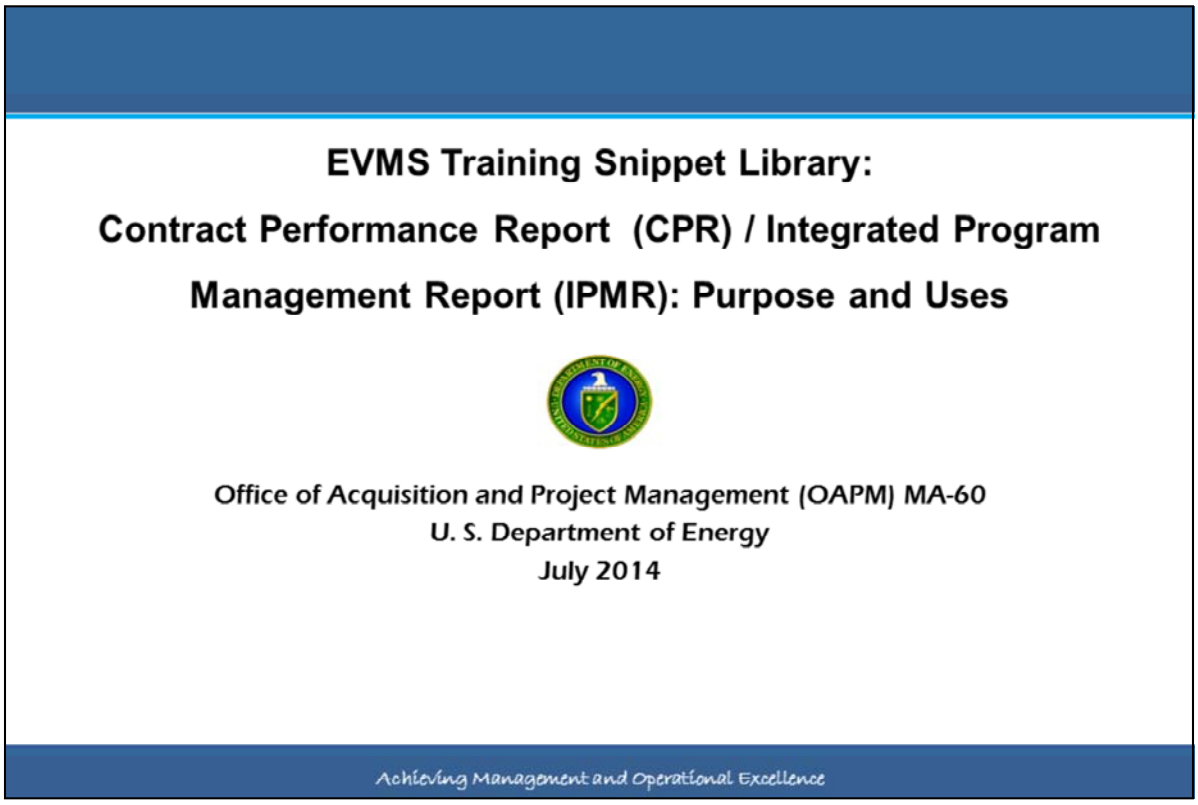
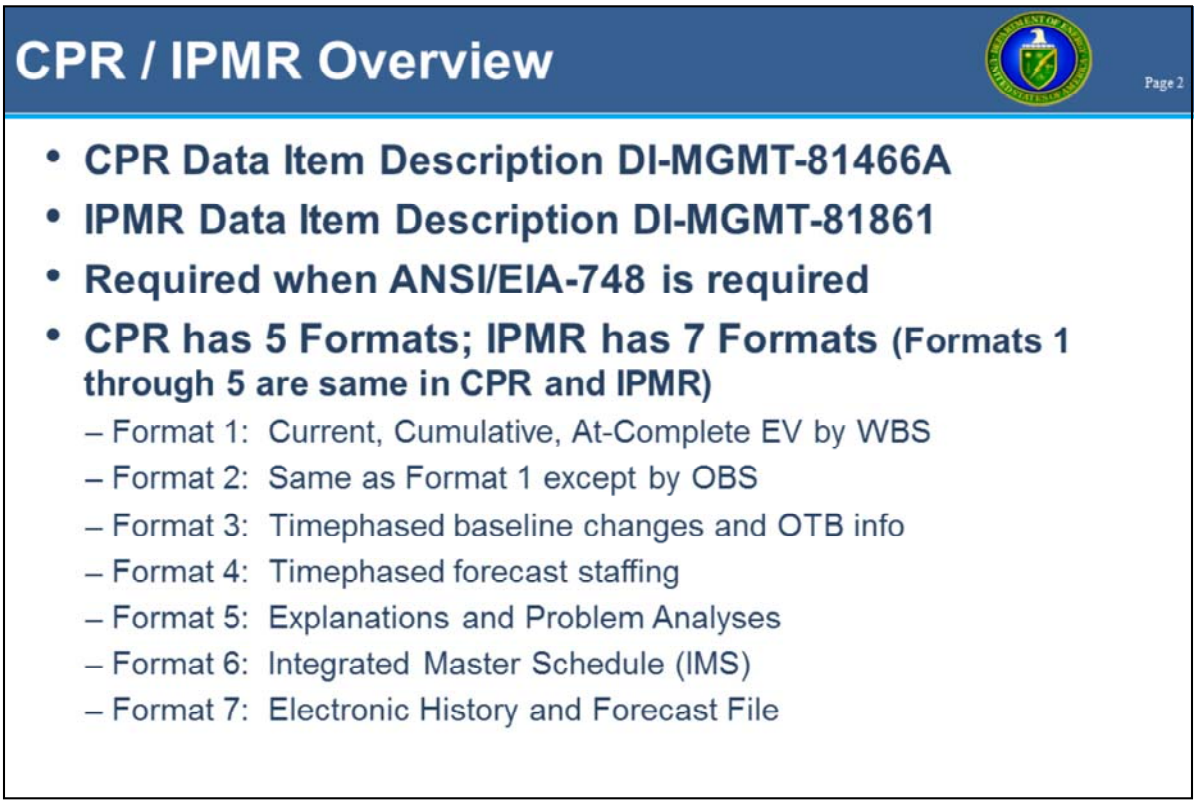
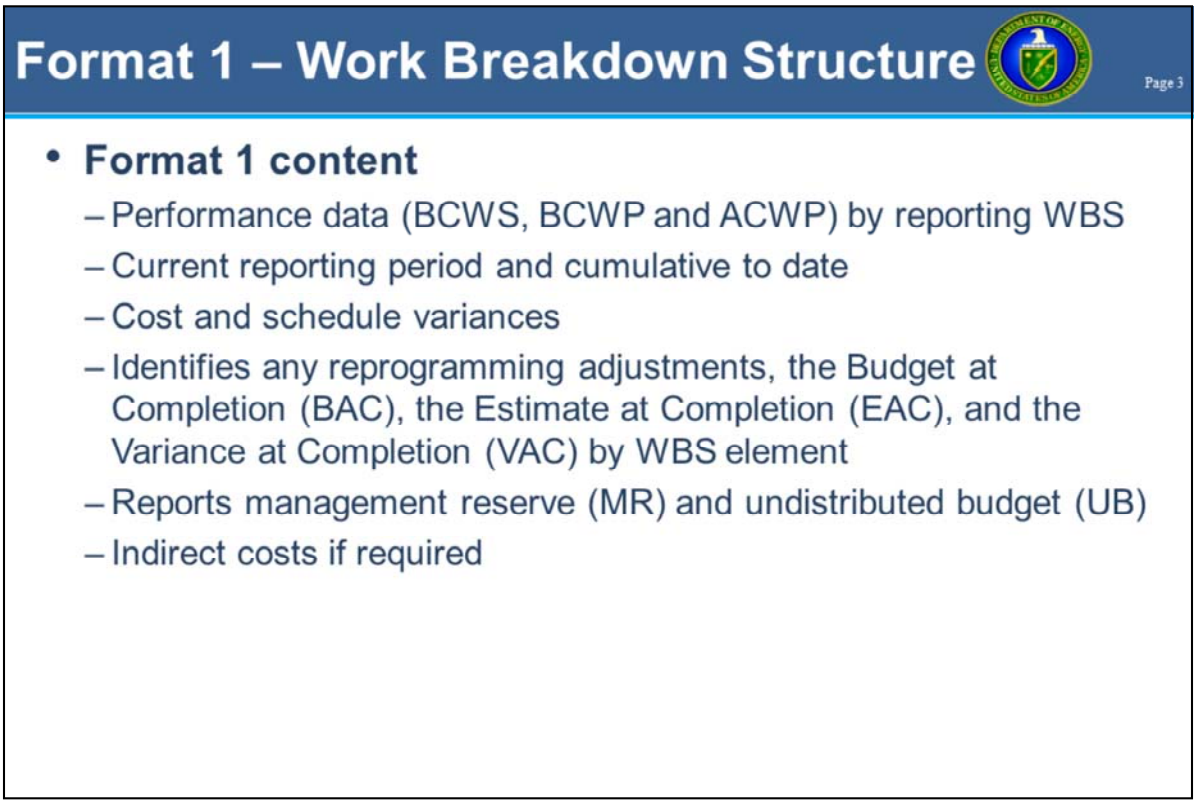


