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Executive Summary

In June of 2012 the Plutonium Sustainment program at LANL completed or addressed the following high-level activities:

- 1) All material received before June 30, 2012 has been recovered (milestone 4197 is complete)
- 2) (b) (5), (b) (7)(F)
- 3) Completed (b) (7)(F) Corrective Maintenance
- 4) Performed functional testing of the preparation unit with a component, which completed unit installation.

There are currently no major issues associated with achieving MRT L2 Milestones 4195-4198 or the relevant PBIs associated with Plutonium Sustainment.

There are no budget issues associated with FY12 final budget guidance. Table 1 identifies all Baseline Change Requests (BCRs) that were initiated, in process, or completed during the month.

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

Each of the 5 major LANL WBS elements is discussed in detail below with a section at the end that is provided by LLNL.

Table 1: June Baseline Change Requests

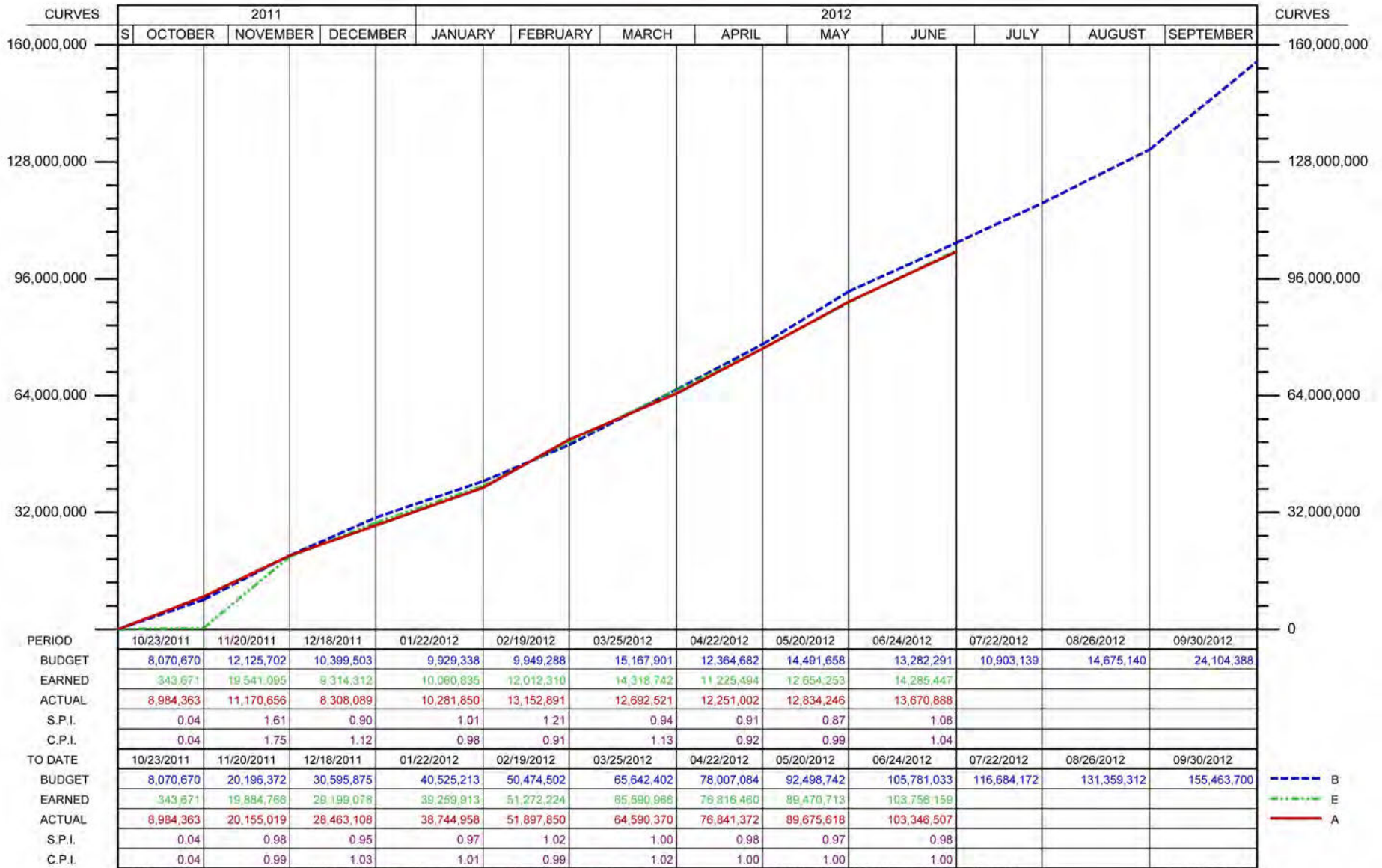
WBS	BCR #	BCR Description	Date Assigned	Date Approved	Impact	Cost Impact	Change Level
Power Supply	PSM-12-030	Electrical Install - In scope Scope changes	4/20/12	5/16/2012	Scope	N/A	4
Power Supply	PSM-12-031	Mechanical Install - In scope Scope changes	4/20/12	6/18/2012	Scope	N/A	4
Power Supply	PSM-12-032	Civil/Structural/Architectural - In scope Scope changes	4/20/12		Scope	N/A	
Power Supply	PSM-12-033	Demolition - Mechanical	4/20/12		Scope	N/A	
Power Supply	PSM-12-034	Scope Modification for Pu Separation & Granule Production	5/1/12	Cancelled	Scope		
Power Supply	PSM-12-035	Scope Modification for Heat Source, Fabrication & Inspection	5/1/12	5/9/12	Scope	N/A	3
Experimental Component	PSM-12-039	Pollux	6/5/12	Pending	Cost/Scope		

