

DOE EVMSIH Test Automation



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October/November 2016

Automated, Data Driven Strategy



Slide 2

- Rethink the way in which DOE EVMS validations and follow-on surveillance are performed
- Strategy uses an automated, data driven approach
- Data now provides an instant diagnosis
- Markers in the data will point the way to emerging issues
- Ensures efficient use of limited resources

EVMS Compliance Protocol Development



Slide 3

- Budget uncertainty necessitates that the Department of Energy (DOE) to identify operational efficiencies to execute its project management oversight responsibilities. To be successful, it is imperative that DOE, working collaboratively with Energy Facility Contractor Group (EFCOG) partners, rethink the way in which DOE Order 413 EVMS compliance is executed following a data-driven approach that objectively and consistently tests the reliability of core contractor EVMS management processes.

– DOE EVMS Pilot Project Charter, May 2016



Limitations of Mathematical Models



Slide 4

- Computational complexity
- Mathematical models based on human misunderstanding and bias
- Details of the model and algorithms must never be hidden secrets
- Concepts and algorithms need to constantly be fine-tuned
- Complete and reliable model depends on the availability of data

EVMS Compliance Protocol Development



Slide 5

- A system of rules that explain the correct conduct and procedures to be followed for EIA-748 interpretation and especially the formatting of EVMS data
 - Each EIA-748 EVMS Guideline has a general purpose and well-defined attributes (i.e., qualities and characteristics)
 - Tests are developed to determine the performance characteristics of each attribute
 - Identify the data sources - where and how to get the data you need
- Collaborative laboratory-type environment to develop and test concepts and methods
- Maximum consideration given to commercial best practices

Establishing the Work Group



Slide 6

- Small group led through an open discussion
- Free and open discussion among the participants results in generation of new ideas
- Provide immediate feedback for the clarification of particular concepts and ideas
- Expressions other than those in verbal form such as simulated activities provide useful insights!

Develop and Document the Agreements



Slide 7

- Upon completion each QE LOI protocol is a documented agreement detailing how EIA-748 EVMS compliance is achieved
- Flowchart diagrams are developed that represent the agreed to workflow process and algorithm, showing the compliance assessment steps
- This diagrammatic representation is placed under configuration control

The Making of an EVMS Protocol



Slide 8

- Provide the necessary levels of interpretation to establish a consistent and clear definition of EIA-748 EVMS compliance
 - Based on an understanding of historical precedence and the present day needs of project management
- EVMSIH based on the following authoritative sources:
 - CSCSC Joint Surveillance Guide
 - CSCSC Bowman Guide
 - DCMA EVMIG
 - DOD EVMSIG
 - NDIA Intent Guide
 - NDIA PASEG
 - GAO Schedule Assessment Guide

1. Requirements

The Making of an EVMS Protocol (cont.)



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EIA-748 EVMS GUIDELINES					
ORGANIZATION	PLANNING, SCHEDULING & BUDGETING	ACCOUNTING CONSIDERATIONS	ANALYSIS AND MANAGEMENT REPORTS	REVISIONS AND DATA MAINTENANCE	INDIRECT CONSIDERATIONS
(1) DEFINE WBS	(6) ESTABLISH SCHEDULES	(16) COST CONSISTENT	(22) CALCULATE VARIANCES	(28) TIMELY CHANGES	(4) INDIRECT COST MANAGER
(2) DEFINE OBS	(7) OBJECTIVE MEASURES	(17) COLLECT COST BY WBS	(23) VARIANCE ANALYSIS	(29) RECONCILE BUDGETS	(13) OH BUDGETS
(3) SYSTEM INTEGRATION	(8) CREATE PMS	(18) COLLECT COST BY OBS	(25) SUMMARIZE	(30) RETROACTIVE CHANGES	(19) COLLECT OH COSTS
(5) WBS OBS ROLLUP	(9) BUDGET BY EOC	(20) IDENTIFY UNIT/LOT COSTS	(26) MANAGEMENT USE	(31) AUTHORIZED CHANGES	(24) VARIANCE
	(10) CREATE WORK PACKAGES	(21) MATERIAL PERFORMANCE	(27) EAC	(32) DOCUMENT CHANGES	
	(11) WP CA BUDGETS EQUAL				
	(12) CONTROL LOE				
	(14) IDENTIFY MR/UB				
	(15) RECONCILE PROJECT				