This EVMS Training Snippet, sponsored by the Office of Acquisition and Project Management (OAPM) discusses the purpose and uses of the Contract Performance Report and the Integrated Program Management Report.

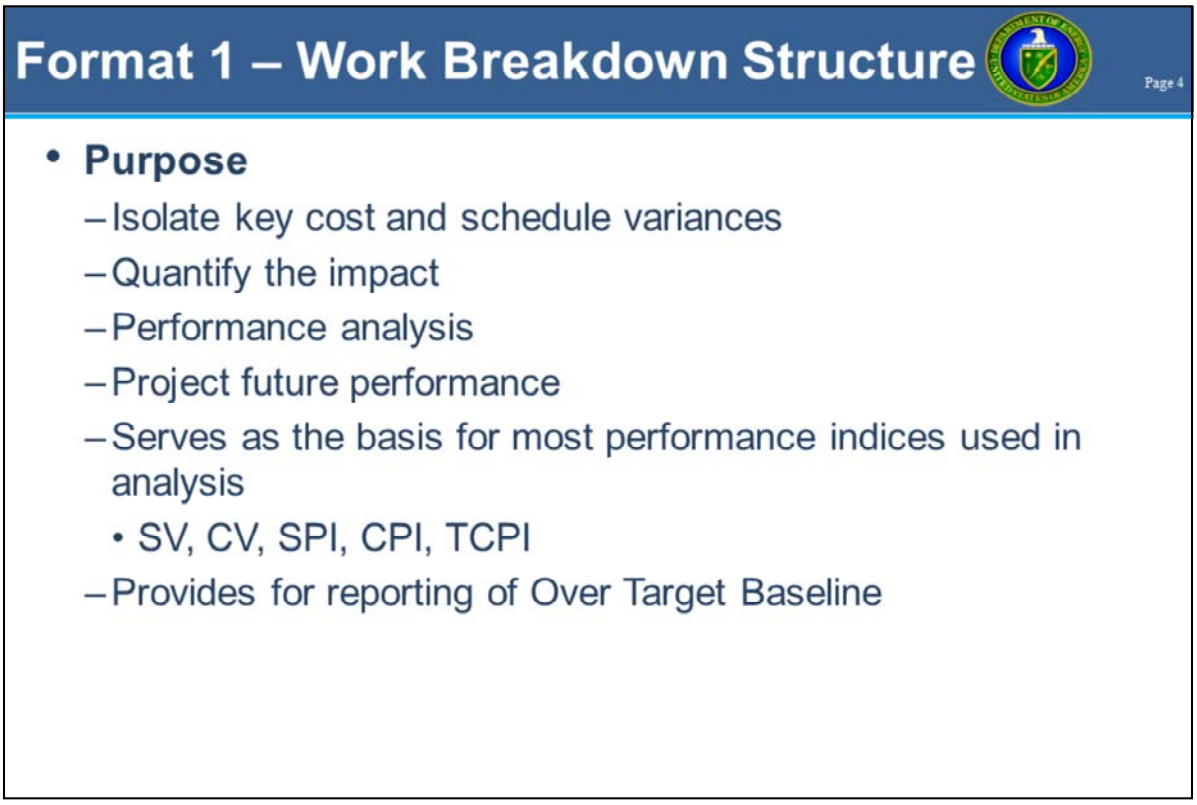


To understand the value of the Contract Performance Report and the Integrated Program Management Report, we will start first with an overview. Both reports originated with the Department of Defense and are explained in detail in Data Item Descriptions. They are easily accessible via an internet search. The CPR was replaced by the IPMR in 2012. DOE is adopting the IPMR data item description for use within DOE with only slight modifications such as recognition of PARSII as DOE's central repository versus the Department of Defense central repository. The CPR and IPMR structures are similar and we will discuss the differences later in this Snippet.

The CPR or IPMR should be required reporting formats when an EVMS compliant with ANSI/EIA-748 is required. There are five formats required in the CPR, and seven required in the IPMR.