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Earned Value Metrics

PERFORMANCE S-CURVE

Pu Sustainment



COST IN \$

LANL, operated by Los Alamos National Security, LLC

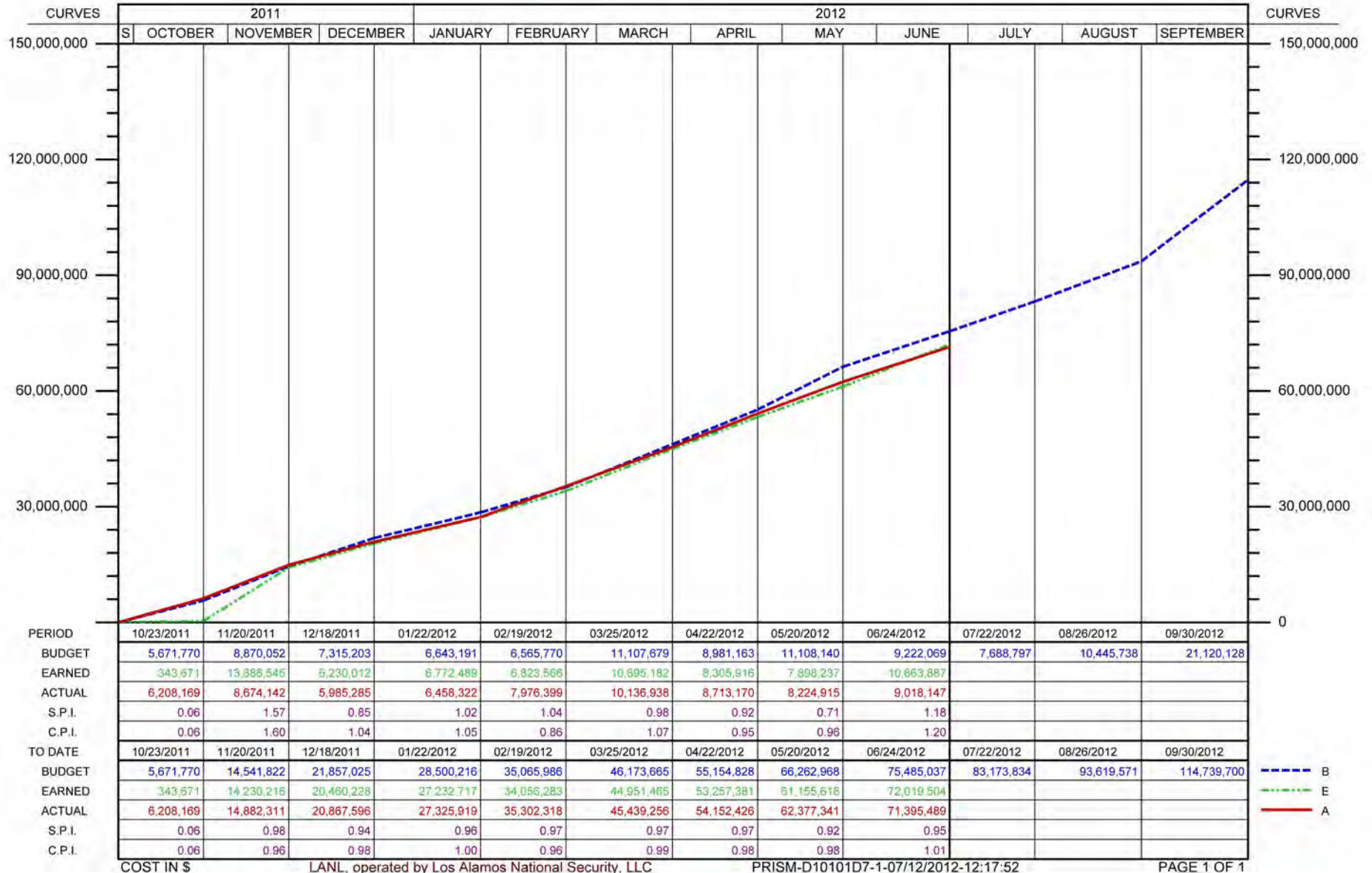
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PERFORMANCE S-CURVE

