

# **EVMS Training Snippet Library: Authorized Unpriced Work (AUW)**



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*Achieving Management and Operational Excellence*

This EVMS Training Snippet, sponsored by the Office of Acquisition and Project Management (OAPM) covers Authorized Unpriced Work, or AUW, or as some refer to it, Authorized Not-Yet Negotiated.

## Definition and Purpose of AUW



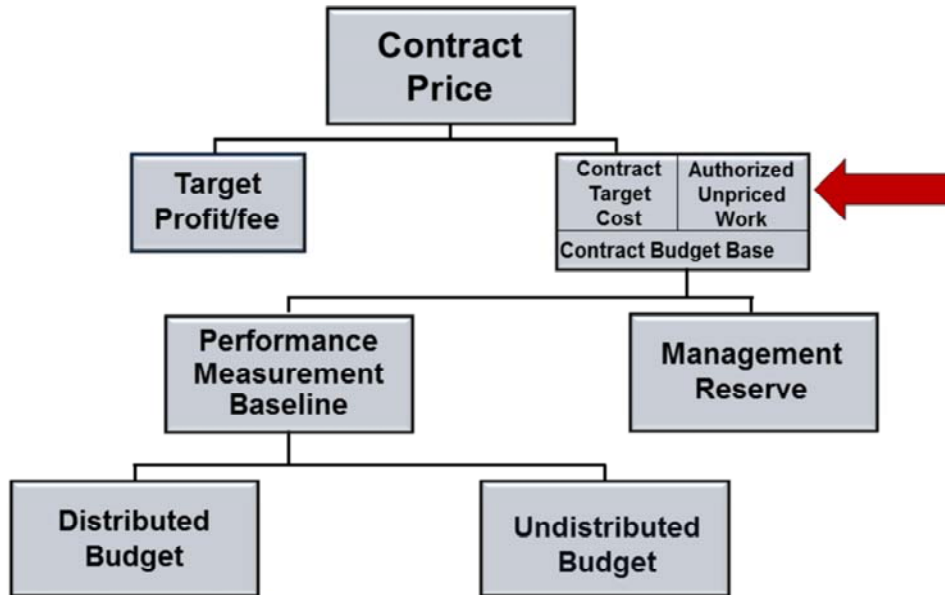
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- **AUW is the estimated cost (less fee/profit) for directed changes not yet negotiated**
- **Also called: change orders, not to exceeds, undefinitized change orders, undefinitized contractual actions**
- **Allows contractor to proceed with work, pending negotiations**
- **AUW baselines represent all authorized scope**
- **NTEs are funding limits**

Authorized Unpriced Work is the estimated cost (excluding fee or profit) for contract changes that have been approved by the government contracting officer but have not yet been fully negotiated. This allows the contractor to start the work while a proposal and contract modification are being negotiated. Some common terminology associated with AUW includes: Change orders (or Unilateral Modifications); Not-To-Exceed which relates to ceiling language within a change order; Undefinitized change orders which is the "status" prior to negotiations; and Definitization which is the conversion of a change order to a bilateral modification.

Earned Value Management budgets are goals or metrics for work performance. The budgets must be sufficient to represent a realistic plan to capture all scope on the contract. Budgets are applied without the constraint of funding or not-to-exceed (NTE) limitations. Just as incrementally funded contracts should establish a baseline for the entire scope of work, incorporation of AUW into the contract or project baseline should represent all authorized scope (a portion of which will be in undistributed budget until negotiations are completed).

AUW is defined by the contracting officer in the scope provided in the authorization. It may reference a contractor provided rough-order-magnitude or certified pricing. The contractor responds to the AUW authorization by placing the AUW budget in Undistributed Budget (UB) and then allocating the near term scope and budget to the applicable control accounts. The remaining budget is retained in undistributed budget until negotiations are completed, at which point this budget is distributed from the UB account and incorporated into the baseline.



This illustrates the concept of AUW, a part of the Contract Budget Base. Throughout the life of the contract, modifications may be issued by the contracting officer to add or delete work within the scope of the contract. The type of authorization does not change the approach to updating the PMB. The negotiated cost plus authorized unpriced work must always equal the contract cumulative authorization or Contract Budget Base.

