4 Variance Analysis and Recovery Plan

- None

2.5 BCRs

- None

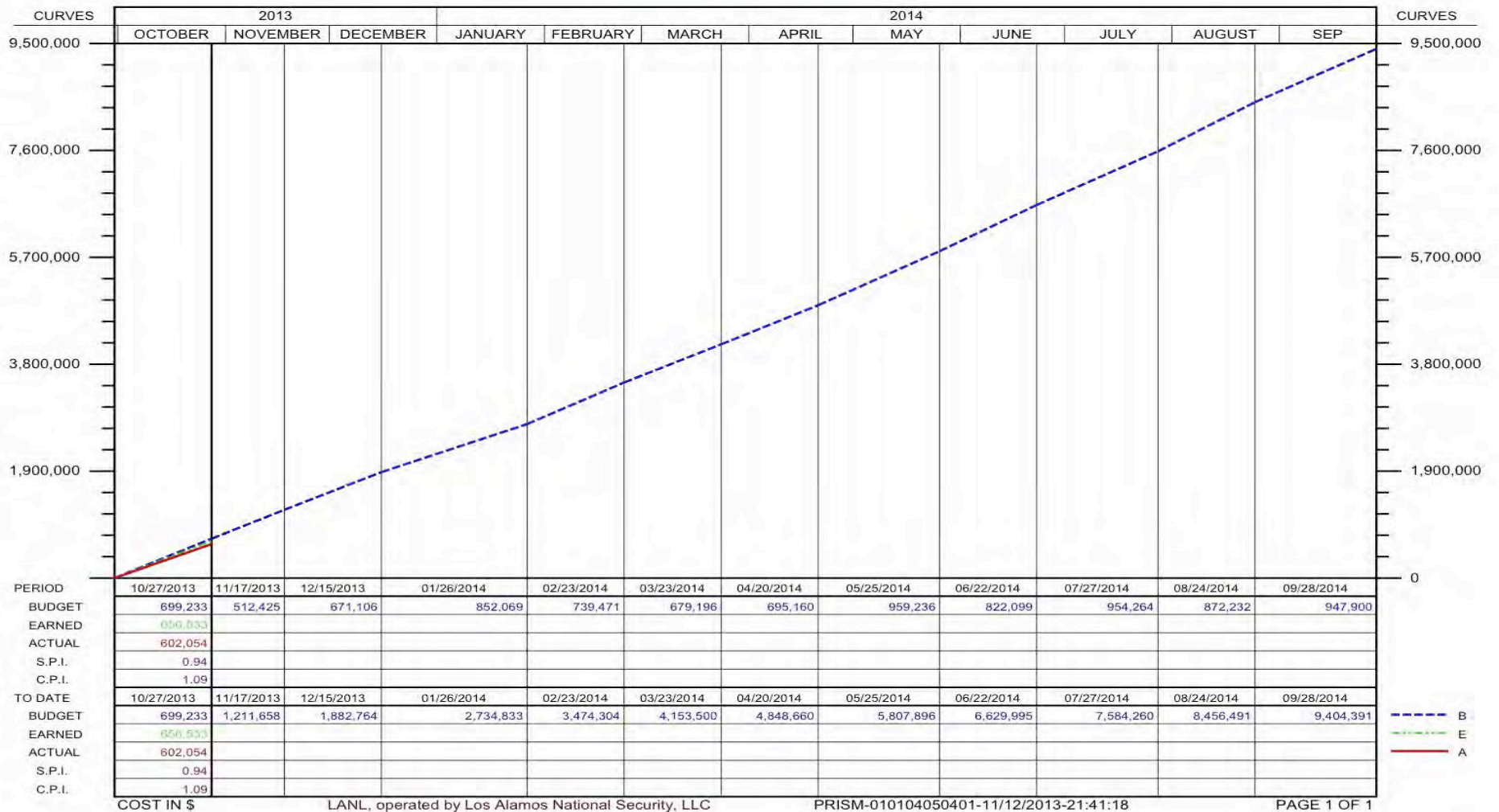
2.6 Risk Table

Work	Description	Handling Strategy	Status
Workforce development and recruiting	Dedicated staffing and depth of trained operators are both at risk to support the development, PPI, and Qual series for Power Supply manufacturing development. The plan to start hiring in FY13 for dedicated staffing did not occur. Staffing is shared with other programs and may not always be available as scheduled. Note that the increase in staff also was planned to maintain lower dose rates in the staff as part of LANL ALARA goals.	1. Communicate and integrate frequently with Power Supply surveillance, NE-75, and other programs to make the best use of available staff. 2. Request LANL and LAFO management to allow for increase in dose to staff assigned to this work. 3. Delay non-critical path activities until they become critical path for FPU.	LANL performed a cross-program review in October of the baselined P6 schedules with NE-75.
Design Maturation beyond PRT Schedule	Delays in the delivery of the various required design phases (AERs, BDR, etc) will lead to a delay in LANL's delivering the FPU.	1. Communicate and integrate frequently with the PRT on LANL design needs. 2. Provide monthly input into the PRT's Integrated Schedule to manage formally any delays.	LANL continues to provide input at the monthly PRT meeting. Topics of the October meeting included review of the most recent fuel specification.
(b) (7)(F)	(b) (7)(F)	(b) (7)(F)	
Hardware Delivery from KCP	The delivery schedule for hardware for the DEV series is very aggressive. Should the schedule slip, production of both cold heat sources and Power Supplies would also lag.	1. LANL has produced hardware to fill small gaps in the hardware delivery schedule in previous years. However, budget constraints in FY14 make it uncertain that resources to fill those gaps will be available this year.	Current hardware on hand is sufficient to meet development schedule. LANL is working with KCP to determine if components expected later in the fiscal year will arrive as expected.

2.7 Earned Value Metrics

PERFORMANCE S-CURVE

Power Supply Production



COST IN \$

