

EVMS Training Snippet Library: EVMS Stage 1 Surveillance



**Office of Acquisition and Project Management (OAPM) MA-60
U. S. Department of Energy
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- **Recurring process of review**
 - Continued compliance with ANSI/EIA-748 and DOE policy
- **Verifies implementation**
 - The use of the EVM system is maintained over time and on subsequent applications (e.g., on new projects)
- **Assesses extent of system use for management purposes**
 - If the contractor is continuing to use their EVMS effectively to monitor and manage cost, schedule, and technical performance

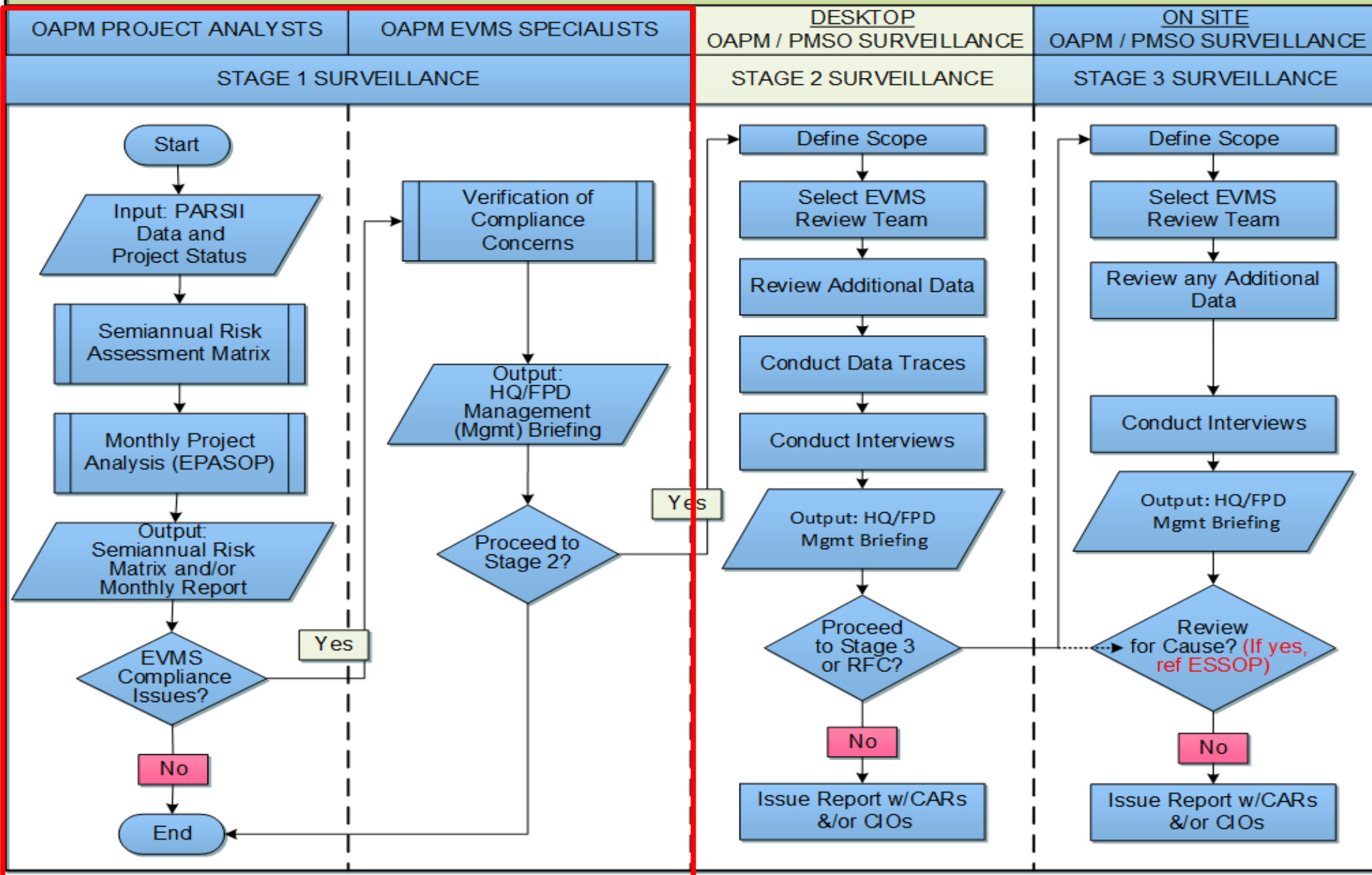
DOE Surveillance Policy and Procedures



- **Department of Energy (DOE) Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, 11/29/2010**
- **DOE Guide 413.3-10A, Earned Value Management System (EVMS)**
- **OAPM EVMS Surveillance Standard Operating Procedure (ESSOP)**



DOE EVMS SURVEILLANCE PROCESS





- **Step 1: Data Analysis**

- Conducted in collaboration with OAPM Project Analysts and EVM Specialists, as well as PMSO, FPD, and project personnel
- While the intent and purpose of project analysis and EVMS surveillance differ, one supports the other

Collaboration is an essential part of EVM system surveillance and project analysis.