## AUW and the Not-to-Exceed (NTE)



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- **Contracting Officer (CO) authorizes the contractor to proceed with new work, pending completion of negotiations**
  - Contractor's rough-order-magnitude or proposal amount serves as the estimated budget for the **full scope**
  - Contractor is limited in incurring actual costs in performing the scope up to the NTE funding limit
- **Budget vs. Funds**
  - Budget represents entire scope; applied without constraint of funding
  - Funding is typically incrementally applied
- **Contractor must notify the CO for direction if negotiations are incomplete and funding limit is approaching, e.g. stop work or NTE increase**

When the Contracting Officer (CO) formally authorizes the contractor to proceed with not yet negotiated work by issuing a change order, the CO will identify the scope changes and AUW budget in the authorization. It may reference a contractor provided rough-order-magnitude or certified pricing. The CO will also identify a not-to-exceed or NTE funding limit. The amount of the NTE usually represents enough funding to last until the change order is definitized.

The contractor enters the full AUW budget as specified by the CO or if not mentioned, the contractor's rough-order-magnitude or proposal amount into Undistributed Budget, not just the NTE funding limit. A portion of that budget is then **distributed** to control account managers to begin work on the near term effort. This amount of distributed budget is usually equal to or no greater than the NTE. The remainder of the budget is left in Undistributed Budget.

The key here is to understand the difference between budget and funds. The PMB represents **all** project scope, negotiated and/or authorized but not yet negotiated. Putting the **entire** estimated budget for the full scope of the undefinitized effort into Undistributed Budget is critical for project management purposes. Tracking the accrued actuals against the NTE is critical for funding purposes.

Once negotiations have been completed and the definitized modification is issued, the contractor will make adjustments to the PMB. Therefore, the contractor typically detail plans budget up to the funding limit, leaving the rest of its proposed amount in UB to simplify the final negotiation adjustment process. If negotiations are delayed and the contractor is reaching the NTE, the contractor must notify the CO for direction. The CO may either

authorize a new NTE or issue a stop work order.

The preferred practice is for Undistributed Budget to be distributed to the applicable Summary Level Planning Packages (SLPPs) or control accounts by the end of the ensuing reporting period after contract definitization takes place.

Let's walk through a quick example. The contractor received AUW estimated at \$10 Million with a NTE of \$3 Million. The contractor records the full \$10M as Authorized Unpriced Work and places this in undistributed budget. The contractor detail plans the first seven months for \$3M which reduces undistributed budget to \$7M. Let's further assume the effort is ultimately negotiated at \$9 million. At this point AUW is eliminated, the CBB is increased by \$9M, and UB is reduced by \$1M to \$6M. The \$6M UB is then distributed appropriately. Similar examples will follow to assist in understanding this important concept.

For more information on UB, refer to OAPM's Snippet 4.4 Undistributed Budget.

## AUW and UB Relationship



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- **AUW budget above NTE amount held in UB until contract action definitized**
- **Loss in negotiations is deducted from the Undistributed Budget**
- **When negotiations complete, AUW Balance in UB should be distributed within approximately two accounting periods**

Undistributed Budget plays an important role when the contractor has authorized unpriced work. Just as its name implies, UB is work and associated budget not yet distributed to a Control Account Manager. When the contractor received not yet negotiated work, and if the entire value of the AUW was distributed and baselined, subsequent loss in negotiations creates problems (commonly referred to as *delete, draw back budget, and create chaos*).

This is the reason for logging the AUW in the UB, and allocating only to maintain an adequate PMB for the not yet negotiated work until negotiations are completed. Allocation is normally at least at the value of the NTE restriction for ease in tracking and managing.

Any negotiation loss is removed from the UB post-negotiations, and the budgets then distributed generally within two accounting periods.

# Contract Budget Base (CBB) Log



Date	Description	Contract Target Cost (CTC)	Authorized Unpriced Work (AUW)	CBB	Management Reserve	PMB	UB	Distributed Budget
1/4	ABC Contract	120	-	120	-	120	120	-
1/31	January Summary	120	-	120	10	110	10	100
2/5	Contract Change No. 001	-	45	45	-	45	10	35
2/23	SWO Generator XX7	-	-	-	-	-	30	(30)
2/28	February Summary	120	45	165	10	155	50	105

This is an example CBB Log to illustrate the process of logging and tracking the AUW.

On February 5th, the contractor received a not yet negotiated change, No. 001. As shown on the CBB Log, this change was for \$45 Million and was allocated to three places: AUW, CBB, and the PMB. The contractor distributed \$35 Million, probably for six-to-seven months of work, and left \$10 Million in the Undistributed Budget.

At the end of the month, the Contract Budget Base is \$165 Million; the PMB, \$155 Million; a total of \$50 Million in the UB; and \$105 Million distributed to the control accounts.