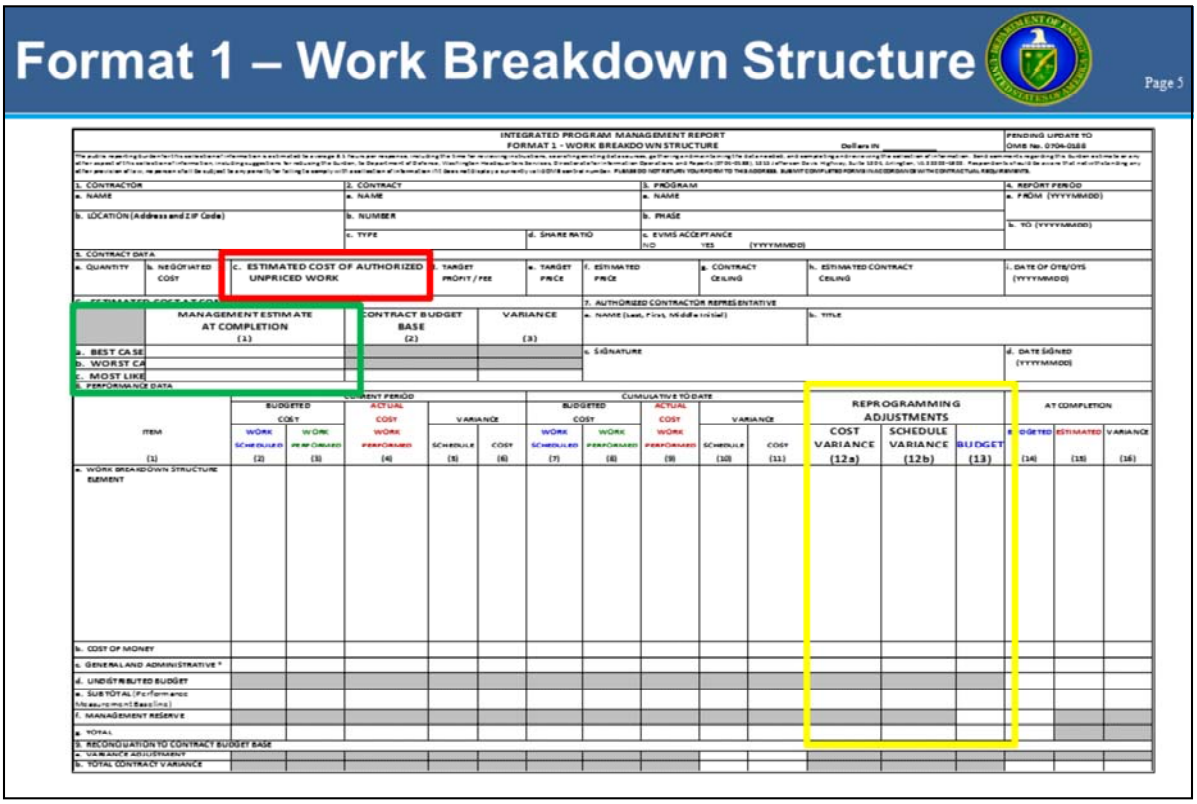
The CPR and IPMR Format 1 contains performance data (BCWS, BCWP and ACWP) by reporting WBS elements for the current reporting period as well as for cumulative to date. Cost and schedule variances are calculated and reported from the data. The report identifies any reprogramming adjustments, the budget at complete, the estimate at completion, and the variance at completion by WBS element. Also reported is management reserve and undistributed budget. Indirect costs are also reported, if required. Indirect costs can be included in the CPR or IPMR in one of two ways. The first is to include the overhead costs as part of the WBS elements reported. The second is to report the indirect costs separately “below the line” in the reporting format.



The purpose of the Format 1 is to provide EVM data to facilitate performance analysis. Cost and schedule variances are reported and performance issues can be isolated at the lowest reporting level and analyzed for the impact to overall cost and schedule variances.

The data provided in the Format 1 serves as the basis for calculating most of the performance indices used in EVM analysis, for example schedule variance, cost variance, schedule performance index, cost performance index, and the to complete performance index.

Format 1 is also where an Over Target Baseline is reported. This slide shows the primary purpose of the report. Next we will discuss three additional areas of focus for the Federal Project Director and analysts.



This is a sample of the recommended form for reporting Format 1 data. We mentioned that the primary purpose of the Format 1 is to provide data for performance analysis purposes. Three areas have been highlighted to bring special attention to the Federal Project Director (FPD) and analysts for using the data provided.

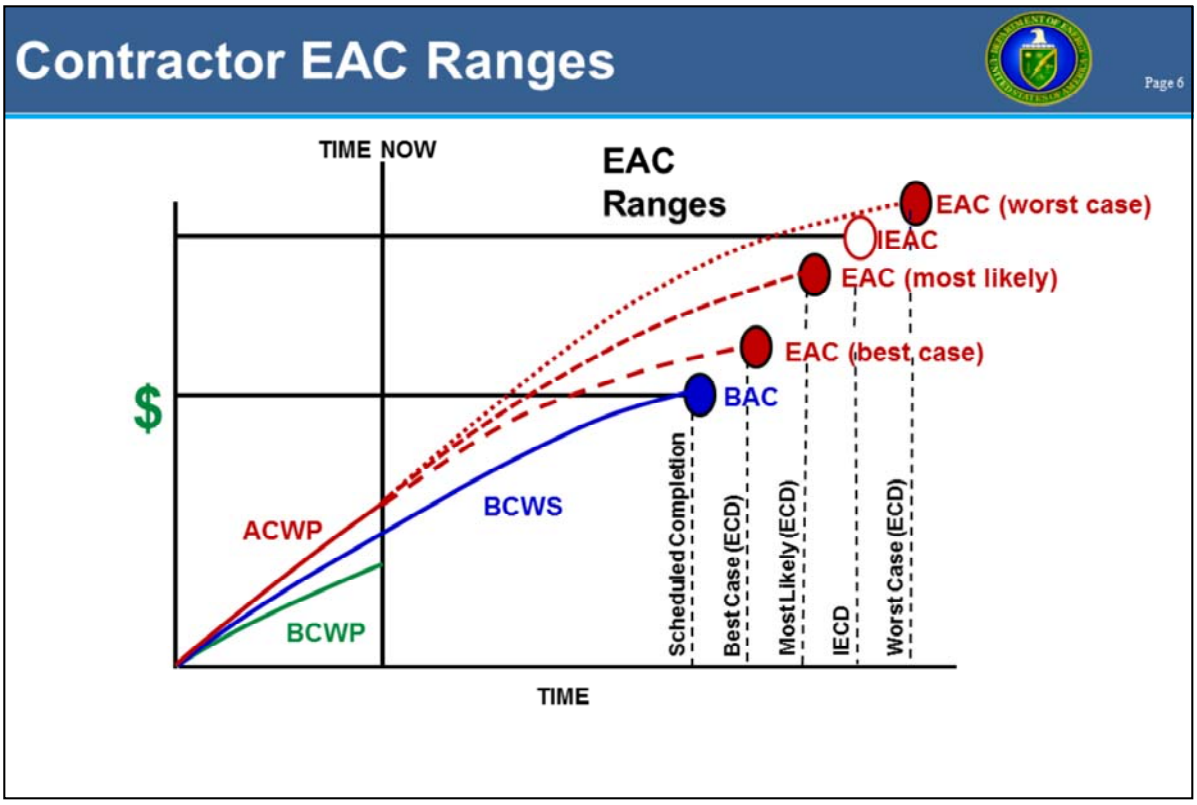
Block 5.c. is highlighted in red. It is the Estimated Cost of Authorized Unpriced Work. Here the FPD would expect to see the full estimate. EVM budgets are applied without the constraint of funding or not-to-exceed (NTE) limitations. Just as incrementally funded contracts should establish an EVM baseline for the entire scope of work, AUW baselines should represent all authorized scope. AUW is determined by the Contracting Officer with the scope provided in the authorization. It may reference a contractor provided rough-order-of-magnitude or certified pricing. The contractor responds to the AUW authorization by placing the budget in undistributed budget, then allocating near term budget to the applicable control accounts. The remainder of the AUW is retained in undistributed budget, along with its applicable scope, until negotiation and incorporation into the contract (and removal from AUW). For more information on AUW, please refer to Snippet 4.5.

