

EVMS Training Snippet Library: PARSII Analysis: OAPM Red Yellow Report



**Office of Acquisition and Project Management (OAPM) MA-60
U. S. Department of Energy
July 2014**

Analysis Reports – Project Analysis SOP



PARS II KGA

OVERSIGHT & ASSESSMENT

PROJECT PERFORMANCE

ALL REPORTS

SSS Reports

SSS Reports

All monetary values are

+ Add | Paste

Shared Reports

- Analysis Reports
 - + Data Validity Check
 - + Schedule Health Assessment
 - + Variance Analysis
 - + Trend Analysis
 - + EAC Reasonableness
 - + Predictive Analysis
- + APM DepSec Monthly Reports



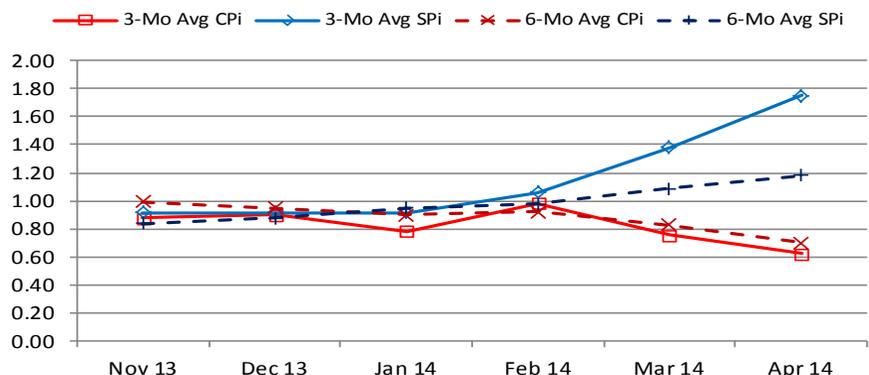
- **APM DepSec Monthly Reports**
 - Verification Reports (Project)
 - APM Red/Yellow Detail 1 – 6 Month Trend
 - APM Red/Yellow Detail 2 – 12 Month Plan v Actual
 - APM Red/Yellow Detail 3 – Contractor Completion Forecast
 - APM Red/Yellow Detail 4 – TPC To-Go
 - APM Red/Yellow Project Report
 - Assessments by Project – Current & Prior Periods
 - Project Quick View Management Report
 - Project Quick View Report



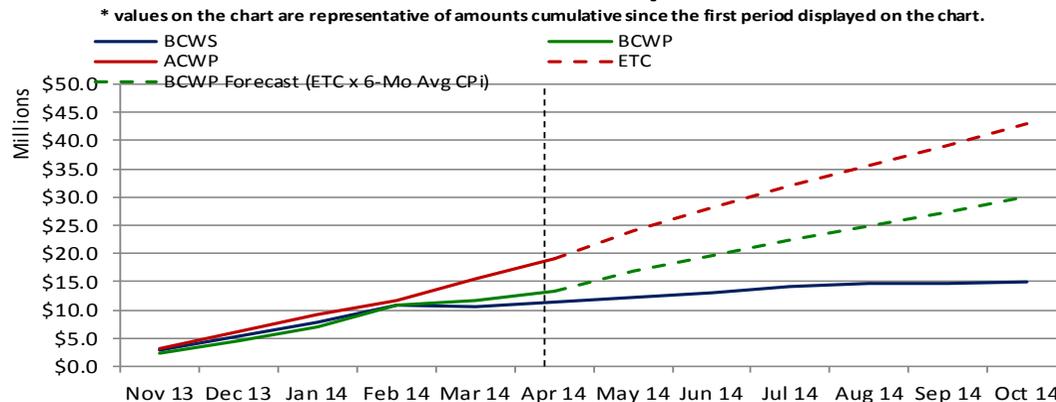
APM Red Yellow Project Report

APM Analyst: John Smith			FPD: Jane Doe		Level 3	Contractor: Acme		Not Certified
Current APM Assessment	Prior APM Assessment	# of Months At No Assessment			TPC (\$M)	CD-4 Date	Project % Complete	Program
No Assessment	Red	1	Approved:		\$414.2	8/31/2015	95.0%	NA
			APM Forecast:		TBD	TBD		