Pu Sustainment W/O Facility Infrastructure



1.0 LANL - Pit Development

MRT 4196		GREEN	Perform Activities to Sustain Base Pit Material Processing and Fabrication Capability		
1. (b) (7)(F)					
2. Continue installation and upgrade to pit capability equipment per PEP					
3. (b) (7)(F)					
L3 Milestone	Baseline Date	Status/Comments	Completion Date	RGYB	
Non-nuclear components necessary for an EDU build are available for use.	July 13, 2012		June 13, 2012	BLUE	
Suitable nuclear material is available as ER	September 21, 2012		May 14, 2012	BLUE	
(b) (7)(F) documentation approved - Technical Specifications & Requirements - Functional & Operations Requirements - Cold System Test Plan	September 21, 2012	TS&R Approved by PMB/WB F&OR Approved by PMB/WB	June 27, 2012 June 27, 2012	GREEN	
(b) (7)(F) Corrective Maintenance Complete	June 29, 2012	Corrective Maintenance completed. Weld performed	June 28, 2012	BLUE	
Preparation Unit Installed	August 14, 2012	Post installation operation demonstrated on part	June 26, 2012	BLUE	
Production Strategy and TRL/MRL assessment	September 30, 2012			GREEN	

1.1 Technical Progress

- (b) (5), (b) (7)(F)
- (b) (5), (b) (7)(F)
- Started outer contour inspection on the CMM.
- Completed a draft of the MRL and TRL stages and completion criteria that apply to a legacy pit demonstration.
- Performed (b) (7)(F) on test specimens in preparation of (b) (7)(F)

1.2 Equipment

- (b) (7)(F)
 - Submitted Technical Specifications and Requirements (TS&R) and the Functional and Operational Requirements (F&OR) documents to the Program Management Board/Working Board (PMB/WB). Documents were approved by the PMB/WB on June 27, 2012.
- (b) (7)(F)
 - Vendor reviewed corrective maintenance performed and concurred that capability to weld had been restored.

- o On June 28, 2012, (b) (7)(F) successfully performed a weld.
- Surface Preparation
 - o Performed functional testing on a surrogate component on May 3, 2012
 - o Software Quality Assurance documentation approved.
 - o Performed functional testing of the unit with a component on June 26, 2012.