Block 6 is highlighted in green. It is the Estimated Cost at Completion in terms of Best Case, Worst Case, and Most Likely. We will show this in a graph on the following slide. These blocks present the contractor's range of estimated costs (EACs) for the authorized contractual scope. The required range of estimates is intended to allow contractor management flexibility to express multiple, justifiable final cost outcome positions. The contractor's best case EAC is entered in block 6.a. (1). The best case EAC reflects the lowest potential cost to the Government and is based on the most favorable set of circumstances. In block 6.b. (1) is the contractor's worst case EAC. The worst case EAC

reflects the highest expected cost to the Government based on the outcome of the least favorable set of circumstances.

The most likely EAC is shown in block 6.c. (1). This EAC is the contractor's official contract EAC and takes precedence over the estimates presented in Column (15) of Formats 1 and 2, and Blocks 6.a.1 and 6.b.1. The most likely EAC is the value that the contractor's management believes is the most possible outcome based on a knowledgeable estimation of all authorized work, known factored risks, and probable future conditions. If the value does not agree with Column 15 Block 8.e, then the difference must be explained in Format 5 in terms of risk and opportunities and senior management knowledge of current or future contract conditions. The difference could also be CAM unapproved estimates, an option that could be considered with approval. The most likely EAC need not agree with EACs contained in the contractor's internal data, but must be reconcilable to them. This EAC should also be reconcilable to the contractor's latest statement of funds required as reported in the Contract Funds Status Report or ‘CFSR’ or its equivalent, if applicable.

Columns (12) and (13), outlined in yellow, are intended for use only in situations involving formal reprogramming, also called an “OTB” or Over Target Baseline. Internal replanning actions within the contract budget base do not require entries in these columns. An OTB can result in budget allocations in excess of the contract budget base and, in some instances, adjustments to previously reported variances. If previously reported variances are being adjusted, the adjustment applicable to each reporting line item affected is entered in Column (12a) for cost variances and Column (12b) for schedule variances. In Column 13, the total amounts added to the budget are entered for each reporting line item as the result of the OTB. The amounts will consist of the sum of the budgets used to adjust cost variances entered in column 12 plus the additional budget added to the WBS element for remaining work. The amount of budget added to MR is entered in block 8.f. of Column 13. The total of Column (13) should be verified that it equals the budget amount by which the Total Allocated Budget (TAB) exceeds the Contract Budget Base (CBB) as shown in Block 5.g of Format 3. For further information on OTBs, please refer to Snippet 4.1.



This is the graph of the different estimates at completion reported in the Format 1. The y-axis is resources, the x-axis is time. The blue curve is the full plan with the budget at completion and the original expected (contractual) completion date. The red curves represent the contractor's project manager's best case, worst case, and most likely estimates at completion and estimated completion dates.

Format 2 – Organizational Breakdown Structure

Page 7

- **Format 2 content**
  - Same data as Format 1
  - By Organizational Breakdown Structure elements or by Integrated Project Teams (IPTs)
  - Major subcontractors and material reported separately
- **Purpose**
  - Provides for analysis based on these elements

Switching gears to the Format 2. It requires the same data as Format 1, except instead of reporting by work breakdown structure, it contains organizational breakdown structure elements or Integrated Project Team or “IPT” levels. The Format 2 identifies major subcontractors and major material elements separately. The purpose of the Format 2 is to provide for analysis at the organizational elements and/or IPT level(s) as well as analysis of major subcontractors or material performance.