6-Mo. Performance Trends



12-Mo. Plan v. Actual/Forecast



DOE Performance Baseline - Reporting Period June 2014						Key Performance Indicators		
COST			SCHEDULE			KPI	Current	Prior
DOE Cost Contingency (\$M)			DOE Schedule Contingency (days)			Cum CPI	1.02	1.05
Approved	Remaining	% of TPC To-Go	Approved	Remaining	% of To-Go Duration	Cum SPI	1.45	1.44
\$55.0	\$48.9	57.3%	364			Cum Start Date	12/17/12	12/17/12
Contractor PMB - Performance Period April 2014								
Performance Measurement Baseline (\$M)			Management Reserve (\$M)			Independent Estimates At Complete		
Approved (PMB)	Forecast (EAC)	To-Go (ETC)	Approved	Remaining	% of ETC	TCPI to EAC	CPI x SPI	3 Mo. Avg CPI
\$341.3	\$361.5	\$37.9	\$17.5	\$9.4	24.8%	0.45	\$341.4	\$351.0
APM Assessment						Contractor Completion Date Forecast:		8/23/2015

Red/Yellow Project Report Header



Report Date: 6/2/2014 OA Status Date: 6/26/2014 CPP Data As-Of Date: 4/27/2014			Red - Yellow Project Status Report June 2014					
APM Analyst: John Smith			FPD: Jane Doe	Level 3	Contractor: Acme	Not Certified		
Current APM Assessment	Prior APM Assessment	# of Months At No Assessment		TPC (\$M)	CD-4 Date	Project % Complete	Program	Site
No Assessment	Red	1	Approved:	\$414.2	8/31/2015	95.0%	NA	Kendaltucky
			APM Forecast:	TBD	TBD			

