

EVMS Training Snippet Library:

EVMS Stage 2 Surveillance



Office of Acquisition and Project Management (OAPM) MA-60
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Achieving Management and Operational Excellence

This EVMS Training Snippet sponsored by the Office of Acquisition and Project Management (OAPM) covers OAPM's approach to EVMS Stage 2 Surveillance.



- **Recurring process of review**
 - Continued compliance with ANSI/EIA 748 and DOE policy
- **Assesses 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

What is EVMS Surveillance and why do we do it?

Surveillance is the recurring process of reviewing a contractor's EVMS to ensure continued compliance with the ANSI/EIA-748 and DOE policy.

An effective surveillance process ensures that the key elements and the use of an EVMS are maintained over time and on current and subsequent projects.

The purpose of surveillance is to ensure that the contractor is continuing to use its EVMS effectively to monitor and manage cost, schedule, and technical performance.

DOE Surveillance Policy and Procedures



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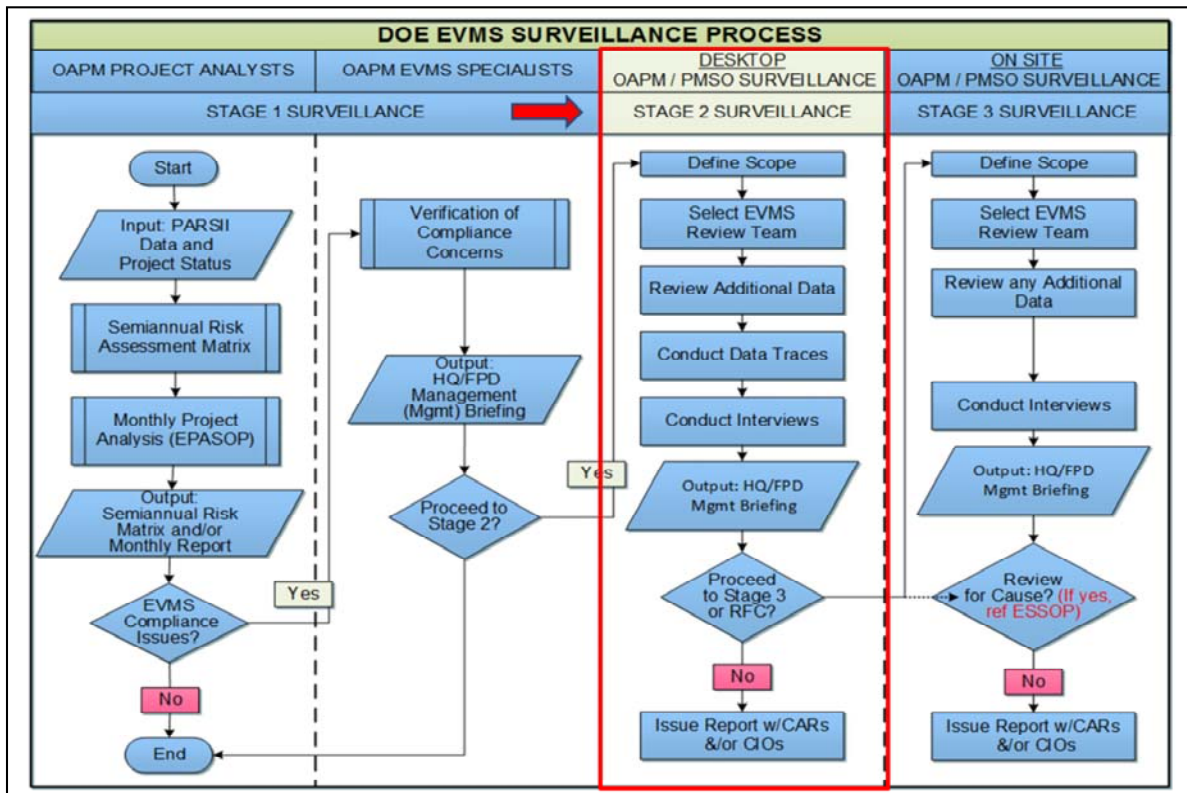
- **Department of Energy (DOE) Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, 11/29/2010**
- **DOE Guide 413.3-10A, *Earned Value Management System (EVMS)***
- **OAPM EVMS Surveillance Standard Operating Procedure (ESSOP)**



DOE Order 413.3B identifies surveillance requirements for the contractor, the Project Management Support Office, and for the Office of Acquisition and Project Management.

DOE Guide 413.3-10A provides overall principles regarding EVM and surveillance.