Format 2 – Organizational Categories

Page 8

INTEGRATED PROGRAM MANAGEMENT REPORT
FORMAT 2 - ORGANIZATIONAL CATEGORIES Dollars IN _____

PENDING UPDATE TO
OMB No. 0704-0188

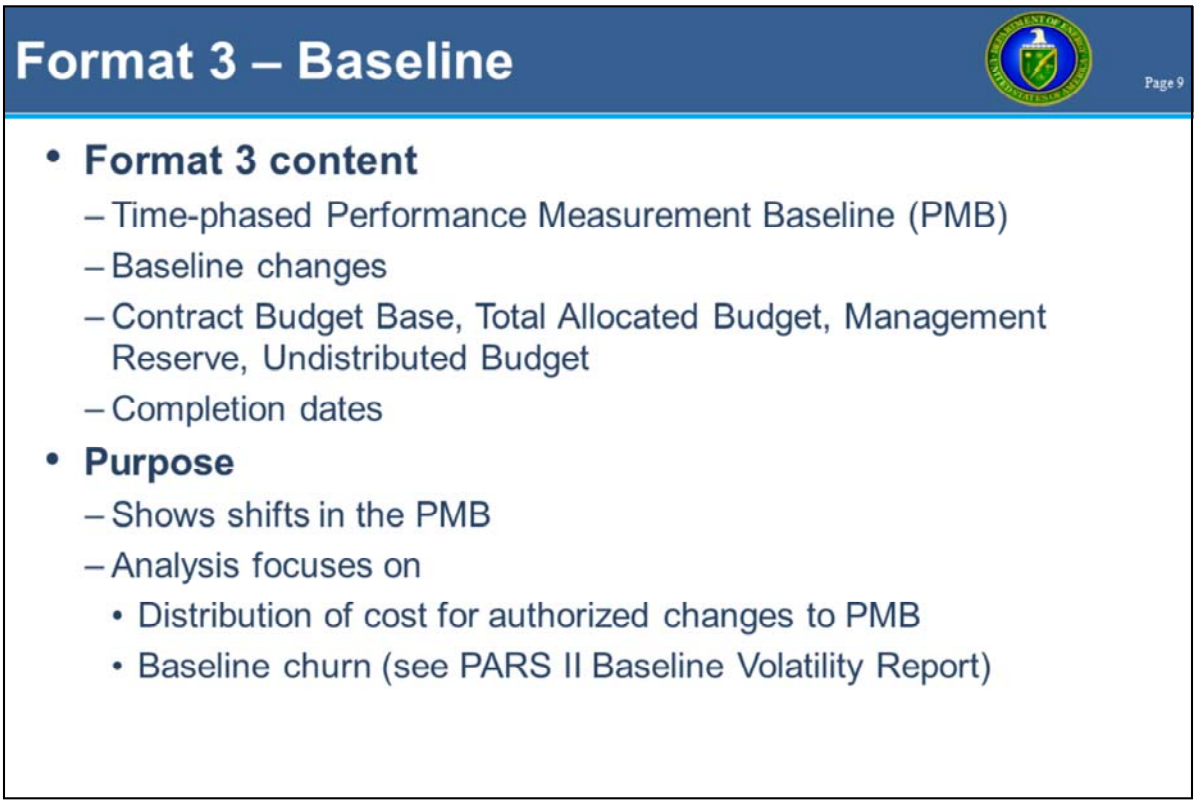
The public reporting burden for this collection of information is estimated to average 0.6 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME		a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE	b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO	c. EVMS ACCEPTANCE NO YES (YYYYMMDD)	

5. PERFORMANCE DATA

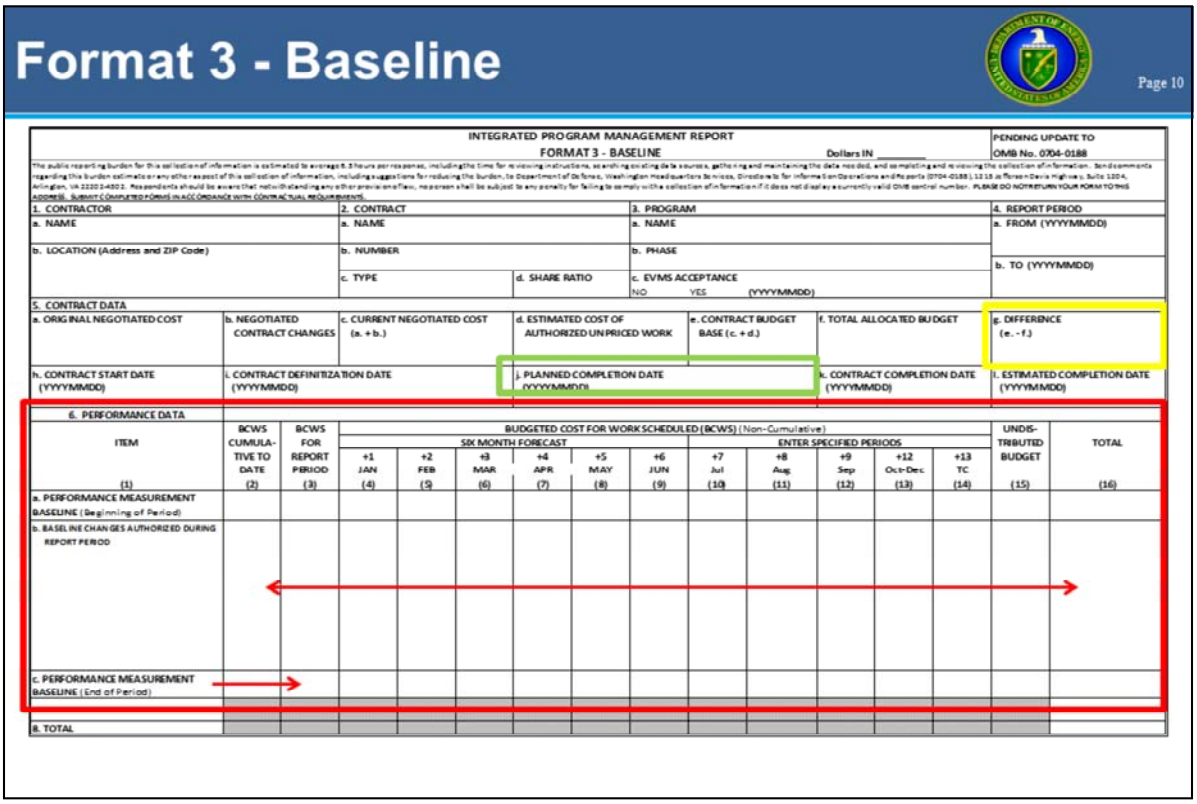
ITEM	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE							
	WORK SCHEDULED (2)	WORK PERFORMED (3)	WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	WORK PERFORMED (9)	SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
a. ORGANIZATIONAL CATEGORY																
b. COST OF MONEY																
c. GENERAL AND ADMINISTRATIVE *																
d. UNDISTRIBUTED BUDGET																
e. SUB TOTAL (Performance Measurement Baseline)																
f. MANAGEMENT RESERVE																
g. TOTAL																

The format 2 reporting information is basically the same as the format 1 except the data is reported is by Organizational Elements as opposed to the work breakdown structure elements.



The Format 3 reports the time-phased Performance Measurement Baseline (PMB) through project completion. This format shows significant baseline changes authorized during the reporting period. Data includes the Contract Budget Base, Total Allocated Budget, Management Reserve, Undistributed Budget, and completion dates.

Using the before and after baselines reported in Format 3, these data can be plotted to determine if there has been a shift in the PMB. Analysis can focus on the distribution of costs for authorized changes during the reporting period. The header is used to identify if an Over Target Baseline or Over Target Schedule has been incorporated into the PMB. This report also provides the data for the PARSII Baseline Volatility Report. Baseline churn is identified by percentages of change over a six month period, both in the past and in the future. Please refer to the PARSII Analysis Reports in Snippet group 5 for further information.