- **High-Level Project Information**

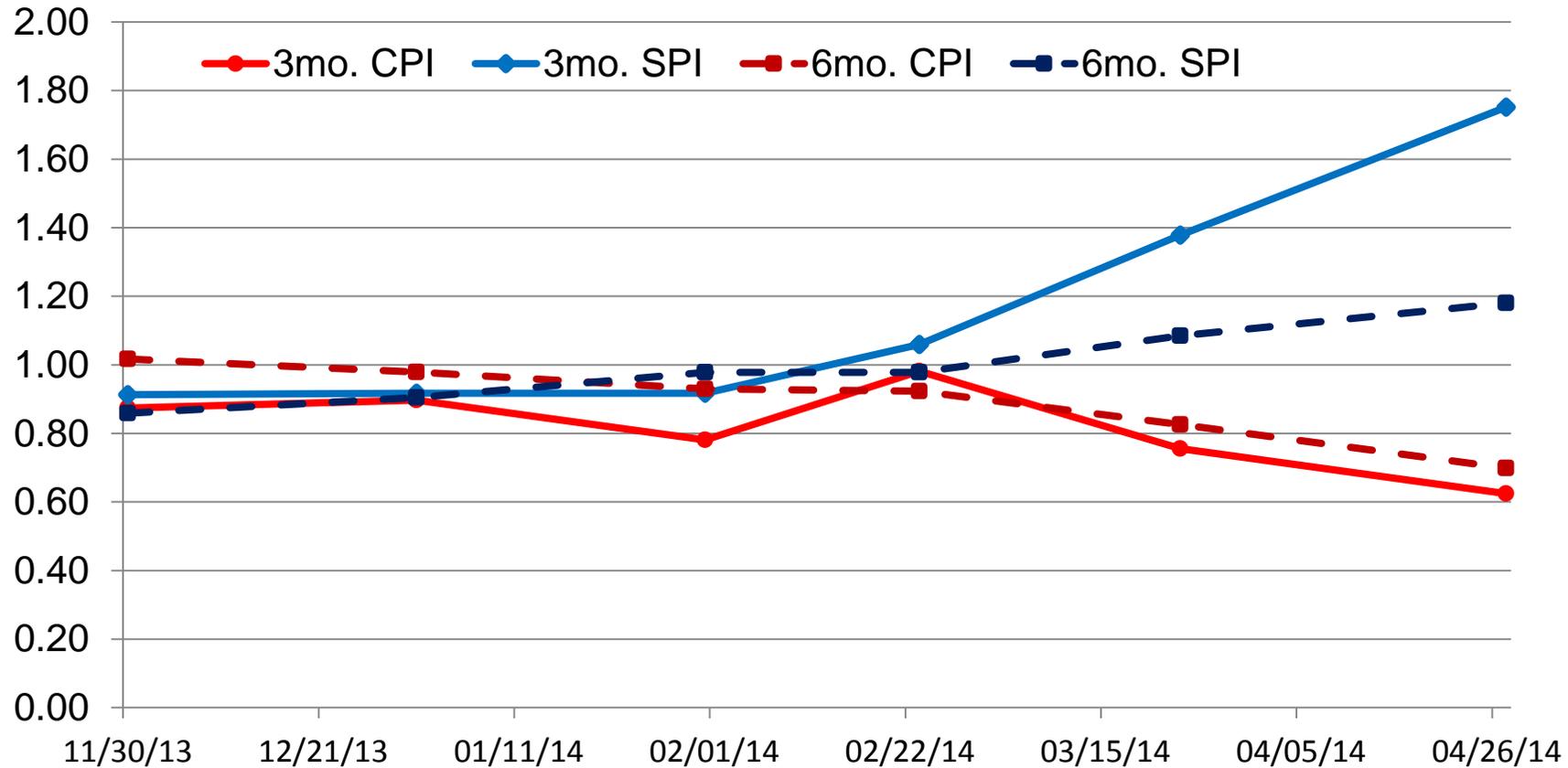
- **All of the Data Resides in PARS II**

- **Note:**

- **FPD Certification Level** is highlighted **RED** if current approved project TPC is above the top range of TPC allowed to be managed by the current FPD certification level.
- **Contractor Certification** is highlighted in **RED** if contractor EVMS is Not Certified
- **Project % Complete** is calculated by PARS II from contractor-reported data
 - % Complete = $BCWP_{cum} / PMB$
 - $PMB = BAC + UB$