2. Application



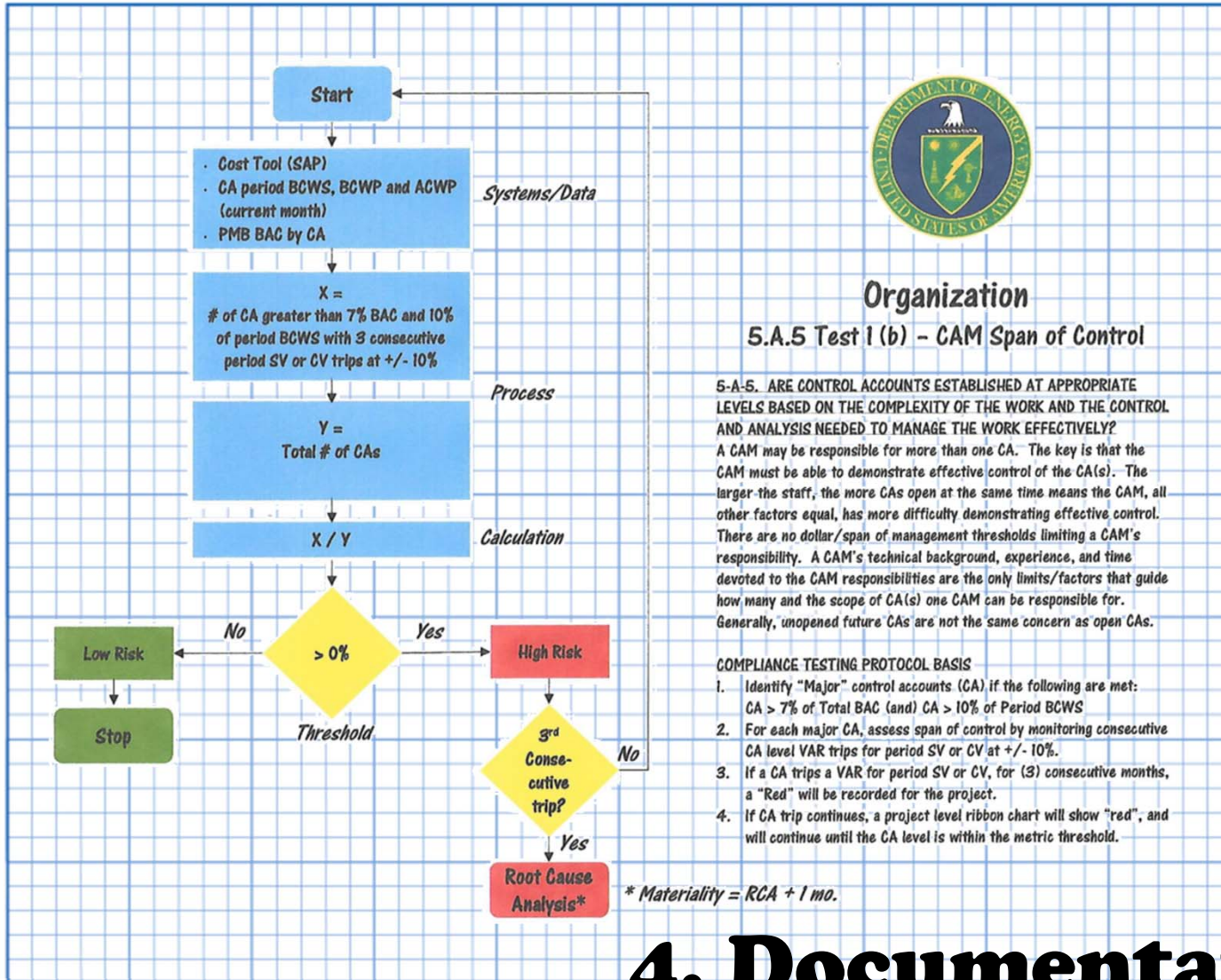
- DOE EVMSIH 2.0, QE LOI 5.A.5: Are control accounts established at appropriate levels based on the complexity of the work and the control and analysis needed to manage the work effectively?
 - CAM is a single manager within the organizational structure who has been given the authority and accountability to manage one or more control accounts
 - CAM responsibilities include schedule planning and status, measurement of accomplishment, actual cost collection, variance analysis and resultant corrective action, and estimating costs at completion
 - CAM must demonstrate the effective execution and control of scope, schedule, and budget parameters

3. Interpretation

The Making of an EVMS Protocol (cont.)



TITLE _____ DATE _____
NAME _____



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4. Documentation

The Making of an EVMS Protocol (cont.)



DESCRIPTION	Program, Type & Threshold	2016						
		J	J	A	S	O	N	D
I. ORGANIZATION - Guidelines 1, 2, 3, 5								
Guideline 5: Provide for integration of the program work breakdown structure and the program organizational structure in a manner that permits cost and schedule performance measurement by elements of either or both structures as needed.								
OE-LOI: 5.A.5 Are control accounts established at appropriate levels based on the complexity of the work and the control and analysis needed to manage the work effectively?								
5.A.5-1 Verify effective CAM span of control								
5.A.5-1.1 To verify effective CAM Span of Control, identify the Major CAs (> 7% of the total BAC and >10% of the period BCWS) and if the current period SV% and/or CV% greater than 10%	C	A	0%	0	0	0	0	

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Did we get the intended result?

5. Testing



Content
Development

Content
Delivery

- Once EVMS Compliance protocols are created, they can be stored, accessed, delivered and used by an unlimited number of contractors, providing access to real-time feedback
- Office of Project Management Oversight & Assessments (PM) manages and operates Project Assessment and Reporting System (PARS IIe), the Department's official Business Intelligence and Analytics System



- Amy Basche – **Washington River Protection Solutions (WRPS)**
 - Project Support Services Manager for
 - EFCOG Project Controls Subgroup Chair
- Sandi Tracy – **Consolidated Nuclear Security (CNS)**
 - EVMS Compliance Manager for Y-12 and Pantex Sites
- Kevin McGuire – **Consolidated Nuclear Security (CNS)**
 - Senior EVMS Analyst and the Systems Lead
- Igor Pedan – **Project Management Policy and Systems (PM-30)**
 - PM Information Manager (PARS IIe Senior Administrator)
- Luis Contreras – **AzTech International**



Please find the full set of slides presented at the IPMW DOE Track on the DOE PM Website EVM Page <http://www.energy.gov/projectmanagement/earned-value-management>

EARNED VALUE MANAGEMENT

- Project Management
- Earned Value Management**
- EVMS Guidance
- EVM SMEs
- Training
- Glossary of Terms & Acronyms
- Career Development (PMCDP)
- Policy Development
- Information Systems



KEY RESOURCES

- PMCDP
- EVMS
- PARS IIe
- FPD Resource Center
- PM Newsletter
- Forms and Templates

The mission of the DOE Earned Value Management website is to educate and train on theory and practice of Earned Value Management, and use it as an integrated Project Management process.

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.