Format 3 - Baseline

Page 10

INTEGRATED PROGRAM MANAGEMENT REPORT
FORMAT 3 - BASELINE
Dollars IN _____

PENDING UPDATE TO
OMB No. 0704-0188

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME		a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE	b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO	c. EVMS ACCEPTANCE NO YES (YYYYMMDD)	

5. CONTRACT DATA

a. ORIGINAL NEGOTIATED COST	b. NEGOTIATED CONTRACT CHANGES	c. CURRENT NEGOTIATED COST (a. + b.)	d. ESTIMATED COST OF AUTHORIZED UNPRICED WORK	e. CONTRACT BUDGET BASE (c. + d.)	f. TOTAL ALLOCATED BUDGET	g. DIFFERENCE (e. - f.)
h. CONTRACT START DATE (YYYYMMDD)	i. CONTRACT DEFINITIZATION DATE (YYYYMMDD)		j. PLANNED COMPLETION DATE (YYYYMMDD)	k. CONTRACT COMPLETION DATE (YYYYMMDD)		l. ESTIMATED COMPLETION DATE (YYYYMMDD)

6. PERFORMANCE DATA

ITEM	BCWS CUMULATIVE TO DATE	BCWS FOR REPORT PERIOD	BUDGETED COST FOR WORK SCHEDULED (BCWS) (Non-Cumulative) SIX MONTH FORECAST +1 JAN	+2 FEB	+3 MAR	+4 APR	+5 MAY	+6 JUN	ENTER SPECIFIED PERIODS +7 Jul	+8 Aug	+9 Sep	+12 Oct-Dec	+13 TC	UNDISTRIBUTED BUDGET	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
a. PERFORMANCE MEASUREMENT BASELINE (Beginning of Period)															
b. BASELINE CHANGES AUTHORIZED DURING REPORT PERIOD															
c. PERFORMANCE MEASUREMENT BASELINE (End of Period)															
8. TOTAL															

This is the Format 3. While the IPMR Format 3 is the same basic structure as the CPR Format 3, there are two significant differences (outlined in red). The first is in Block 6.b. The area is not shaded from Column 2 through Column 15, as it was in the CPR Format 3 (see double headed arrow). The contractor is now required to list all significant baseline changes that have occurred during the reporting period in the respective column. This list should specify any contract changes, authorized unpriced work transactions, transactions involving Management Reserve, Undistributed Budget, and any significant PMB re-time phasing. Also, all significant authorized baseline changes should be listed individually, whether priced or unpriced, and all other changes should be summarized and titled “other.” The term “significant” may be defined in the Project Execution Plan or determined by the contractor if undefined. While listed here in Format 3, the reasons for any of these changes must still be discussed in Format 5.

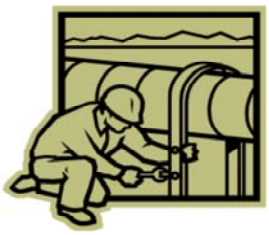
The second difference -- or change in Format 3 is that Block 6.c, Column 3, is not shaded (see arrow). Consequently, any PMB change in the current period will be clearly noted. A current month BCWS change needs to be discussed in Format 5. Otherwise, it could be viewed as a possible “Freeze Period” violation.

The information on this report is very helpful for the FPD to monitor how the baseline plan is changing every month. There are two other areas of discussion. A difference between blocks 5.e - the CBB, and 5.f - the total allocated budget, is reported in Block 5.g. (outlined in yellow) and reflects an Over Target Baseline which would be reported on other formats as well. Without an OTB there should be no difference. Also note block 5.j Planned Completion Date, outlined in green. In the case of an Over Target Schedule or ‘OTS’, the planned completion date would exceed the contract completion date reported in block 5.k.

Format 4 - Staffing

Page 11

- **Format 4 content**
  - Staffing forecasts by organizational elements
- **Purpose**
  - Correlate time-phased staffing to major milestones
  - Identifies accuracy of labor estimates
  - Analyze projected staffing levels with scheduled activities



The Format 4 reports staffing forecasts for organizational elements through project completion.

The purpose of the Format 4 is to provide staffing data plotted over time. The correlation of that data to major milestones and activities on the project schedule shows accuracy of labor estimates. The FPD should analyze the projected staffing levels for consistency with scheduled activities.