1.3 Issues

- None

1.4 Variance Analysis and Recovery Plan

- None

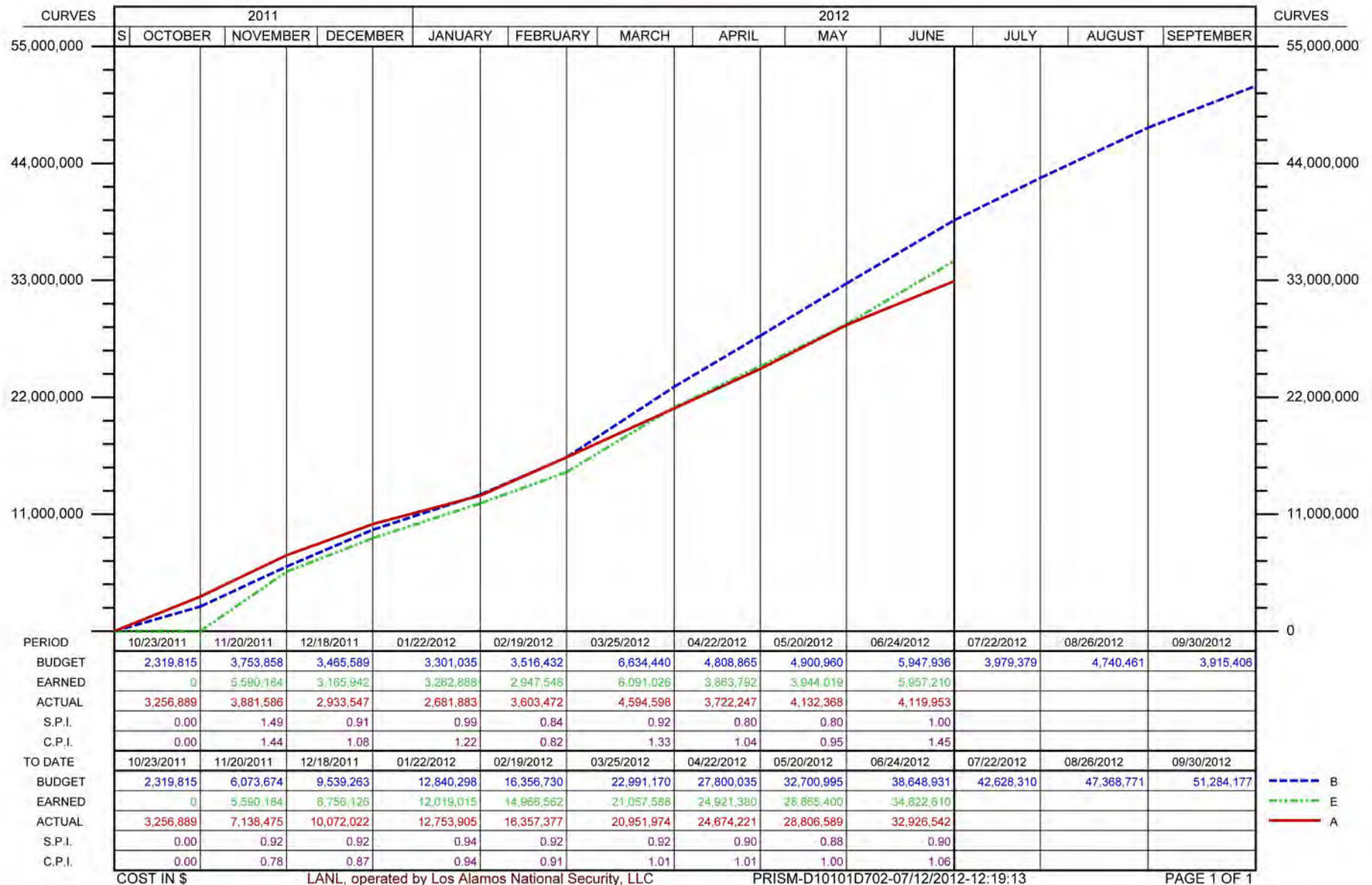
1.5 BCRs

- None

1.6 Earned Value Metrics

PERFORMANCE S-CURVE

Pit Manufacturing



2.0 LANL – Experimental Component

4198	GREEN	Perform activities to sustain base pit material processing and fabrication capability through Experimental Component Fabrication		
1. Experimental Component Fabrication and Shipment of Gemini / Pollux in accordance with PEP but no later than September 30, 2012				
L3 Milestone	Baseline Date	Status/Comments	Completion Date	RGYB
Start Cold Machining	January 10, 2012		Nov 18, 2011	BLUE
Start Hot Machining	February 21, 2012		March 23, 2012	BLUE
Casting Complete	February 27, 2012		February 27, 2012	BLUE
Complete Castor Sub-Assembly	May 3, 2012		May 31, 2012	BLUE
Start Hot Development Assembly	May 7, 2012	First assembly chosen as a shipping fixture test in lieu of hot assembly.	May 14, 2012	BLUE
Complete Machining Lot 1 – DEV	June 14, 2012	MET-2 has elected not to perform a hot (b) (7)(F)		BLACK
Complete Machining Lot 2 – Pollux	August 1, 2012			GREEN
Start Pollux Assembly	August 13, 2012			GREEN
Pollux Complete	September 6, 2012			GREEN

2.1 Technical Progress

- Completed (b) (7)(F) and (b) (7)(F) and packaging.
- Complete shipping/packing procedures with approvals.
- Completed COSA/Perfect Practice activities and DAF to validate/authorize unpack/assembly procedures.
- Completed (b) (7)(F) machining the first set of two parts from Lot 2 of Pu parts on (b) (7)(F). Parts were inspected and accepted by LANL DA. Parts are ready for milling operation.

2.2 Equipment

- Completed constant feed cutting development and implementation on (b) (7)(F)
- Completed on machine probing development on cold (b) (7)(F) with implementation scheduled for early July.

2.3 Issues

- In order to maintain the (b) (7)(F) schedule, the (b) (7)(F) has been dropped. This results in an increased technical risk since there will be no (b) (7)(F) before the (b) (7)(F).
- Compressed schedule will require overtime minimizing the schedule risk.

2.4 Variance Analysis and Recovery Plan

- SPI – Decision to forego the development build has resulted in a 9% schedule variance.
- CPI – Line organizations have revised the cost estimate for the remaining scope for Pollux. Additional budget will be made available from Pu Sustainment reserve. No BCR is planned and a variance will occur.