LANL, operated by Los Alamos National Security, LLC

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3.0 Program Management and Support

3.1 Program Management

- Submitted the allocation 0.1 matrix with the baseline Primavera schedule. Work packages are in final review and will be signed in November.

3.2 Support

- Document Control, Records Management, and Training
 - Supporting the review of all operations greater than 2300 grams.
- Production Control
 - Provided M&TE and classified parts coordination support.
 - Continued to provide shop floor control and daily schedule status to Enduring Stockpile and Power Supply projects.
 - Provided restart scheduling and performance tracking.
- Maintenance
 - Corrective Maintenance: Initiated work on the dri-vacuum system in the 300 area but did not complete due to the pause.
 - Preventative Maintenance: Completing preventative maintenance on systems requiring maintenance while in pause.
 - Work Management & Control: Continued to collect specific history and determine how to view, report, and analyze.
- Warehousing and Procurement
 - The procurement team successfully processed over 100 procurement requests for TA55 in October. The team was able to work through the period without the development of a substantial (> 1 week) and permanent backlog. Continued to effectively procure and manage material for multiple Pu Sustainment projects (ER, Foundry cold testing and Foundry Vacuum upgrades, CMM replacement, and (b) (7)(F) upgrades.)
 - Processed 1,777 warehouse distributions and 957 warehouse receipts. The cost of the warehouse distributions was \$93.1k and the cost of the warehouse receipts was \$91.8k. The net change in warehouse valuation in October was -\$1,275.
- Calibration
 - The S&CL continues to work with dimensional inspection at TA-55 to develop processes for re-certifying various M&TE in glove boxes that most benefits the Laboratory in regards to minimizing waste and maximizing the useful life of the M&TE.

3.3 Issues

- Enacting a rolling start of PF-4 processes. A crawl list has been generated to monitor and track in a prioritize fashion how PF-4 product lines are restarted. Currently Pu Sustainment related processes are not the highest priority.

