

# **EVMS Training Snippet Library: Control Account Manager's Roles and Responsibilities**



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*Achieving Management and Operational Excellence*

This EVMS Training Snippet, sponsored by the Office of Acquisition and Project Management (OAPM) is a two-part overview about the contractor's control account managers (CAMs) and effective control account (CA) management. Part 1 is an overview of the CAM's roles and responsibilities in the use of the contractor's earned value system. Part 2 covers the CAM's roles and responsibilities during a surveillance review.

# The Control Account Manager



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- **Single manager within the company's organizational structure**
- **Given authority and responsibility to manage all work in the assigned control account(s)**
- **Must understand and use the company's EVM System**
- **Must have good communication skills with project team and customer**
- **Mini-Project manager with authority over a distinct component of the project**

The title *Control Account Manager* or *CAM* has been in the EVMS vernacular since the advent of the earned value concept in 1963. Accordingly, the 50-year old definition is still current, "A single manager within the organizational structure who has been given the authority and responsibility to manage one or more control accounts." To do so, the CAM should understand and use the company's EVM system and have good communication skills with the contractor's project team, the Federal Project Director, and the DOE project team.

Another way of thinking about the CAM's role is to compare it with the Project Manager. The CAM has all of the same responsibilities, but for a smaller piece of the project, as the PM does for the entire project.

# Control Account Manager Roles and Responsibilities



## Part 1

And now on to Part 1 - Control Account Manager Roles and Responsibilities.

# Control Account Manager Roles and Responsibilities



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- **Negotiate control accounts' specifics**
  - WBS Dictionary/SOW
  - Work Authorization Document
  - Schedule
    - Vertical
    - Horizontal
  - Budget
    - Total
    - Element of Cost
  - Variance Analysis Thresholds
- **Approve and sign authorizing document(s)**
  - CAM's signature denotes agreement with PM
  - PM's signature denotes approval

To begin, the CAM is essentially responsible for the development, definition, and management of the scope, schedule, and budget for the work contained in the control account. Accordingly, before any work begins, the CAM should negotiate the scope of work for the control account and document the results in the WBS Dictionary and the Work Authorization Document (WAD) prior to WAD approval.

Included in this early process is a clear understanding of the control account's schedule, its vertical and horizontal traceability, associated predecessor/successor ties, and applicable risk in achieving the control account schedule.

The control account's resource profile, the Budget at Completion, and the element of cost composition is to be understood and agreed upon also.

The control account variance thresholds for cost, schedule, and variance at completion analysis and reporting should be well understood and negotiated, as necessary.

The CAM's approval and signature (on the WAD, which includes the control account's start and completion date, statement of work, and total budget by cost element, indicates agreement with the contents of the WAD.

## CAM Roles and Responsibilities (cont'd)



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- **Develop detailed control account plans**
  - Develop logical work packages
    - Verify SOW CAP/WP trace
    - Reconcile CA BAC and WP BACs
  - Prepare WP schedules
    - Identify logic network activities
    - Vertical/horizontal
  - Resource-load work packages
    - BCWS by cost element
    - Identify BCWP EVT
- **Verify CAP SOW/Schedule/Budget traceability**

The next series of responsibilities involves the process of detail planning the control account. The CAM develops logical work packages to establish adequate division and definition of the work, establishes and maintains resource requirements for each activity, identifies resources and logic based network activities, identifies the earned value measurement techniques to be used, and verifies that the work packages reconcile to the Work Authorization Document's statement of work, schedule, and budget as well as ensuring that these three elements are integrated and traceable.

This is a top down, bottom up type process. The CAM negotiates with the Project Manager for the Control Account scope, schedule, and budget. The work packages/planning packages and resource plans are then identified. The resources are planned consistent with the schedule and priced out to create the work package/planning package budgets. The summation of work package and planning package budgets must then equal the control account budget shown on the WAD.

## CAM Roles and Responsibilities (cont'd)



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- **Authorize and direct control account work**
  - Identify work package managers, as applicable
  - Verify all charges are accurate
  - Provide remaining duration and resource requirements
  - Conduct weekly reviews
    - BCWP updates
    - ETC/remaining durations
- **Conduct analysis**
  - Remaining durations
  - Resource requirements

These next responsibilities involve the control phase of the contractor's EVM system. After the CAM has detail planned the control account and work is soon to commence, the CAM will authorize, direct, and control work within the work package or identify work package managers who will manage the work packages. The CAM verifies that the labor reports are accurate and provides the remaining duration and remaining resource requirements for all in-process and future activities at least each month.

The CAM also conducts weekly reviews of plans and accomplishments including assessing and reporting progress on activities, the identification and analysis of variances, and the analysis of the estimate-to-complete developed from the remaining scope, duration and resource requirements.

## CAM Roles and Responsibilities (conclusion)



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- **Conduct analysis**
  - Prepare Variance Analysis Reports
  - Implement and direct Corrective Action Plans
    - Schedule impacts, SRA, and resolutions
    - Staffing requirements & monitor new ETC
- **Identify scope, schedule, or budget changes, as required**
- **Submit Budget Change Requests**
- **Update CAPs, schedules, etc.**
- **Obtain BCR, WAD, CAP approvals**
- **Management of assigned subcontractors**

The CAM also monitors variances against the thresholds; prepares Variance Analysis Reports as required; and develops, implements, and manages corrective actions, and corrective action plans, at the activity level, which includes schedule impacts, schedule risk assessments, and staffing requirements. All of this includes monitoring and updating, if necessary, the Estimate to Complete.