Rather than approach surveillance as an event-based task similar to the initial certification review, OAPM decided to adopt a risk-based, data-driven surveillance method modeled after the risk based, data driven EVMS surveillance approach widely endorsed by industry groups and Governmental agencies, such as National Defense Industry Association (NDIA), General Accounting Office (GAO), Department of Defense (DOD), and Energy Facility Contractor's Group (EFCOG). An OAPM EVMS Surveillance Standard Operating Procedure was developed to provide process level 'how to' instruction. While this is the approach used by OAPM, the SOP is available for use by the PMSO, FPDs and their project control staff, and the contractor.



This figure shows the three stages of surveillance in OAPM's process. In this Snippet, we are focusing on Stage 2 Surveillance elements outlined in red on the slide.

When concerns exist from Stage 1 and management approves further investigation, the next step is Stage 2 surveillance, an off-site desk-top surveillance. This stage may include additional data calls to include items such as work authorization documents, control account plans, schedules, and other documentation. The analysis takes a deeper and broader look across all the projects in the portfolio and focuses primarily on data analysis. During this stage, there is communication with the stakeholders to get answers to questions, and could include CAM interviews by telephone, etc.

Desk Top Stage 2 Surveillance may indicate that an on-site review, referred to as Stage 3 On-Site Surveillance, is necessary to consult directly with Control Account Managers (CAMs), and other project team members, in a more in-depth nature to determine whether the system and its implementation continues to comply with ANSI/EIA-748.

Stage 2 Step by Step



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- **Scope Definition**
- **Team Selection**
- **Data Call**
- **Data traces and data analysis**
- **Conduct Interviews as needed**
- **Management Briefing**

The Stage 2 Surveillance process flow includes defining the scope of the review; selecting a team of subject matter experts; requesting that the contractor provide scope-specific data; conducting data traces and analysis; conducting interviews of contractor personnel if needed; and lastly, preparing and conducting a management briefing to present the outcome of the Stage 2 surveillance.

Stage 2 Scope Meeting



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- **Scope defined based on:**
 - Stage 1 risk matrix and data analysis results
 - PARS II data verification
 - Contractor's Earned Value System description/processes
- **Project selection:**
 - The entire contractor portfolio of projects requiring EVMS will be considered for EVMS surveillance
- **Results of scope meeting:**
 - Determination of projects and EVM system areas to be examined
 - Identification of the documentation and artifacts needed
 - Team composition
 - Timeline for the surveillance

The first step is to define the scope of the Stage 2 surveillance. This is primarily a function of the Stage 1 risk matrix and data analysis results.

Another essential part of Stage 2 surveillance is verification that the PARSII data being uploaded by the contractor agrees with the contractor's internal data used to manage the program, i.e. one set of books. This can be evaluated by comparing contractor CPRs to PARSII data, interviewing CAMs and looking at Control Account level data to ensure what is reflected in the CAM's cost and schedule data agrees with PARSII (based on the same reporting period dates, Budgeted Cost for Work Performed that has been claimed, etc.).

The results of the scoping meeting include a determination of the procedures and processes to be examined; projects to be included in the surveillance; the documentation and artifacts necessary for the surveillance; the team composition; and the timeline for the surveillance.

Team Roles / Responsibilities



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ROLE	RESPONSIBILITY
OAPM EVM Specialist	Surveillance lead; facilitate and lead the process; resolve issues; document results
OAPM/PMSO Project Analyst	Support process with technical project specific insight
Contract Support	EVMS team members; assist in assessment; prepare review documentation and reports
Program/FPD	Support process with resources, time, data, and personnel

The team is led by the OAPM EVM Specialist in close collaboration with the OAPM Project Analyst who provides project specific insight. Contract Support personnel are chosen to assist based on the scope of the review and their areas of expertise. The Project Management Support Office also supports the process as needed with technical project specific insight. The site office Federal Project Director's staff supports the review by providing past local surveillance reports, information and discussion of their observances and concerns, etc.

Stage 2 Data Call



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- **Documentation - static information (procedures)**
- **Artifacts - dynamic outputs (data)**
- **Typical data requested may include but is not limited to:**
 - Time phased data file in native or industry standard readable format (e.g., X12, XML format)
 - At least three months of EVMS monthly reports
 - EVM variance analysis and corrective action log
 - Project schedules in native (e.g., XER) or industry standard readable format (e.g., X12, XML format)
 - Risk management plans
 - System Description Document and other pertinent procedures
 - WBS/OBS and WBS dictionary
 - EAC supporting documentation
 - Contract budget logs, e.g. CBB, MR, UB, PMB
 - Responsibility Assignment Matrix (RAM) (Dollarized)
 - Work authorization documentation

While some data is available from PARSII, the contractor maintains supporting data that may be included in the Stage 2 data call. These data may be requested based on risk indicators and/or concerns identified in Stage 1.