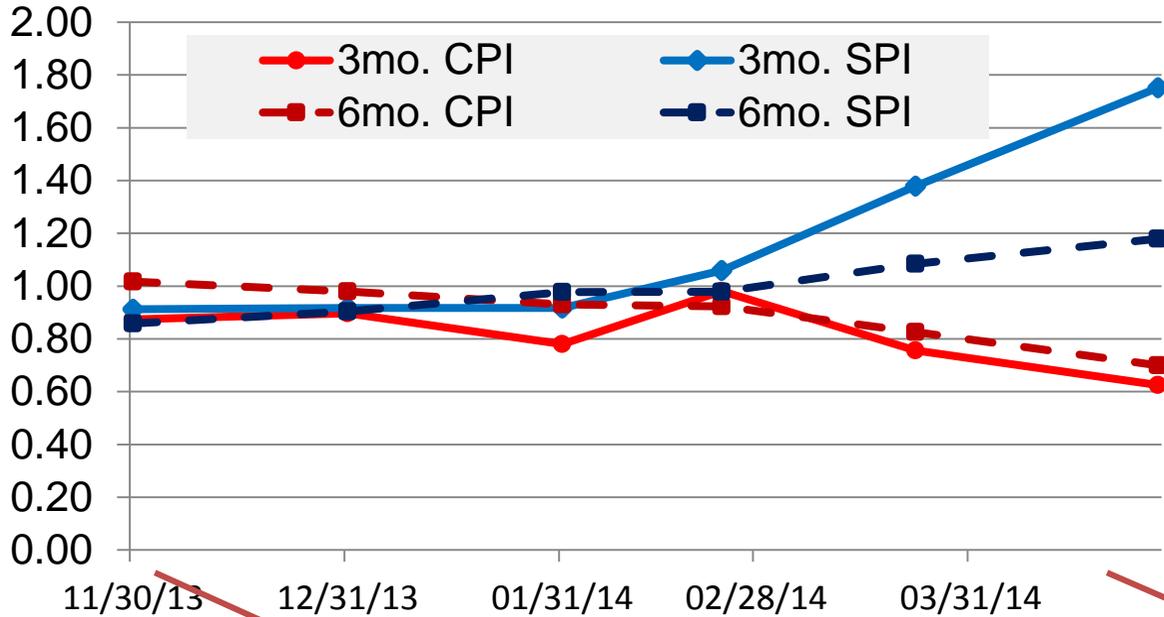
6 Month Performance Trends



- Provides 3 and 6 Month Rolling Average CPI and SPI Trends
- Based on Incremental CPI and SPI



6 Month Performance Trends



- Provides 3 and 6 Month Rolling Average CPI and SPI Trends
- Based on Incremental CPI and SPI
- Calculated from Contractor Timephased SPA Data