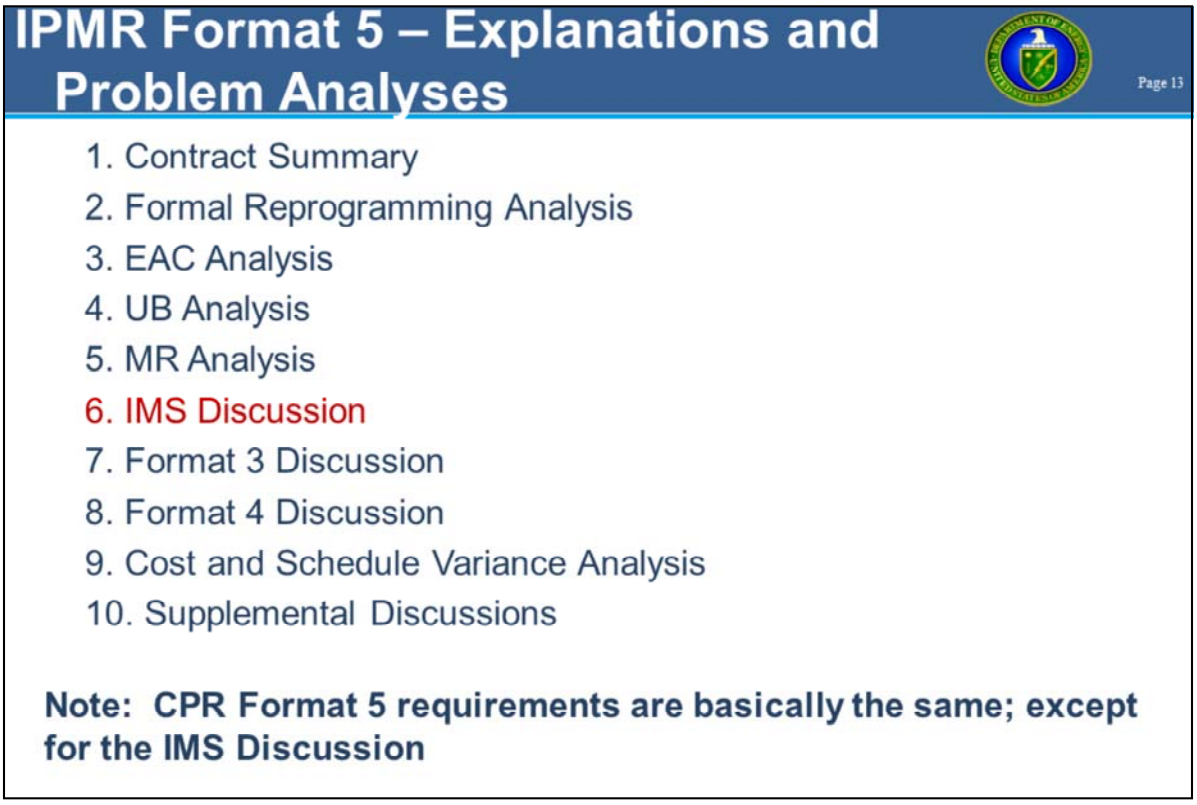
Format 4 - Staffing

Page 12

INTEGRATED PROGRAM MANAGEMENT REPORT FORMAT 4 - STAFFING (BAC EQP)														PENDING UPDATE TO OMB No. 0704-0188
The public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.													
1. CONTRACTOR			2. CONTRACT				3. PROGRAM							4. REPORT PERIOD
a. NAME			a. NAME				a. NAME							a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)			b. NUMBER				b. PHASE							b. TO (YYYYMMDD)
			c. TYPE		d. SHARE RATIO		c. EVMS ACCEPTANCE NO YES (YYYYMMDD)							
5. PERFORMANCE DATA (All figures in whole numbers)														
			FORECAST (Non-Cumulative)											
ORGANIZAIONAL CATEGORY	PLANNED CURRENT PERIOD	PLANNED END OF CURRENT PERIOD (Cumulative)	SIX MONTH FORECAST BY MONTH (Enter Names of Months)						ENTER SPECIFIED PERIODS					AT COMPLETION
			+1 JAN	+2 FEB	+3 MAR	+4 APR	+5 MAY	+6 JUN	+7 Jul	+8 Aug	+9 Sep	+12 Oct-Dec	+13 TC	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
6. TOTAL DIRECT														

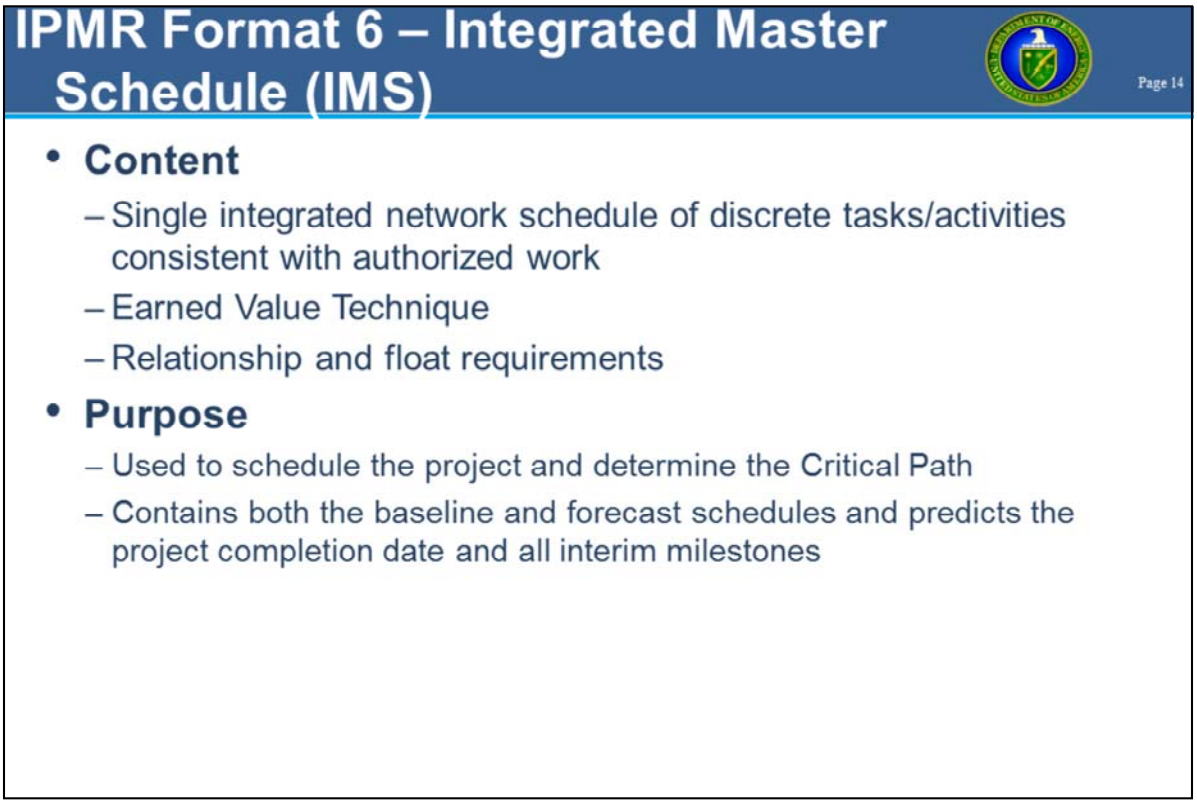
The IPMR Format 4 is the same as the CPR Format 4; and, as mentioned earlier, the organizational categories in Column 1 of Block 5 do not need to be the same as those in Format 2.

The staffing information can be in hours, equivalent months, or total headcount and is reported by months for the next six months, then the contractor can report by quarters or fiscal years to fit the form. The staffing forecast is updated as part of the formal EAC process and the forecast schedule. Staffing forecast changes should be explained in Format 5.



The Format 5 is a narrative explanation of data from other formats to understand the reasons for the variances and corrective action(s). The complete analysis in this report provides the Federal Project Director and analysts great insight into the details behind the data being reported. When done correctly, the Format 5 is a monthly 'must read'.

This list is from the IPMR data item description. However, the CPR data item description is essentially the same with the exception of the IMS Discussion. The items are in a different sequence and stated a little differently. Details about each category are provided in the data item description.