The data call is a written request to the contractor asking for information. The data call includes such items as EVM Time phased data in native or industry standard readable format (e.g., X12, XML format), EVMS monthly reports; EVM variance analysis and corrective action log; project schedules (baseline and forecast) in native (e.g., XER) or industry standard readable format (e.g., X12, XML format); risk management plans; the EVM system description and supporting procedures; the Work Breakdown Structure and dictionary; the Organizational Breakdown Structure; documentation to support the reported Estimate at Completion; contract budget logs, including the Contract Budget Base, Management Reserve, Undistributed Budget, and Performance Measurement Baseline; the responsibility assignment matrix showing the budget value of the control accounts; and work authorization documents. These documents and data will be used in the data trace and analysis phase.

Stage 2 Data Traces



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- Assesses system integration
- Disconnects between the EVMS processes may indicate that the system is not functioning as intended
- This in-depth examination may include discussions with CAMs and other project staff



Because EVMS is an integrated set of processes, these processes must work in concert as a total system. Each sub-process of the system requires input from another process and provides outputs to still other processes. Tracing the data flow between processes is a critical element of the review process for the review team. Disconnects between the EVMS processes indicate that the system is not functioning as intended and that the processes and procedures must be examined in detail. This in-depth examination may include discussions with CAMs and other project staff.

Stage 2 Interviews



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- **Interview areas may include:**

- Work authorization
- Organization
- EVM methodologies
- Cost and schedule integration
- Cost accumulation
- Scheduling and budgeting
- Material management
- Subcontract management and integration of data
- Risk assessment and mitigation
- Variance analysis
- Use of the information
- Change control and maintenance
- EAC process
- EVMS program training

Disconnects between the EVMS processes indicate that the system is not functioning as intended and that the processes and procedures must be examined in detail. This in-depth examination may include interviews with affected CAMs, and other project staff, and cover some or all areas listed on the slide, subject to the scope of the surveillance. During a Stage 2 Surveillance, CAM interviews may be accomplished using audio, web-based, and/or video teleconferences to provide the insight necessary to determine if and what type of corrective action is necessary.

The surveillance team should conduct interviews with appropriate project staff to gain additional insight or knowledge that would help them determine compliance with EVMS requirements.

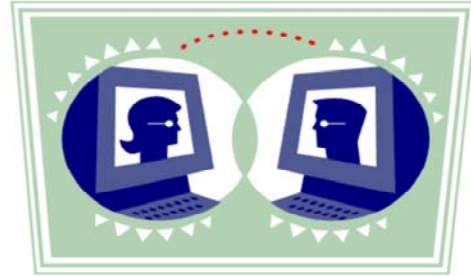
What to Expect During Interviews



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- **Interviewees may include:**

- Contractor Management
- Project Controls
- Control Account Managers



- **Interviews may be conducted to:**

- Clarify the data
- Acquire understanding of use

Stage 2 interviewees could include the contractor's management, Project Controls staff, and/or Control Account Managers (CAMs). The interviews may be conducted to clarify the data being reviewed and to acquire a basic understanding of how the contractor is using the data.

Stage 2 Surveillance Output



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- **Prepare HQ/FPD Management Briefing with Recommendation whether to proceed or complete surveillance**
 - Based on severity and risks, Management may approve more in-depth surveillance, i.e. Stage 3
 - If Stage 2 results from the data review do not justify an on-site review, then Stage 2 may continue with CAM interviews remotely to verify questions and ends with issuance of a report with any Corrective Action Requests, if any


The output of Stage 2 is a briefing to the OAPM and the PMSO Headquarters management and the cognizant Federal Project Director(s).

The briefing includes the results of the Stage 2 surveillance, such as the number and nature of non-compliant guidelines, number of projects affected, and the impact any non-compliances have in terms of data accuracy, timeliness, and extent by which the data can be used to manage the project(s).

The Management briefing may result in a decision to proceed with more in-depth Stage 3 on-site surveillance. If the decision is that any non-compliances found do not justify an on-site review, additional CAM interviews by phone may be conducted. Then the team documents the Stage 2 surveillance actions and a final report, with corrective action requests, is issued.

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DOE OAPM EVM Home Page



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History

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>

For information on the other Stages of Surveillance, refer to the EVMS Training Snippet Library. For information relative to EVMS procedures, templates, helpful references, and training materials, please refer to OAPM's EVM Home page.