3.4 Variance Analysis and Recovery Plan

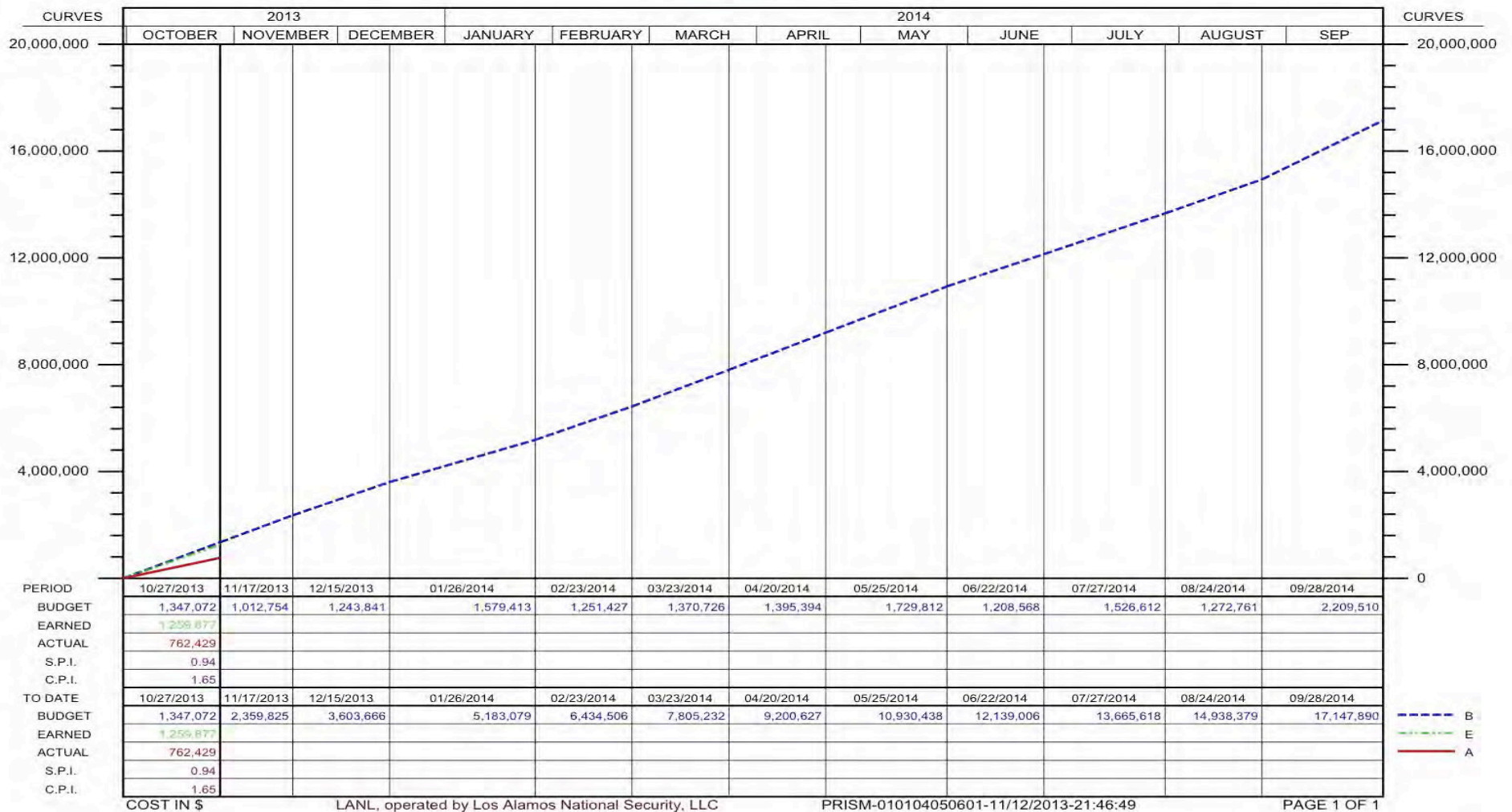
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3.5 BCRs

- None

3.6 Earned Value Metrics

PERFORMANCE S-CURVE Program Office



COST IN \$

LANL, operated by Los Alamos National Security, LLC

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4.0 Facilities, Waste and Institutional Support

4.1 Technical Progress

- (b) (7)(F)

- A major resumption goal was accomplished with all (currently there are 313) procedures having now completed the table-top verification and initial walk down. A total of 121 revised procedures are out for review by effected organizations with 54 of those solely waiting Criticality Safety review. Eight additional procedures were internally approved for resumption.
- LISC Approval Received for 10-29-13: PADOPS-ADNHOO, PR# 317863, \$450,000, two Reverse Osmosis systems in support of Radiological Liquid Waste Treatment Facility Ground Water Permit was **APPROVED** by the LISC committee.
- A safety event occurred in which an MSS electrician received 120-volt electrical shock while performing breaker maintenance.
- Procurement and Warehousing May 2013 Metrics Report
 - The NPI-8 procurement team successfully processed over 100 procurement requests for TA55 in October. The team was able to work through the period without the development of a substantial (> 1 week) and permanent backlog.