Of the \$50 Million in UB, \$10 Million remains from the initial contract, \$30 Million for a Stop Work Order received from the customer on February 23<sup>rd</sup> and the remaining \$10 Million for change No. 001.

# IPMR Format 1 With A UW



<b>2. CONTRACT</b>		<b>4. REPORT PERIOD</b>	
a. NAME	ABC Contract	a. FROM (YYYYMMDD)	February 1, 2013
b. NUMBER		b. TO (YYYYMMDD)	February 28, 2013
c. TYPE			

<b>5. CONTRACT DATA</b>		
a. QUANTITY	b. NEGOTIATED COST	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK
	120	45

<b>8. PERFORMANCE DATA</b>	<b>AT COMPLETION BUDGETED (14)</b>
a. WORK BREAKDOWN STRUCTURE ELEMENT	105
b. COST OF MONEY	
c. GENERAL AND ADMINISTRATIVE *	
d. UNDISTRIBUTED BUDGET	50
e. SUB TOTAL (Performance Measurement Baseline)	155
f. MANAGEMENT RESERVE	10
g. TOTAL	165

Note: This is a partial view of the IPMR Format 1.

Only Blocks 2, 4, 5, and 8 are shown.

This is an example of the Format 1 of the Integrated Program Management Report, IPMR, or Contractor Performance Report (CPR). Please see Snippets 2.1 for more information on the CPR and IPMR reporting formats.

To illustrate the A UW and associated data we just looked at in the CBB Log, this example Format 1 -- with authorized unpriced work -- contains only that data related to the A UW, PMB, and CBB in the CBB Log. This clearly illustrates the reporting of authorized unpriced work. Subsequent transactions will be reported and traceable to the CBB Log in the same manner.

The contract name and date for the February report are in the upper Blocks 2 and 4. The negotiated Contract Target Cost of \$120 Million at February month-end is in Block 5.b, with the \$45 million of A UW in Block 5.c.

A summary of the distributed budget values for the WBS elements, including Cost of Money and the G&A, totaling \$105 Million is in Block 8, Column 14. The UB of \$50 Million dollars is in Block 8.d; the PMB total (which includes UB) of \$155 Million is in Block 8.e, Column 14; and finally, the CBB of \$165 Million (which includes MR) is in Block 8.g, Column 14.



# IPMR Format 3 With AUW (Partial View)



5. CONTRACT DATA																
a. ORIGINAL NEGOTIATED COST	b. NEGOTIATED CONTRACT	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.)			
120	0	120			45			165			165		0			
6. PERFORMANCE DATA																
ITEM (1)	BCWS CUMULATIVE TO DATE (2)	BCWS FOR REPORT PERIOD (3)	BUDGETED COST FOR WORK SCHEDULED (BCWS) (Non-Cumulative)											UNDISTRIBUTED BUDGET (15)	TOTAL (16)	
			SIX MONTH FORECAST						ENTER SPECIFIED PERIODS							
			+1 (4)	+2 (5)	+3 (6)	+4 (7)	+5 (8)	+6 (9)	+7 (10)	+8 (11)	+9 (12)	+12 (13)	+13 (14)			
a. PERFORMANCE MEASUREMENT BASELINE (Beginning of Period)							100								10	110
b. BASELINE CHANGES AUTHORIZED DURING REPORT PERIOD																
CCN001				7	7	7	7	7	7						10	45
SWOXX7			(10)	(10)	(10)										30	
c. PERFORMANCE MEASUREMENT BASELINE (End of Period)							105								50	155
7. MANAGEMENT RESERVE																10
8. TOTAL																165

This is the IPMR Format 3 for the ABC Contract for the same report period as the Format 1. This illustrates the project with authorized unpriced work in the Baseline Format.

The Field 5 Blocks 5.a through 5.g display the contract level data contained in the contractor’s CBB Log. Starting with Block 5.a, the original negotiated cost, \$120 Million, with no negotiated changes (yet), and the resultant current negotiated cost is in Block 5.c.

The \$45 Million AUW is in Block 5.d, with the CBB of \$165 Million in Block 5.e. The Total Allocated Budget, or TAB, is also \$165 Million, so there is no difference. Only when there is an Over Target Baseline would the TAB be greater than the CBB.

Now we come to the baseline block of the Format 3, Block 6. Again to illustrate only those terms and concepts involved with AUW, the format contains only specific, related data. In short, it is not fully populated.