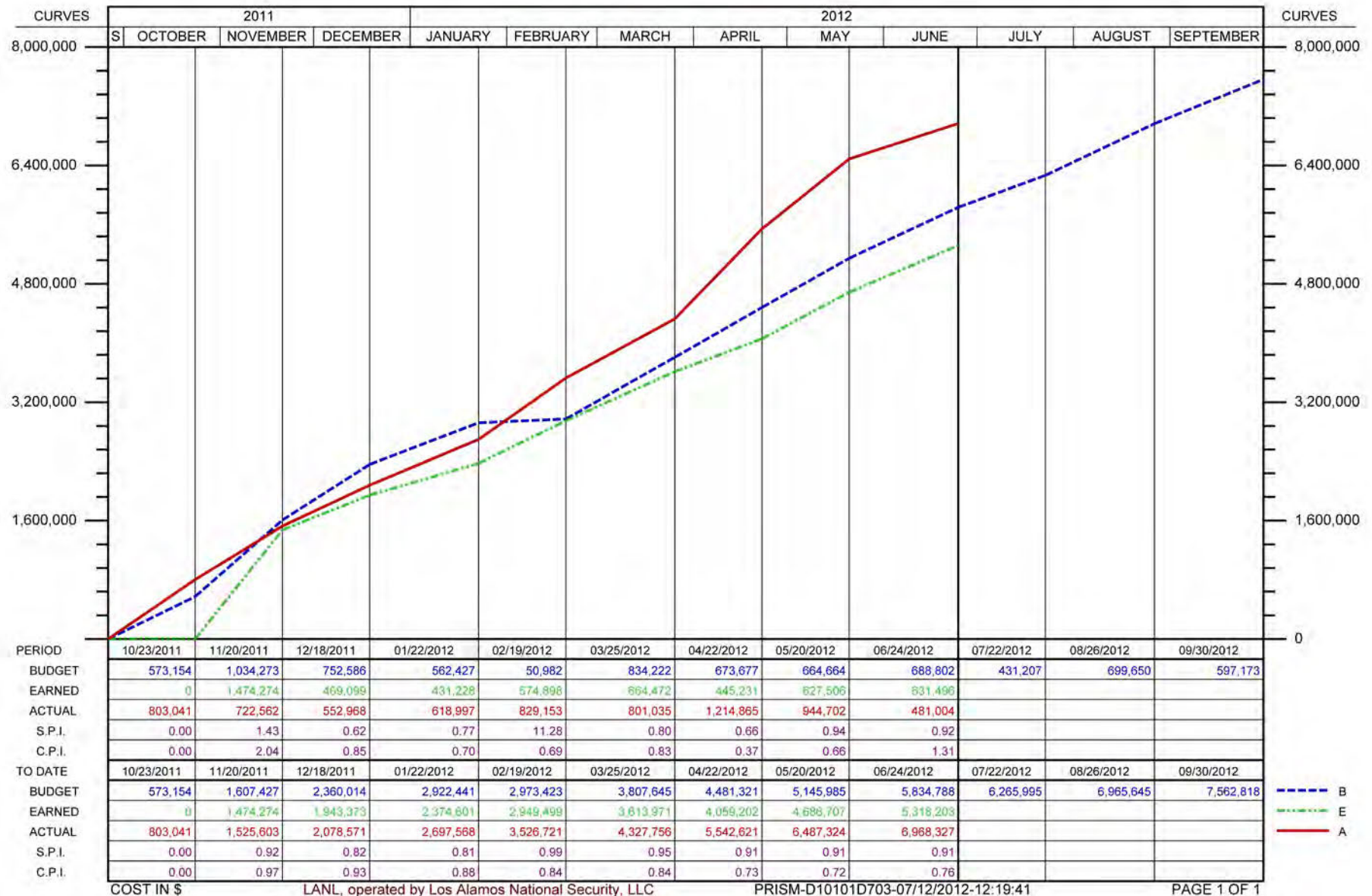
2.5 BCRs

- None

2.6 Earned Value Metrics

PERFORMANCE S-CURVE

Experimental Component Manufacturing



3.0 LANL - Power Supply

4195	BLUE	Install the Power Supply Assembly Area Equipment and Upgrades per the FY2012 Power Supply PEP		
1. Begin construction on the PSAA by March 31, 2012. 2. Start installation of the Analytical Chemistry GBs by June 30, 2012. 3. Start installation of the (b) (7)(F) by June 30, 2012.				
L3 Milestone	Baseline Date	Status/Comments	Completion Date	RGYB
Start Construction – Capital (PSAA)	December 15, 2011		Dec 7, 2011	BLUE
Start Construction – Facility (PSAA)	December 15, 2011		Dec 7, 2011	BLUE
GB-1240 - Construction Field Start (Pu Assay)	March 1, 2012		May 7, 2012	BLUE
GB-1241 - Construction Field Start (Radiochemistry)	March 9, 2012		May 7, 2012	BLUE
Mobilize and Field Start (b) (7)(F)	June 14, 2012		April 30, 2012	BLUE

4197	BLUE	Complete FY 2012 Power Supply material recovery activities IAW the Plutonium Sustainment PEP		
1. Dismantle lesser of 480 units or 95% of the (b) (7)(F) items received by June 30, 2012 2. Recover and store the oxide by Sept 30, 2012				
L3 Milestone	Baseline Date	Status/Comments	Completion Date	RGYB
Material Recovery Complete Shipment #1	October 18, 2011		Oct 18, 2012	BLUE
Material Recovery Complete Shipment #2	January 4, 2012		Dec 22, 2011	BLUE
Material Recovery Complete Shipment #3	March 8, 2012		Feb 15, 2012	BLUE
Material Recovery Complete Shipment #4	April 25, 2012		Mar 15, 2012	BLUE
Material Recovery Complete Shipment #5	June 27, 2012		June 21, 2012	BLUE

3.1 Technical Progress

- Material Recovery
 - o Shipment #6 has been delayed (b) (7)(F) and will be part of the FY13 harvesting milestone.
 - o All material received before June 30, 2012 has been recovered (milestone 4197 is complete)

3.2 Equipment

- Power Supply Assembly Area (PSAA)
 - o Construction continues and is on track.
 - o Completed new concrete placement for the shipping and receiving equipment wall. Completed placement of the rebar and steel roof for the source storage area.
 - o (b) (7)(F) This was a high-risk activity that was accomplished successfully.
 - o Completed duct bank installation between the two manholes.