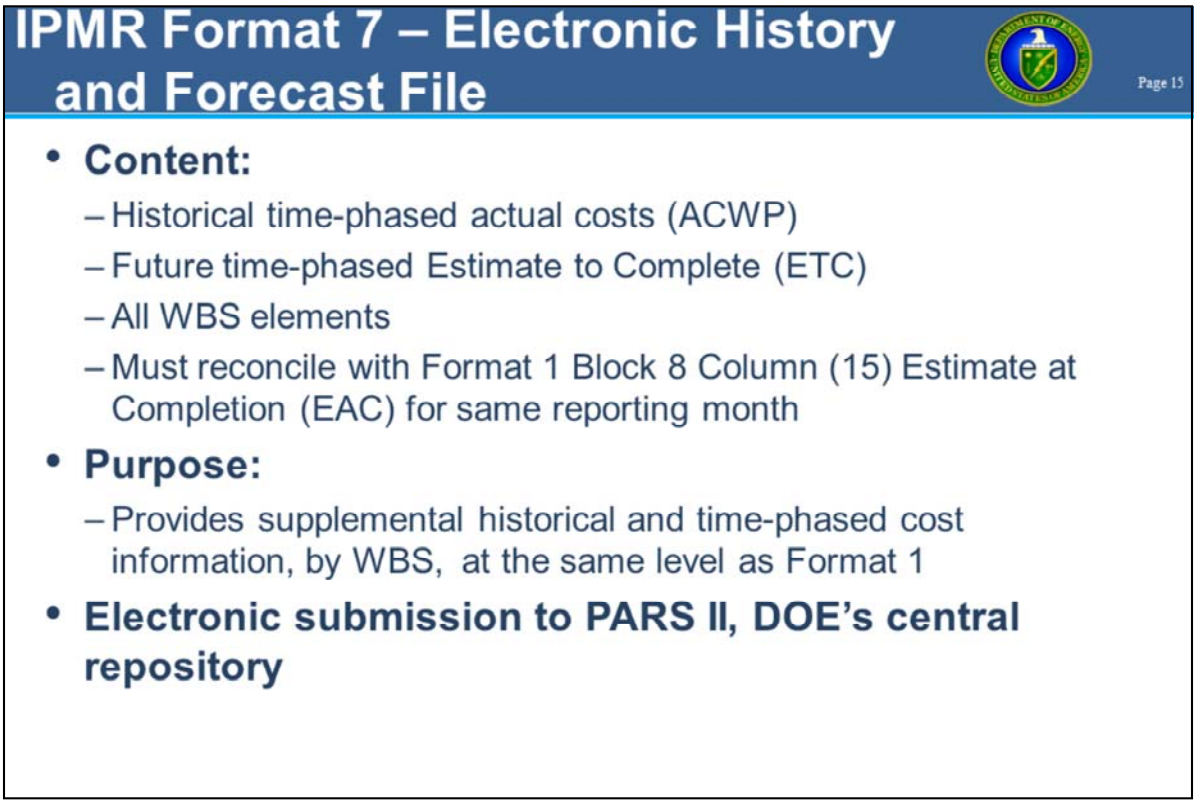
Format 6 of the IPMR, a monthly requirement, is the Integrated Master Schedule, Data Item Description DI-MGMT-81650, inserted into the IPMR Data Item Description as a format requirement. The Format 6 requirement is met by the monthly submittal of the contractor's native IMS schedule files.

The IMS must include, at a minimum, discrete tasks/activities consistent with all authorized work, and relationships necessary for successful contract completion. Subcontractor discrete work must be incorporated as tasks within the prime's IMS at a level necessary for a realistic critical path. Also, if the schedule is being used to directly status the EVM tool, the contractor should clearly identify the earned value technique being used.

The relationship and float requirement stipulates that all non-constrained discrete tasks/activities/milestones shall have at least one predecessor and one successor, except for the start and end of the project.

The purpose of the Integrated Master Schedule is to schedule the project and determine the Critical Path. The IMS contains both the baseline and forecast schedules and predicts the contract completion date and all interim milestones. It is delivered monthly to DOE in its native format.

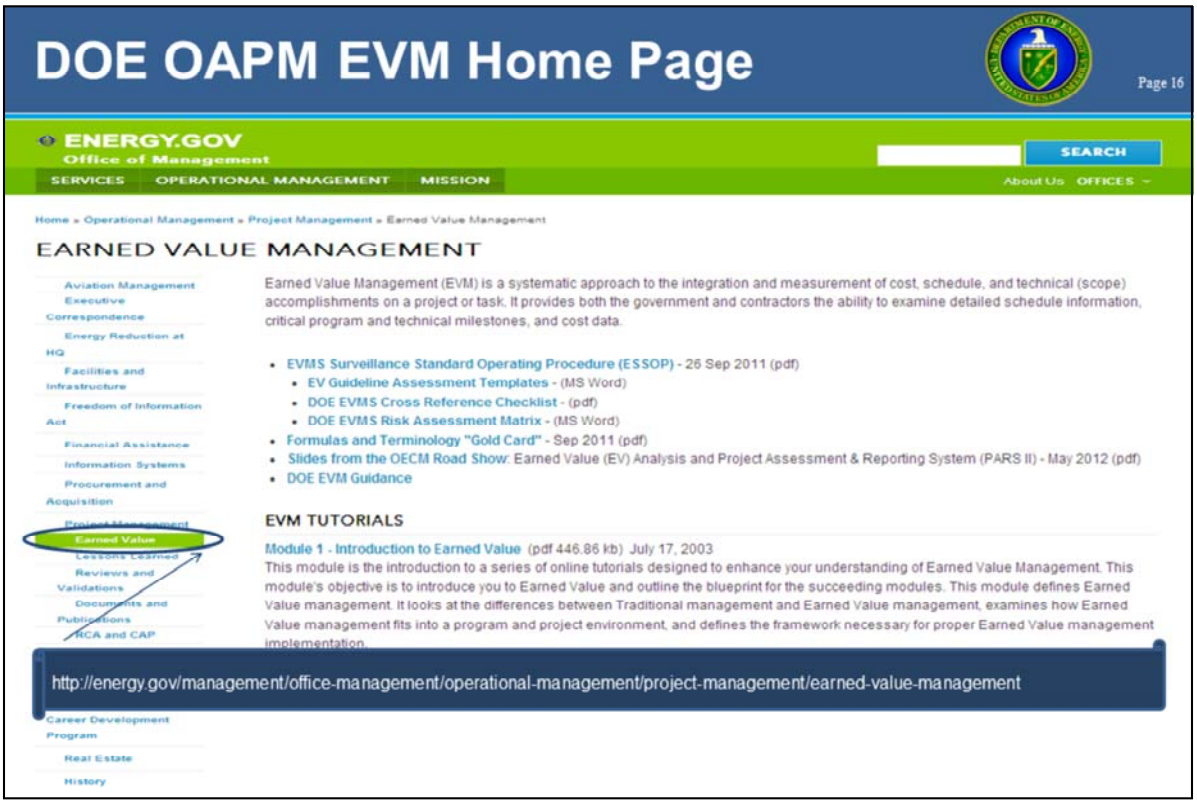
The data item description goes in to greater detail regarding content. Also please refer to the Snippet library for more information.



Format 7 of the IPMR is the electronic submission of time-phased cost information. The submission consists of historical, time-phased actual cost of work performed (ACWP) and future time-phased estimate to complete (ETC) for all WBS elements at the same reporting level as the Format 1.

The Format 7 must reconcile with the reported Estimate at Completion in the Format 1, Block 8, Column 15 for the same reporting period.

The data provides supplemental historical and time-phased cost information for use by DOE for project management purposes. Electronic submission is required via PARS II, DOE's central repository.



This concludes the topic of CPRs and IPMRs – Purpose and Uses. For information relative to EVMS procedures, templates, helpful references, and training materials, please refer to OAPM's EVM Home page. Check back periodically for updated or new information.

Thank you