One primary reason why the IPMR Format 3 is being used to illustrate the reporting of AUW, UB, and associated debits and credits is the entire Performance Measurement Baseline Block 6.b is open. The CPR’s Format 3 Baseline Block 6.b is shaded from Columns 2 through 15. Consequently, PMB changes during the reporting period cannot be noted in the PMB, as in the IPMR’s Format 3, and could be provided only in the format 5 narrative analysis.

At the beginning of the period, Block 6.a, the PMB, comprised \$100 Million of incremental data and when the \$10 Million of UB was added, resulted in a \$110 Million Project BAC.

As we just saw in the CBB Log, on February 5th a not yet negotiated contract change was authorized. Of the \$45 Million of AUW, \$35 Million was distributed to the CAMs and baselined, and \$10 Million remained in the Undistributed Budget. During the same reporting period, the \$30 Million Stop Work Order was received, which resulted in removal of work and associated budget from the PMB. This was logged in the UB.

The end of the period's PMB is now comprised of \$105 Million and the new UB total of \$50 Million for a Project BAC of \$155 Million. The \$10 Million of MR brings the CBB total to \$165 Million with all the data traceable to the CBB Log.

And, now on to what happened in the next month, March.

# Contract Budget Base (CBB) Log



Date	Description	Contract Target Cost (CTC)	Authorized Unpriced Work	CBB	MR	PMB	UB	Distributed Budget
1/4	ABC Contract	120	-	120	-	120	120	-
1/31	January Summary	120	-	120	10	110	10	100
2/5	Contract Change No. 001	-	45	45	-	45	10	35
2/23	SWO Generator XX7	-	-	-	-	-	30	(30)
2/28	February Summary	120	45	165	10	155	50	105
3/4	Negotiated Change No.001	44	-	(1)	-	(1)	(1)	-
3/28	Baseline Change 001 & Program	-	-	-	-	-	(19)	19
3/31	March Summary	164	-	164	10	154	30	124

The CBB Log indicates that two important developments occurred during the month.

Contract Change 001, which was received in February resulting in \$45 Million of AUW, was negotiated on March 4th for \$44 Million. Accordingly, the CTC increased by \$44 Million and the \$1 Million negotiation loss was noted in the three respective columns -- CBB, PMB and Undistributed Budget.

Once again, an example where the contractor did not distribute and baseline the entire AUW value before negotiations were completed.

On March 28th, two transactions took place. The initial project's remaining UB of \$10 Million was distributed as well as the \$9 Million UB balance following negotiations of the Contract Change 001. The log shows the total \$19 Million debit to the UB and the \$19 Million credit to the distributed budget.

The March Summary, which we will soon see in the IPMR Formats 1 and 3, shows the results of the monthly transactions. The CTC is now \$164 Million, which equals the CBB, consisting of \$10 Million of MR and the PMB of \$154 Million. Thirty million dollars is still in Undistributed Budget, the result of last month's Stop Work Order. The new Project Distributed Budget is now \$124 Million.

Now let's look at the Project IPMR Formats 1 and 3 after the AUW was negotiated.

# IPMR Format 1 (Partial View) After A UW Negotiated



5. CONTRACT DATA		
a. QUANTITY	b. NEGOTIATED COST	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK
	164	

6. ESTIMATED COST AT COMPLETION			7. AUTHORIZED CONTRACTOR REPRESENTATIVE		
	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)	a. NAME (Last, First, Middle Initial)	b. TITLE
a. BEST CASE				c. SIGNATURE	
b. WORST CASE				d. DATE SIGNED (YYYYMMDD)	
c. MOST LIKELY					

ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE					PROGRAMMING ADJUSTM			AT COMPLETION	
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE		COST	CHE DULE	BUDGET	BUDGET	ESTIMATE	ARIANC
	SCHEDULE	WORK	WORK	SCHEDULE	COST	SCHEDULE	WORK	WORK	SCHEDULE	COST	(12a)	(12b)	(13)	(14)	(15)	(16)
a. WORK BREAKDOWN STRUCTURE ELEMENT														124		
b. COST OF MONEY																
c. GENERAL AND ADMINISTRATIVE *																
d. UNDISTRIBUTED BUDGET														30		
e. SUB TOTAL (Performance Measurement Baseline)														154		
f. MANAGEMENT RE SERVE														10		
g. TOTAL														164		

The March Format 1 shows the updated \$124 Million Budget at Completion in the WBS elements; this includes COM and G&A. There is the \$30 Million of UB for the Stop Work Order, bringing the PMB total to \$154 Million.

The \$10 Million of MR is in Block 8.f, Column 14; and the revised \$164 Million Contract Budget Base is in Block 8.g, Column 14.