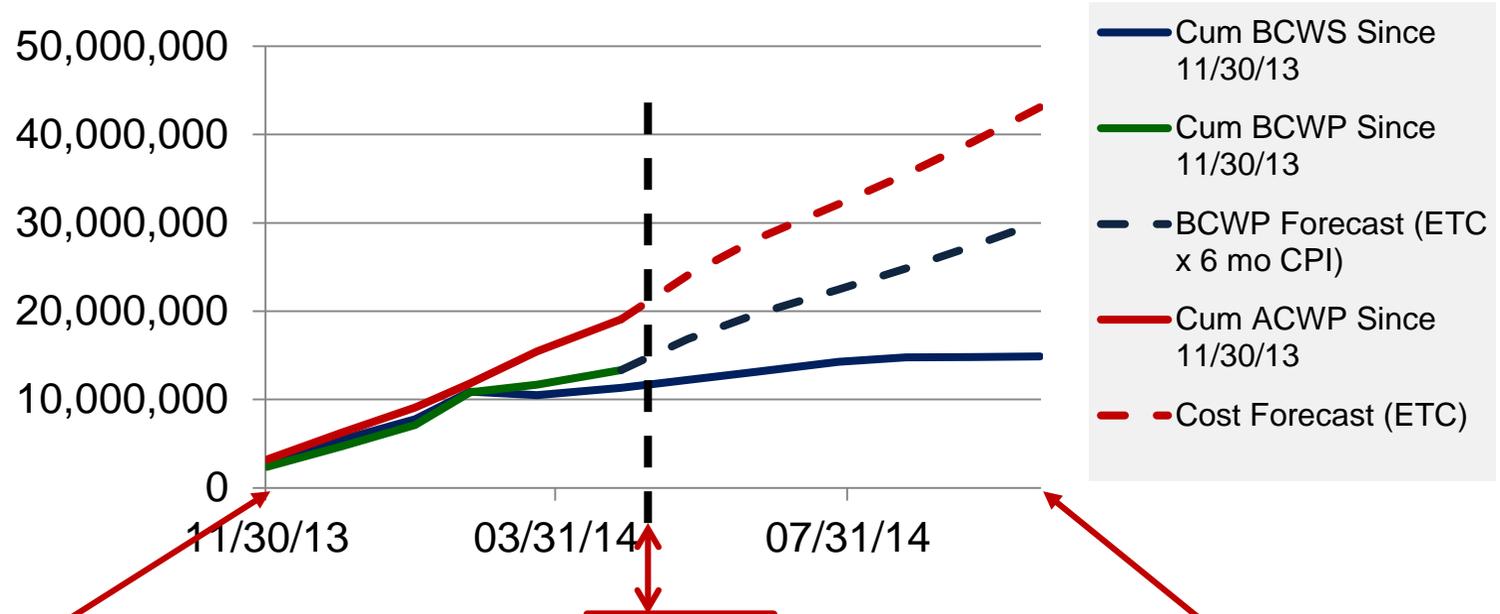
APM Red/Yellow Detail 1 - 6 Month Trend

TYPE	06/30/13	07/31/13	08/31/13	09/30/13	10/31/13	11/30/13	12/31/13	01/31/14	02/23/14	03/23/14	04/27/14
Inc BCWS	5,323,088	6,051,202	4,451,319	3,515,505	3,434,083	2,926,603	2,520,060	2,306,862	3,143,709	-382,833	799,012
Inc BCWP	3,638,868	4,410,678	5,000,000	3,158,329	3,460,448	2,395,948	2,286,500	2,432,765	3,725,704	828,247	1,681,395
Inc ACWP	3,534,360	3,905,223	3,936,963	4,233,687	2,854,031	3,221,512	2,998,707	2,892,075	2,714,898	3,695,745	3,630,347
Inc CPI	1.03	1.13	1.27	0.75	1.21	0.74	0.76	0.84	1.37	0.23	0.46
Inc SPI	0.68	0.73	1.12	0.90	1.01	0.82	0.91	1.05	1.19	-2.16	2.10
3mo. CPI			1.15	1.04	1.05	0.87	0.90	0.78	0.98	0.76	0.62
3mo. SPI			0.82	0.90	1.02	0.91	0.92	0.92	1.06	1.38	1.75
6mo. CPI						1.02	0.98	0.93	0.92	0.83	0.70
6mo. SPI						0.86	0.90	0.98	0.98	1.08	1.18