As control account plan changes become necessary, the CAM should identify the scope, schedule, or budget change required and submit a Budget Change Request (BCR) as described in the company's EVMS Change Control Procedures. Following approval of the BCR, updates to the WAD, CAP, schedule, and work package details should be implemented.

As you can see, the roles and responsibilities of a typical control account manager involve considerable attention to the contractor's EVMS planning and control processes.

## Expectations of CAMs



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- **Expected to give all technical direction for their Control Account(s) and understand all of the tasking**
  - Expected to understand what is expected and when.
- **Not expected to be EVM experts; rather they need to know where to get help**
  - Project Controls; Company's EVMS Process Description
- **Expected to know basic EVM concepts**
  - Meaning of critical path, schedule float, remaining duration
  - Required variance analysis content; EAC update process
  - EV Techniques; work authorization and change process

The CAM needs to understand the technical plan, the resource requirements, and the status of the control account.

They are not expected to be able to quote the company EVMS Process Description. There are basic EVM elements that they should be able to explain and demonstrate

What the critical path is

- The float (or duration) an activity can be delayed without delaying the finish date of the schedule or succeeding tasks
- The remaining duration (how long) an activity has left in days before completion
- How variance analysis, when required, defines the root cause, impacts, and corrective actions
- How EAC is updated whenever the CAM knows of a significant trend or impacts
- The use of the various earned value techniques and how they are applied
- The work authorization process
- How changes are incorporated into the baseline

## **Roles and Responsibilities During EVMS Reviews**



### **Part 2**

In Part II, the roles and responsibilities of the control account manager during DOE reviews of the company's EVM System are provided.



- **CAM interview is a key activity in achieving a successful EVMS Review**
- **It is a two-way communication process**
- **Ensures that both customer and contractor understand the technical, schedule, cost and risks aspects of the project baseline**

The principal responsibility of a CAM during a DOE EVM System review involves what is called the CAM Interview -- a key activity for the company toward successful completion of the EVMS review. It is an opportunity for two-way communication to ensure that the Review Team fully understands how the CAM manages the technical, schedule, cost, and risk aspects of the project baseline.

# The Interview Process



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- **The participant(s) include:**
  - Control Account Managers (CAMs)
  - Scheduler/Planner
  - Project Controls
  - DOE Review Team Members
  
- **CAM is responsible for answering the questions**
  - Scheduler and Project Controls may respond in specific and limited instances

The interview participants include the CAM, the CAM's scheduler, a Project Controls representative if desired, and the DOE Review Team Members. The CAM is responsible for answering all questions. The CAM should avoid relying upon other contractor staff for help in answering questions, except in specific and limited instances.



- **Environment**

- Recognize that Review Team members are prepared for the meeting
  - Familiar with system and control account information
  - Have a meeting objective and plan
  - Not tied just to a questionnaire

The framework for a good interview is comprised of three factors. The first is the interview environment.

The CAM should recognize the Review Team will be well prepared, and therefore should be familiar with the contractor's EVM system and the respective control account information selected for discussion.

The CAM should further recognize the Review Team will have basic objectives and a plan to achieve, and will not simply follow a CAM interview questionnaire.

## Framework for a Good Interview (cont'd)



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- **Opening the Interview**

- Start on time
- Conduct introductions
- Understand but control nervousness
- Maintain positive attitude
- Be prepared
- Allow for normal meeting icebreakers
- Allow the Review Team to control the interview flow

The next factor in the framework for a good interview is opening the interview. It is important to start on time. Introductions need to convey a positive working relationship, and observing the atmosphere in the room is important to completing the discussion in a constructive manner. The CAM should understand it is normal to have some nervousness during the interview but should attempt to control it by maintaining a positive attitude and being prepared. Normal meeting ice breakers help to set all participants at ease. Allow the Review Team to control the flow of the interview.

## Framework for a Good Interview (conclusion)



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- **During the Interview**
  - Be prepared to show live access to the electronic CAM notebook and the cost and schedule engines
  - Avoid yes and no responses
  - Be prepared to show documentation to verify understanding
  - Take screen shots when asked to provide copies to the Review Team

The 3<sup>rd</sup> factor in the framework is conducting the interview. The CAM discussion should proceed in a logical manner, as outlined in Part 1 of this snippet, using actual CAM documentation. The CAM's control account documentation is often presented using the electronic CAM Notebook. The CAM must have live access to the EVMS cost and schedule engines. This live access is necessary to demonstrate integration during the interview.

The team is looking for complete responses that demonstrate understanding. The CAM should refrain from yes and no responses. It is important that the CAM shows and describes how he or she uses the specific system feature being discussed.

During the interview, the CAM may be asked to make screen prints of documents or data on the computer screen and copy the images into a Microsoft Word or PowerPoint file for the Review Team to retain.



- **The CAM's roles and responsibilities in understanding and using the contractor's EVM System are paramount to successful project completion**
- **The CAM should be prepared to review the contractor's system and its functionality with the Review Team-- doing so fosters positive communications and confidence in the contractor's system**

In summary, each CAM represents a portion of the project's Work Breakdown Structure, the Baseline, and the Schedule. Consequently, a key factor in successful completion of the project is in the CAMs' understanding of their roles and responsibilities with the EVM System.

Verifying that the CAM's understand and are using the system, by conducting CAM discussions, is an important process in establishing positive communications and confidence in the contractor's system and in its monthly performance report.

**DOE OAPM EVM Home Page**

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## EARNED VALUE MANAGEMENT

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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.

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