4.2 Equipment

- None.

4.3 Issues

- None

4.4 Variance Analysis and Recovery Plan

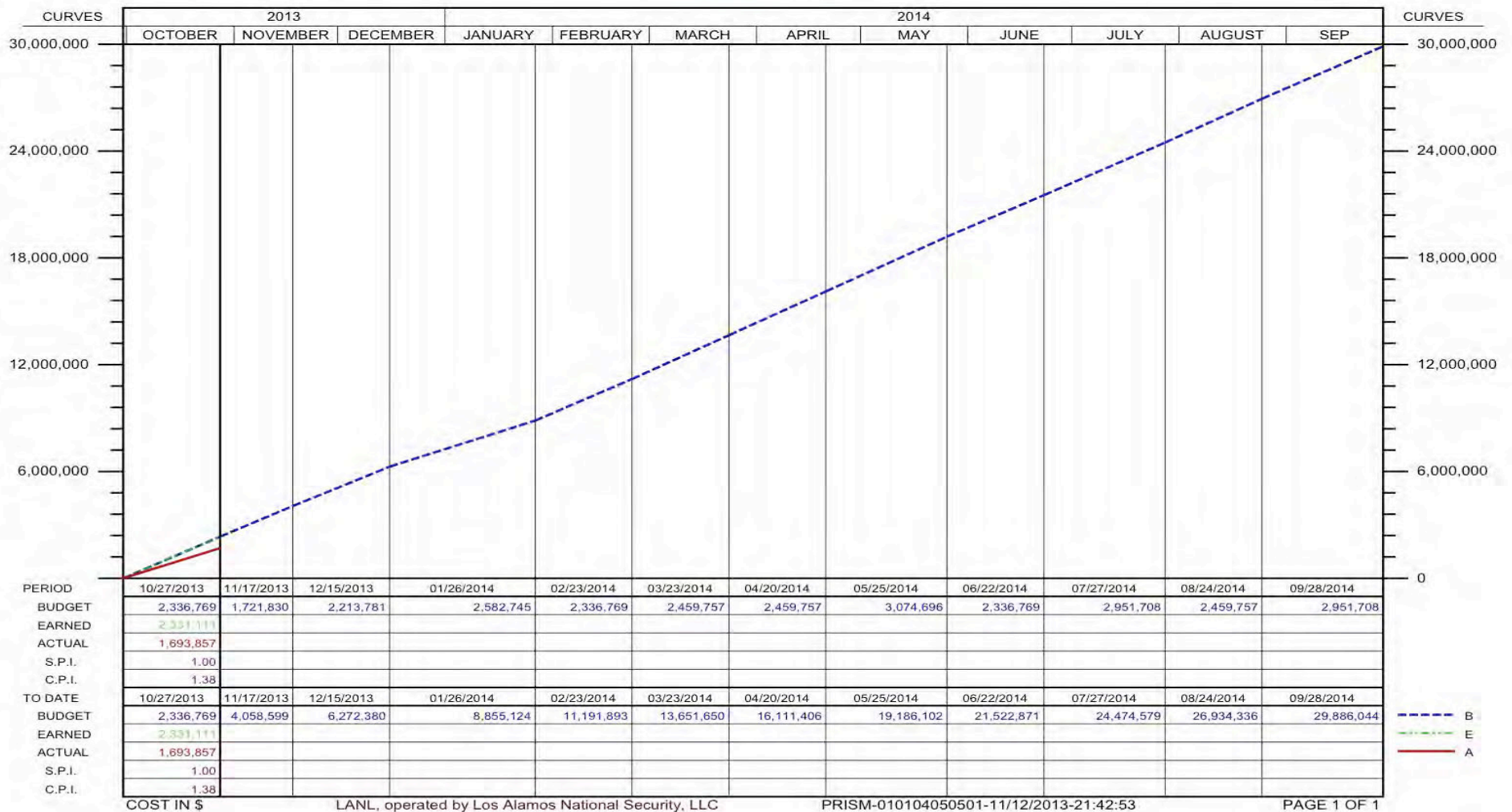
- None

4.5 BCRs

- None

4.6 Earned Value Metrics

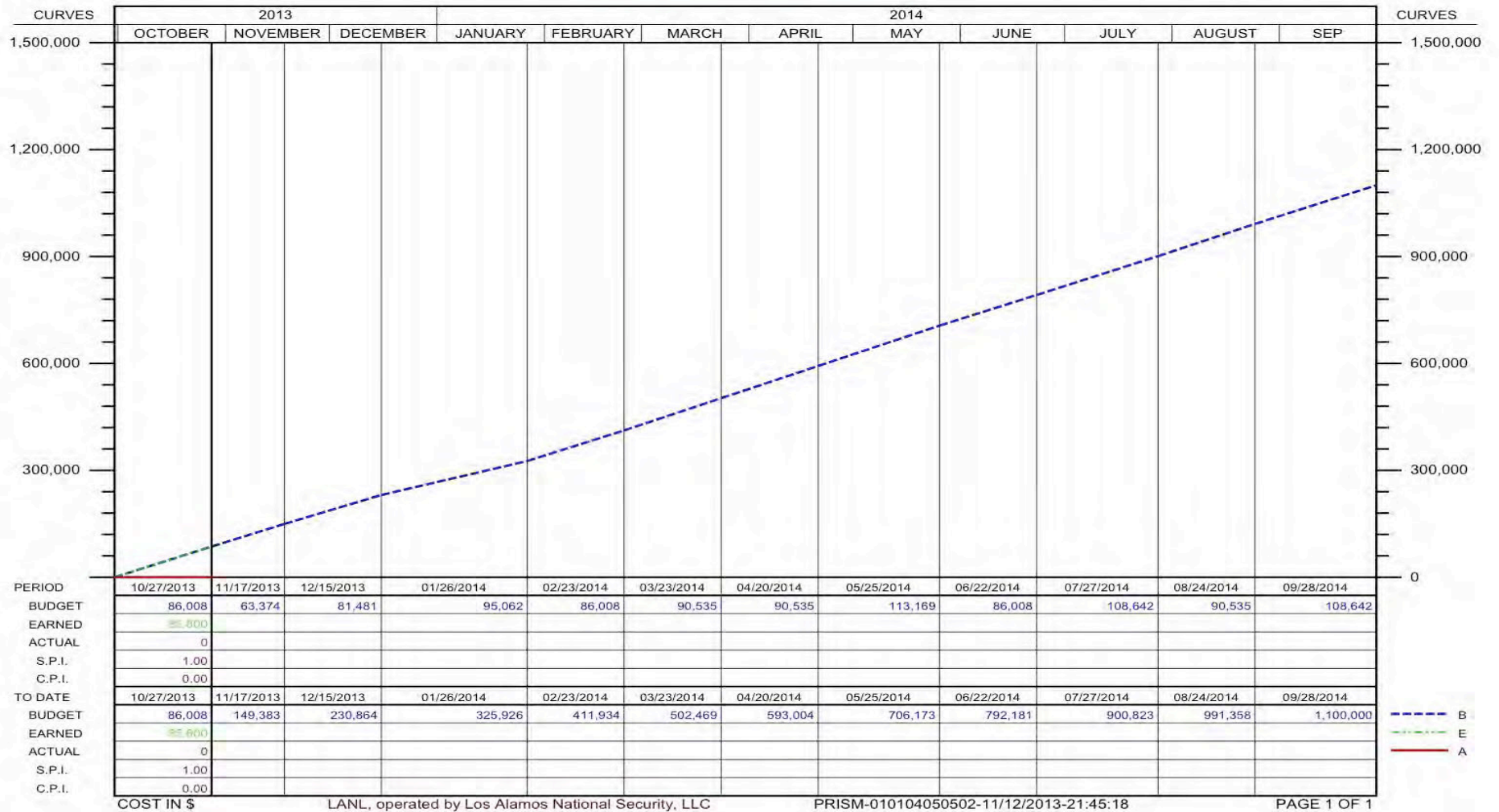
PERFORMANCE S-CURVE RTBF Recovery



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Waste & Other Landlord Recovery



COST IN \$

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