12 Month Plan vs. Actual/Forecast

- 12 Month Performance Snapshot
- Based on Contractor Timephased SPA and ETC

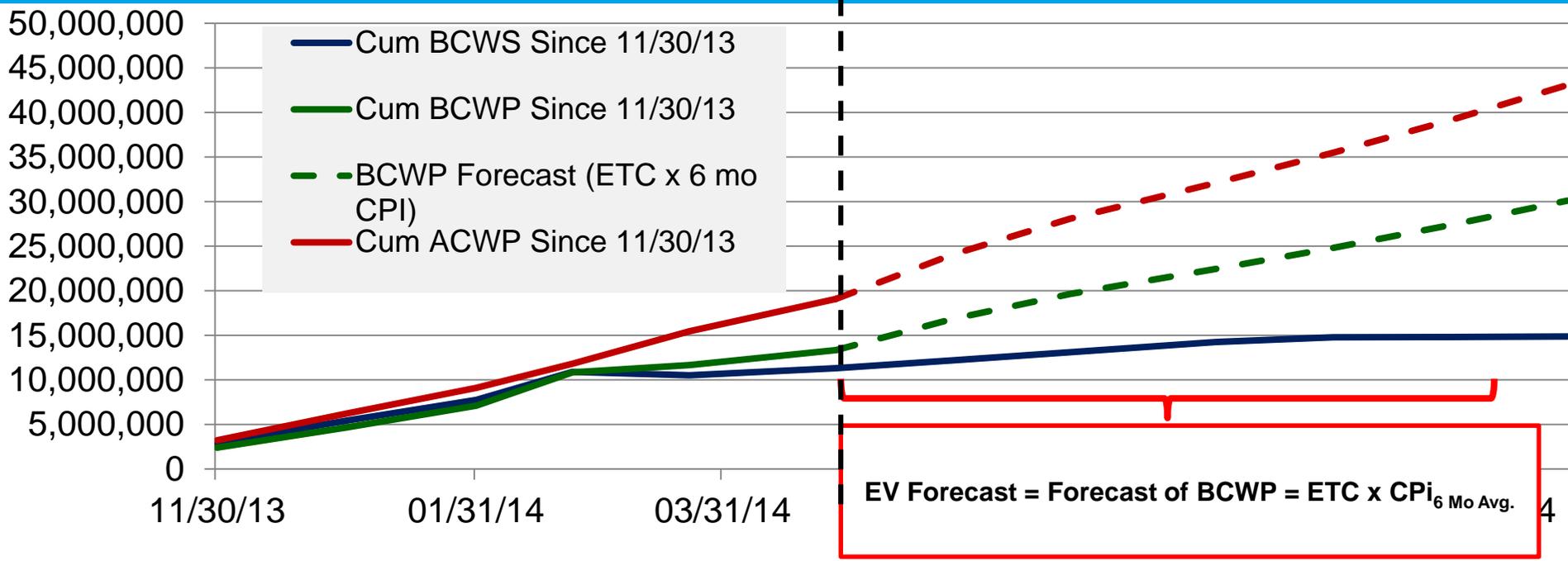


APM Red/Yellow Detail 2 - 12 Month Plan v. Actual

TYPE	11/30/13	12/31/13	01/31/14	02/23/14	03/23/14	04/27/14	05/25/14	06/22/14	07/27/14	08/24/14
Inc BCWS	2,926,603	2,520,060	2,306,862	3,143,709	-382,833	799,012	893,090	916,987	1,132,344	535,127
Inc BCWP	2,395,948	2,286,500	2,432,765	3,725,704	828,247	1,681,395				
Inc ACWP	3,221,512	2,998,707	2,892,075	2,714,898	3,635,745	3,630,347				
Inc ETC							4,997,548	3,997,843	4,029,057	3,387,308
Cum BCWS Since 11/30/13	2,926,603	5,446,663	7,753,525	10,897,234	10,514,401	11,313,414	12,206,504	13,123,491	14,255,835	14,790,962
Cum BCWP Since 11/30/13	2,395,948	4,682,448	7,115,213	10,840,916	11,669,163	13,350,558				
BCWP Forecast (ETC x 6 mo CPI)						13,350,558	16,844,983	19,640,386	22,457,616	24,826,172
Cum ACWP Since 11/30/13	3,221,512	6,220,218	9,112,293	11,827,191	15,462,936	19,093,284				
Cost Forecast (ETC)						19,093,284	24,090,831	28,088,674	32,117,731	35,505,119



12 Month Plan vs. Actual/Forecast



- EV Forecast Expects ETC to Turn into ACWP in Future Periods
- Current Period 6-Month Average CPI Is Used for Calculation
 - 6-Month Average CPI for current period can be found in the data from 6 Month Performance Trend Chart

DOE Performance Baseline



DOE Performance Baseline - Reporting Period June 2014					
COST			SCHEDULE		
DOE Cost Contingency (\$M)			DOE Schedule Contingency (days)		
Approved	Remaining	% of TPC To-Go	Approved	Remaining	% of To-Go Duration
\$55.0	\$48.9	57.3%	364		

- **Cost and Schedule Color Assessment by OAPM Analyst**
 - Cannot be worse than Overall Assessment
 - Cost and Schedule Assessment can be different
- **Approved: Amount Approved by Current Baseline (CD-2 or BCP)**
- **Remaining: Product of FPD Usage Reporting**
 - Remaining = Approved – Used Since Baseline



DOE Performance Baseline - Cost

DOE Performance Baseline - Reporting Period June 2014					
COST			SCHEDULE		
DOE Cost Contingency (\$M)			DOE Schedule Contingency (days)		
Approved	Remaining	% of TPC To-Go	Approved	Remaining	% of To-Go Duration
\$55.0	→ \$48.9	57.3% ←	364		