- o Continue construction of electrical primary service raceways to the ground floor of PF-5.
 - o Completed the rebar placement for the new 2,000kVA transformer pad.
- The (b) (7)(F)
 - o Received both (b) (7)(F) from (b) (7)(F) (Germany).
 - o Both (b) (7)(F) have been moved into their respective facilities (SM-39 and PF-4).
- Analytical Chemistry gloveboxes (Pu Assay and Radiochemistry)
 - o The glovebox delivery is on track.
 - o Construction activities continue for June.
- SM-39 Development Laboratory
 - o Received (b) (7)(F)

3.3 Issues

- None

3.4 Variance Analysis and Recovery Plan

- None

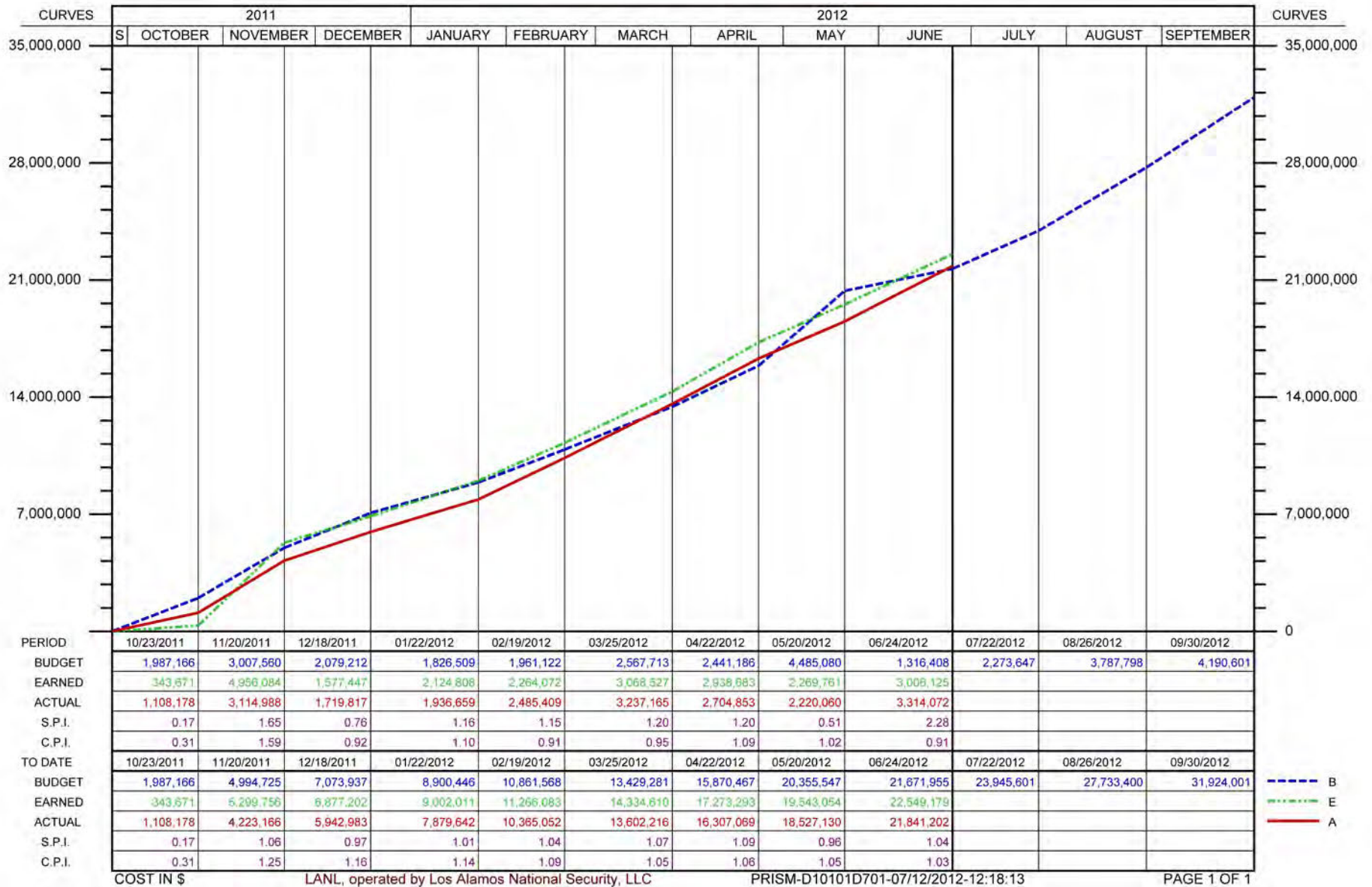
3.5 BCRs

- None

3.6 Earned Value Metrics

PERFORMANCE S-CURVE

Reconstitution of Power Supply Manufacturing



4.0 Program Management and Support

4.1 Technical Progress

- Hosted the IPT on the 12th of June, which included discussions on:
 - o PA requested drawing changes
 - o CMM Qualification Plan
 - o Status of key processes and equipment.
- Started integration of work package schedules for Fiscal Year 2013.
- Continued budget planning for Fiscal Year 2013.