# IPMR Format 3 After AUW Negotiated (Partial View)



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.)										
120	44	164		164	164	0										
6. PERFORMANCE DATA																
ITEM (1)	BCWS CUMULATIVE TO DATE (2)	BCWS FOR REPORT PERIOD (3)	BUDGETED COST FOR WORK SCHEDULED (BCWS) (Non-Cumulative)											UNDIS-TRIBUTED BUDGET (15)	TOTAL (16)	
			SIX MONTH FORECAST						ENTER SPECIFIED PERIODS							
			+1 (4)	+2 (5)	+3 (6)	+4 (7)	+5 (8)	+6 (9)	+7 (10)	+8 (11)	+9 (12)	+12 (13)	+13 (14)			
a. PERFORMANCE MEASUREMENT BASELINE (Beginning of Period)							105								50	155
b. BASELINE CHANGES AUTHORIZED DURING REPORT PERIOD																
CCN001 Negotiated				3	3	3									(10)	(1)
Baseline PGM							2	2	2	2	2				(10)	
c. PERFORMANCE MEASUREMENT BASELINE (End of Period)							124								30	154
7. MANAGEMENT RESERVE																
																10
8. TOTAL																
																164

The March IPMR Format 3 is again updated in the contract data blocks, reflecting the negotiation of the \$45 Million of AUW for \$44 Million, bringing the current negotiated cost, or CTC, up to \$164 Million. The Contract Budget Base and the Total Allocated Budget are both now \$164 Million.

The PMB at the beginning of the period was comprised of \$105 Million with \$50 Million in UB for a beginning period BAC of \$155 Million.

The two actions that we just saw in the CBB Log are noted in Block 6.b. This shows the distribution of the negotiated CCN 01 balance of \$9 Million into the baseline, the \$10 Million UB debit, and the \$1 Million loss in negotiations in the project's BAC.

The UB resulting from the initial project award baselining was distributed and debited from the UB accordingly.

The end of the month PMB is now comprised of \$124 Million with the \$30 Million for the Stop Work Order still in the UB.

The new BAC of \$154 Million, \$10 Million of MR, and the new CBB of \$164 Million are in Block 6.g, Column 14, as well as up in Block 5.e.

## IPMR Format 5 Requirements Regarding AUW



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- **The IPMR DID Instructions requires:**
  - Identify the components of the UB in current report
  - Discuss UB and PMB changes
  - Explain significant shifts in PMB time phasing
  - Explain significant changes in PMB total
  - Explain content of Authorized Unpriced Work

Format 5 requirements involving authorized unpriced work are essentially the same for both the CPR and the IPMR. Authorized unpriced work involves Undistributed Budget. Consequently, the UB components should be specifically identified. The requirement to document changes in the statement of work and its associated budget is a good reason to correctly maintain the UB Log, which experienced contractors attach to the Format 5 as backup for the explanations.

Any UB and PMB changes associated with AUW should be discussed.

Often AUW and the resultant distribution of budget results in PMB shifts. Again, these shifts and changes require explanations in Format 5.

And finally, even though the recipient of the IPMR or CPR Format 5 is the DOE Federal Project Director and the DOE Contracting Officer who authorized the unpriced work, the Format 5 should still explain the AUW's contents.

Why, you ask? Two reasons: Better understanding for those above those who provide the Federal Project Director's funds; and clear traceability during multiple, simultaneous contract modifications. Occasionally, there are two to three authorized unpriced work orders in process simultaneously on today's risky projects; these involve limited funds.



- **Authorized Unpriced Work and Associated Distributed/Undistributed Budgets should be logged, distributed, reported, and diligently monitored**
- **After negotiations, remaining UB should be distributed within approximately two-months**
- **AUW is not normally fully funded - contractor should carefully observe ACWP while observing the NTE value**

We sum up this short snippet on Authorized Unpriced Work with these three points: AUW and its associated logging, reporting, and tracking, in conjunction with the other project elements -- UB, CBB, Distributed, and post-negotiation CTC, requires diligent monitoring.

Following negotiations of the AUW, the remaining UB should not linger in the UB Log lest it be improperly used to budget something unrelated to its scope.

It is the contractor's responsibility to monitor the burn rate of the additional work while the AUW is in process. The NTE involves only the funding limit. The AUW should be incrementally baselined. The BCWS should be planned well in advance of Time Now for measurement of the work performed (BCWP), and accrual of the actuals (ACWP), while observing the not-to-exceed funding limit.

# DOE OAPM EVM Home Page



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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>

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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