From APM Red/Yellow Detail 4 - TPC To-Go Report		
Current Approved TPC (BCP-01):	414,150,000	<i>MINUS</i>
Total TPC Used:	328,777,729	
TPC To-Go:	85,372,271	←

• Calculations Used

- % of TPC To-Go = $\text{Contingency}_{\text{remaining}} / \text{TPC To-Go} = 48,900,000 / 85,372,271 = 57.3\%$
- $\text{TPC To-Go} = \text{TPC}_{\text{approved}} - (\text{FEE}_{\text{paid}} + \text{ODC}_{\text{used}} + \text{Sunk Cost} + \text{ACWP}_{\text{cum}})$

Key Performance Indicators – CPI & SPI



- **Cumulative Cost and Schedule Performance Indices**

Key Performance Indicators		
KPI	Current	Prior
Cum CPI	1.02	1.05
Cum SPI	1.45	1.44
Cum Start Date	12/17/12	12/17/12

- **Current Reporting Period Compared to Previous Reporting Period**
- **Uses Sum of Incremental BCWS, BCWP, and ACWP since the Date Indicated as Cum Start Date**
- **Cum Start Date Currently Indicates Latest Approved Baseline; CD-2 or BCP**
- **Calculated from Contractor Time-phased Data**
- **Displays Total Project CPI and SPI if Cum Start Date Is Not Set or Time-phased Data Not Available**

Contractor Performance Measurement Baseline



Contractor PMB - Performance Period April 2014								
PMB (\$M)			Management Reserve (\$M)			Independent Estimates At Complete		
Approved (PMB)	Forecast (EAC)	To-Go (ETC)	Approved	Remaining	% of ETC	TCPi to EAC	CPI x SPI	3 Mo. Avg CPI
\$341.3	\$361.5	\$37.9	\$17.5	\$9.4	24.8%	0.45	\$341.4	\$351.0
						Contractor Completion Date Forecast:		8/23/2015

- **Approved MR = Amount Approved by Current Baseline (CD-2 or BCP)**
- **Approved PMB = Current BAC + UB Amounts Reported by Contractor in CPP Upload**
- **Calculations Used:**
 - $TCPi\ to\ EAC = (BAC - BCWP_{cum}) / (EAC - ACWP_{cum})$
 - $MR\ as\ \%\ of\ ETC = MR_{remaining} / ETC$
 - Independent Estimate At Complete (IEAC)
 - $IEAC_{CPI \times SPI} = ACWP_{cum} + (BCWR / (CPI_{cum} \times SPI_{cum}))$
 - $IEAC_{3\ Mo\ Avg.\ CPI} = ACWP_{cum} + (BCWR / CPI_{3-mo\ Avg.})$
- **All Other Elements Contractor-Reported via CPP Upload**

Contractor Performance Measurement Baseline



Contractor PMB - Performance Period April 2014								
PMB (\$M)			Management Reserve (\$M)			Independent Estimates At Complete		
Approved (PMB)	Forecast (EAC)	To-Go (ETC)	Approved	Remaining	% of ETC	TCPi to EAC	CPI x SPI	3 Mo. Avg CPI
\$341.3	\$361.5	\$37.9	\$17.5	\$9.4	24.8%	0.45	\$341.4	\$351.0
						Contractor Completion Date Forecast:		8/23/2015

- Contractor Completion Date Forecast**

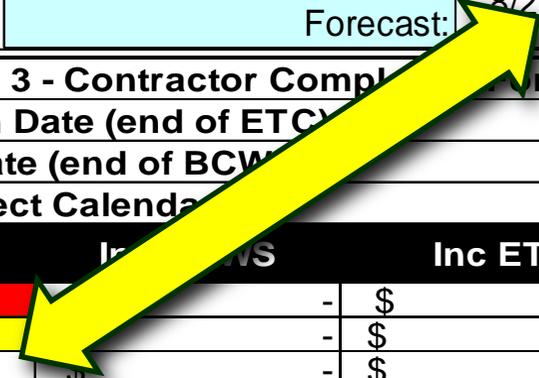
- Based on contractor-reported time phased Estimate To Complete (ETC)