4.2 Equipment

- None

4.3 Issues

- None

4.4 Variance Analysis and Recovery Plan

- None

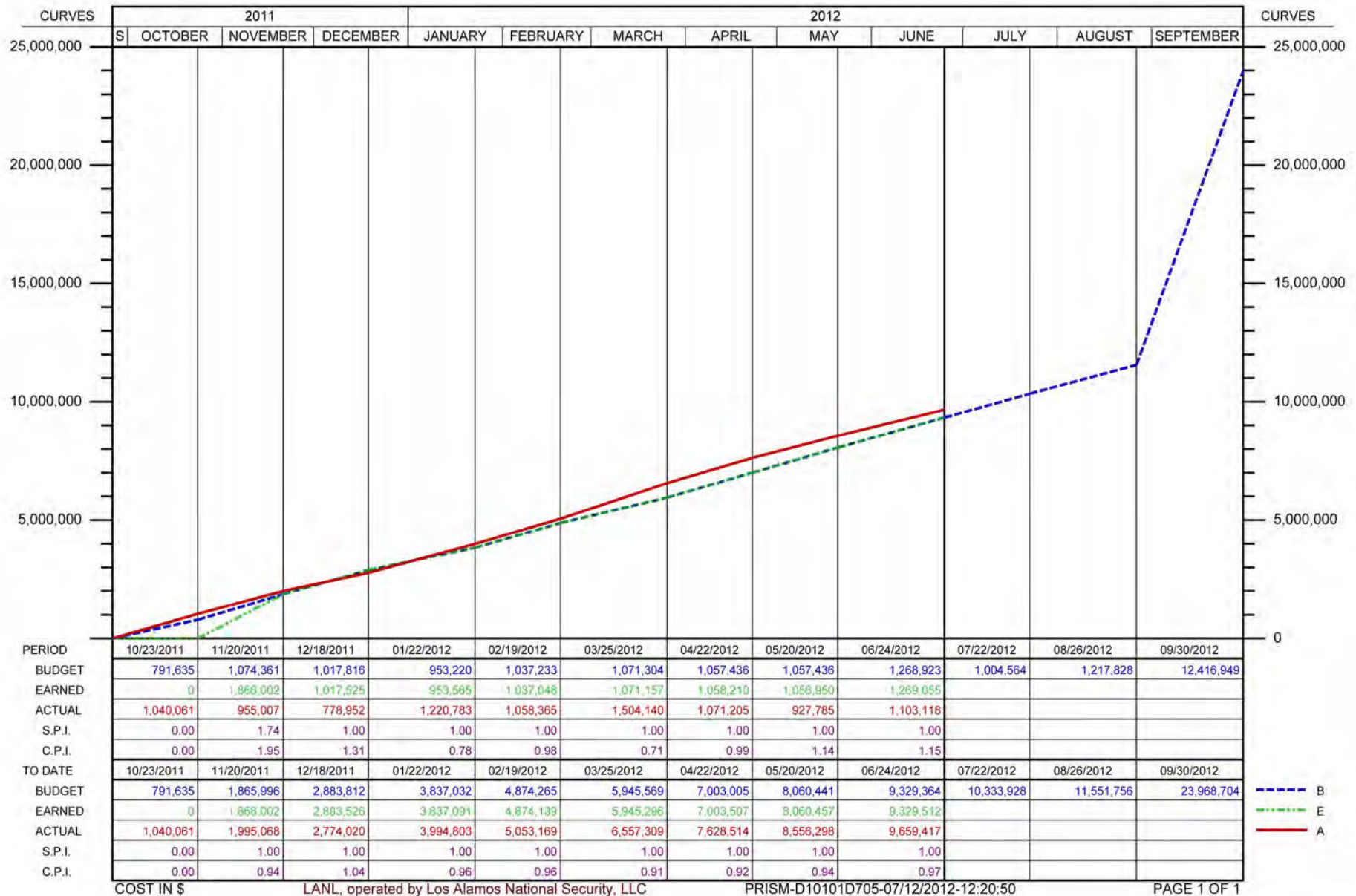
4.5 BCRs

- None

4.6 Earned Value Metrics

PERFORMANCE S-CURVE

Program Office



5.0 Facilities, Waste and Institutional Support

5.1 Technical Progress

- PF-4 Facility Availability: June 96.76%
 - o 100 Area: 93.75%
 - o 200 Area: 96.05%
 - o 300 Area: 100.00%
 - o 400 Area: 97.25%