- **Step 1: Data Analysis – continued**
 - Data analysis procedures
 - OAPM EVMS & Project Analysis Standard Operating Procedure (EPASOP)
 - Data sources:
 - PARS II Reports
 - Contractor’s EVMS self-surveillance documentation
 - Assessments conducted by the FPD, PMSO, and/or APM relative to project performance and EVM system health
 - Additional information from the FPD as requested
 - Identify
 - Disconnects
 - Negative trends
 - Significant changes that may point to systemic issues



Data Validity Check

- EV Data Validity (WBS Level)
- Retroactive Change Indicator (6-Mo, PMB Level)

Schedule Health Assessment

- Schedule Missing Logic (Activity Level)
- Relationship Leads and Lags Report
- Schedule Relationship Types (Activity Level)
- Schedule Hard Constraints (Activity Level)
- Schedule Total Float Analysis (Activity Level)
- Schedule Duration Analysis (Activity Level)
- Invalid Forecasts and Actual Dates (Activity Level)
- Schedule Hit or Miss Report

Variance Analysis

- EV Project Summary (6-Mo, PMB Level)
- Performance Analysis (WBS Level)
- Variance Analysis Cumulative (WBS Level)

Trend Analysis

- Baseline Volatility – Past and Near-Term (PMB Level)
- EV Project Summary (6-Mo, PMB Level)
- MR Balance v. CV, VAC, & EAC Trends
- Management Reserve (MR) Log
- Performance Index trends (WBS Level)
- Variance Analysis Cumulative (WBS Level)

EAC Reasonableness

- CPI v. TCPI (PMB Level)
- EV Data Validity (WBS Level)
- Performance Index Trends (WBS Level)

Predictive Analysis

- Funding Status (Monthly at Project Level)
- IEAC Analysis (WBS Level)

• Analysis Folder

- Wealth of data available
- Reports available for DOE analysts and DOE Contractors for their assigned projects
- Reports are organized into folders and subfolders for ease of use
- Detailed instructions

Data Validity and Schedule Health Assessment



- **Data Validity Reports**

- EV Data Validity errors, such as
 - Cumulative BCWP > BAC
 - Cumulative ACWP > EAC
- Retroactive Change Indicator

- **Schedule Health Assessment Reports**





- **Step 2: Assess EVM System Risk by Project (periodically)**
 - Purpose: To assist in prioritizing the EVM surveillance schedule, and to **determine depth and scope** should Stage 2 surveillance be warranted.
 - Use **DOE EVMS Risk Matrix**
 - Conduct risk assessment to **generate a risk profile** for the entire portfolio of projects for each contractor and/or site
 - **Identify and select** projects for additional surveillance



Assessing Project Risk

- **For EVMS Surveillance purposes:**
 - Apply Risk Matrix to *each EVM-applicable project within a contractor's portfolio*
 - Rate each project in each of 14 areas
 - Use results from portfolio perspective to determine where to focus surveillance efforts

DOE EVMS RISK MATRIX w/ SCHED RISK		DATE:	ANALYST:	
CONTRACTOR:	PM SO:		PROJECT:	
RISK ELEMENT	HIGH RISK PARAMETERS 3.00	MEDIUM RISK PARAMETERS 2.00	LOW RISK PARAMETERS 1.00	RATING
PROJECT PHASE	PRIOR TO CD-3 Organizing, Scheduling, Work Authorization	EARLY TO MID CD-3 Accounting, Material Management, Change Incorporation	1.0	L
	LATE CD-3 Managerial Analysis, Change Incorporation			
PM EVM EXPERIENCE	< 2 YRS Organizing, Scheduling, Managerial Analysis	2 - 5YRS Scheduling, Managerial Analysis	1.0	L
	> 5YRS Managerial Analysis			
CONTRACT BUDGET BASE VALUE	≥ \$100M Work Authorization, Accounting, Managerial Analysis	\$50M < \$100M Work Authorization	1.0	L
	\$20M < \$50M Scheduling			
PRIME WORK REMAINING %	> 50% Managerial Analysis, Change Incorporation	10 - 50% Managerial Analysis, Change Incorporation	1.0	L
	< 10% Accounting, Material Management			
SUBCONTRACTOR WORK REMAINING %	> 50% Work Authorization, Scheduling, Subcontract Management, Managerial Analysis	10 - 50% Work Authorization, Scheduling, Subcontract Management	1.0	L
	< 10% Accounting, Subcontract Management			
MATERIAL REMAINING %	>30% Work Authorization, Scheduling, Accounting, Material Management	15 - 30% Accounting, Material Management	1.0	L
	< 15% Material Management			

- **Determine if EVM compliance concerns exist**
 - If No – Stage 1 continues as defined with monthly data analysis and periodic risk matrix updates
 - If Yes -
 - Prepare and present Management Briefing
 - If Management supports the concerns, proceed to Stage 2
 - If not, concerns monitored as part of Stage 1 continuing activities





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EARNED VALUE MANAGEMENT

- Aviation Management
- Executive Correspondence
- Energy Reduction at HQ
- Facilities and Infrastructure
- Freedom of Information Act
- Financial Assistance
- Information Systems
- Procurement and Acquisition
- Project Management
 - Earned Value**
 - Lessons Learned
 - Reviews and Validations
 - Documents and Publications
 - RCA and CAP

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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