- Last Period with ETC > 0

- Identifies Scheduled Completion**

- Last Period with
 - BCWS > 0

APM Red/Yellow Detail 3 - Contractor Completion Date Forecast		
Forecasted Completion Date (end of ETC)		
Planned Completion Date (end of BCWS)		
End of Contractor Project Calendar		
Period Finish Date	Inc BCWS	Inc ETC
09/20/15	-	\$ -
08/23/15	-	\$ 86,546
07/26/15	-	\$ 86,546
06/21/15	\$ -	\$ 491,085
05/24/15	\$ -	\$ 625,425
04/26/15	\$ -	\$ 1,327,410
03/22/15	\$ -	\$ 2,289,741
02/22/15	\$ -	\$ 1,772,727
01/18/15	\$ 61,106	\$ 2,086,821
12/14/14	\$ 103,995	\$ 2,788,304
11/16/14	\$ 134,490	\$ 2,339,487
10/19/14	\$ 59,705	\$ 3,923,827
09/21/14	\$ 14,942	\$ 3,647,756
08/24/14	\$ 535,127	\$ 3,387,388
07/27/14	\$ 1,132,344	\$ 4,029,057
06/22/14	\$ 916,987	\$ 3,997,843
05/25/14	\$ 893,090	\$ 4,997,548
04/27/14	\$ 799,012	\$ -





- **Detailed APM Narrative on the Project**
- **Provides APM Perspective on Project Performance**
- **Explains Data Anomalies**
- **Identifies Major Milestones**

- **High level decisions are based on the data in the APM Monthly DepSec report**
- **To ensure that the data provided is as accurate as possible, everyone must do their part**
- **If the data is not accurate or if the full story is not represented by the data, narrative comments can tell the rest of the story**



Home » Operational Management » Project Management » Earned Value Management

EARNED VALUE MANAGEMENT

- Aviation Management
- Executive Correspondence
- Energy Reduction at HQ
- Facilities and Infrastructure
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- Information Systems
- Procurement and Acquisition
- Project Management**
 - Earned Value**
 - Lessons Learned
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 - Documents and Publications
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Earned Value Management (EVM) is a systematic approach to the integration and measurement of cost, schedule, and technical (scope) accomplishments on a project or task. It provides both the government and contractors the ability to examine detailed schedule information, critical program and technical milestones, and cost data.

- [EVMS Surveillance Standard Operating Procedure \(ESSOP\) - 26 Sep 2011 \(pdf\)](#)
 - [EV Guideline Assessment Templates - \(MS Word\)](#)
 - [DOE EVMS Cross Reference Checklist - \(pdf\)](#)
 - [DOE EVMS Risk Assessment Matrix - \(MS Word\)](#)
- [Formulas and Terminology "Gold Card" - Sep 2011 \(pdf\)](#)
- [Slides from the OECM Road Show: Earned Value \(EV\) Analysis and Project Assessment & Reporting System \(PARS II\) - May 2012 \(pdf\)](#)
- [DOE EVM Guidance](#)

EVM TUTORIALS

[Module 1 - Introduction to Earned Value](#) (pdf 446.86 kb) July 17, 2003

This module is the introduction to a series of online tutorials designed to enhance your understanding of Earned Value Management. This module's objective is to introduce you to Earned Value and outline the blueprint for the succeeding modules. This module defines Earned Value management. It looks at the differences between Traditional management and Earned Value management, examines how Earned Value management fits into a program and project environment, and defines the framework necessary for proper Earned Value management implementation.

<http://energy.gov/management/office-management/operational-management/project-management/earned-value-management>

Career Development Program

Real Estate

History