5.2 Equipment

- None

5.3 Issues

- None

5.4 Variance Analysis and Recovery Plan

- None

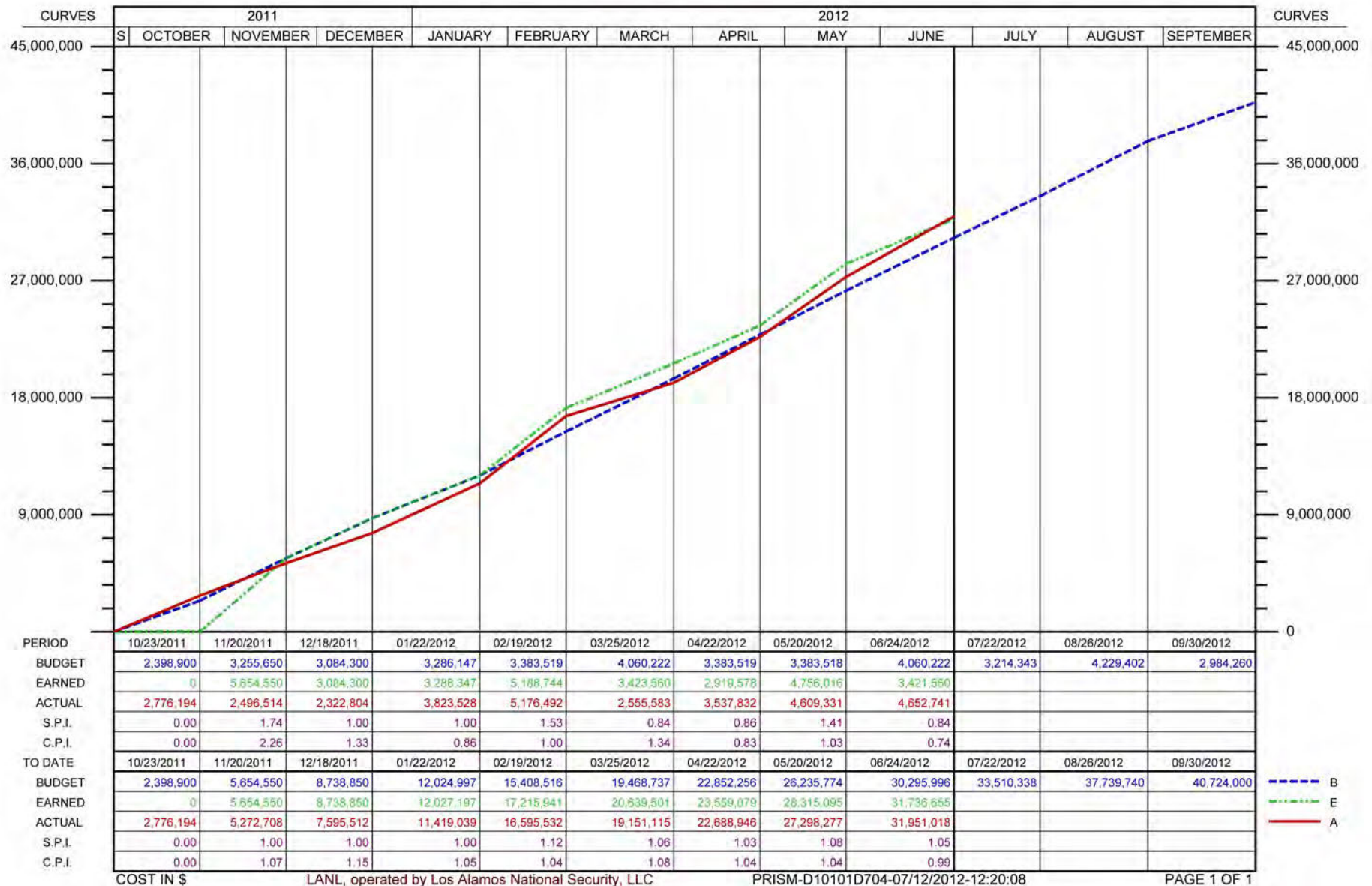
5.5 BCRs

- None

5.6 Earned Value Metrics

PERFORMANCE S-CURVE

Facility Infrastructure



6.0 LLNL

MRT 4196	GREEN	Perform Activities to Sustain Base Pit Material Processing and Fabrication Capability		
1. (b) (7)(F)				
2. Perform initial cold testing of modern foundry				
3. (b) (7)(F)				
4. No later then June 30, 2012, Package and Ship Pu metal to LANL				
L3 Milestone	Baseline Date	Status/Comments	Completion Date	RGYB
LLNL Tasks to supports FY2013 (b) (7)(F)	9/30/2013	Design Definition complete for (b) (7)(F) Working chemistry specification		GREEN
Initial cold testing of modern foundry (b) (7)(F)	9/30/2012	Several systems have been cold tested		GREEN
(b) (7)(F)	9/30/2012	Need LLNL machinists		YELLOW
Package and Ship Pu metal to LANL	6/30/2012	Shipments completed	6/28/2012	BLUE

6.1 Technical Progress

- IPT met at LANL on the 12th of June. Highlights:
 - Discussed/agreed on disposition of PA requested drawing changes
 - LANL presented notional CMM qual plan which captured key elements LLNL requested
 - LANL presented status of key processes and equipment which indicates risk level is dropping for some of the high risk (b) (7)(F) processes
- (b) (5), (b) (7)(F).
- The (b) (7)(F) inspection fixture currently at inspection at LLNL. Work continues on writing (b) (7)(F) inspection program. Inspection procedure has been approved for use at LANL.
- (b) (7)(F)
- New fixture for (b) (7)(F) working well; several pressings were performed with good success. LLNL is continuing metallurgical evaluation of (b) (7)(F) samples.
- Met milestone for shipment of material for ER feed to LANL. Additional parts have been prepared from other sources for shipment to LANL.

6.2 Equipment

- Modern Foundry:
 - Continued verification and testing of the modern foundry control system. The TC connections between the Induction furnaces, Mold and Die furnaces and the associated breach components to the controller were verified. The AHJ inspection and wiring verification of the Mold and Die Furnace power supply and controller and the Shear and Press controller was also completed. The number of wiring connections coupled with the consequence of losing control system components drives us to be cautious and recheck all power supplies and their associated control and interlock systems prior to start-up.

6.3 Issues

- None

6.4 Variance Analysis and Recovery Plan

- (b) (7)(F)
- Recovery Plan – Additional staff have achieved unescorted access and will be able to support work on Pu Sustainment tasks in July allowing parallel operations to proceed.

6.5 BCRs

- None

6.6 Earned Value Metrics

PERFORMANCE S-CURVE

LLNL

