



**Jefferson Science Associates, LLC
Earned Value Management System
2013 Surveillance Plan**



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Earned Value Management System Surveillance Plan

The Department of Energy (DOE) certified the Jefferson Science Associates (JSA) Earned Value Management System (EVMS) in September 2008 and an Acceptance Review in December 2011 with the expectation that JSA would maintain its EVMS by conducting an annual surveillance review. Continued compliance with the EIA-748-B EVMS standard is essential in maintaining the JSA certification. As delineated by the JSA Project Control System (PCS) Manual, this EVMS Surveillance Plan establishes the organization and conduct of the 2013 surveillance review of the certified JSA Earned Value Management System.

Surveillance Overview

Surveillance is the process of reviewing the implementation and use of the EVMS process to one or more projects. The purpose of this system surveillance is to focus on using EVMS effectively to monitor and manage cost, schedule, and technical performance for projects at Jefferson Lab. An effective surveillance process provides assessment, training, and mentoring of the EVMS process so that the elements of the process are maintained over time and on subsequent applications. Through the process of surveillance, successful practices will be shared as part of the continuous improvement process.

Objectives Of Review

The 2013 Surveillance Review seeks to accomplish two important goals:

- Ensure that JSA EVMS processes and procedures are being followed appropriately
- Ensure that JSA EVMS processes and procedures continue to satisfy the guidelines in the EIA-748-B Standard for Earned Value Management Systems.

The Jefferson Lab Project Management Organization is responsible for conducting the Earned Value Management System surveillance program. The PMO point of contact for the 2013 Surveillance Review is Dennis Miner.

An overview of the surveillance process includes a review of each of the EIA-748-B guideline categories:

1. Organization
2. Planning, Scheduling, and Budgeting
3. Accounting Considerations
4. Analysis and Management Reports
5. Revisions and Data Maintenance

Scope Of Review

The 12 GeV Upgrade is the major Jefferson Lab project that requires full compliance with the JSA EVMS. There are no other ongoing projects that require compliance with the JSA EVMS. For purposes of this surveillance review, the scope will be restricted to the review of the JSA Project Control System Manual (EVM System Description) processes and procedures as they pertain to the EIA-748-B and implemented on the 12 GeV Upgrade project.

Surveillance Membership

Surveillance membership for this review consists of participants from other labs to ensure independence of the surveillance process. Individuals participating in the 2013 JSA EVMS surveillance review include the following:

Surveillance Team Reviewers

Jennifer Fortner (Team Leader) – Argonne National Laboratory, Project Controls Manager

Dean Hoffer – Fermi National Accelerator Laboratory, Office of Project Management Oversight

Lynda Gauthier – Michigan State University, Facility for Rare Isotope Beams Project, Project Controls Department Manager

Peter Selgrad – Brookhaven National Laboratory, Senior Project Controls Analyst

Pamela Utley – Stanford Linear Accelerator Center National Accelerator Laboratory, Senior Project Controls Specialist

Betsy O’Connor – Argonne National Laboratory, Project Manager

Observers

Bob O’Sullivan – Fermi National Accelerator Laboratory, LBNE Project Controls Manager

Elmie Peoples-Evans – Argonne National Laboratory, Project Controls

Kurt Fisher – DOE Office of Science, Office of Project Assessment, SC-28, Engineering and Construction Manager

James Hawkins – DOE Office of Nuclear Physics, Facilities & Project Management Division, Major Initiatives Program Manager

Tim Maier - DOE Office of Science, Office of Project Assessment, SC-28

EVMS Surveillance Team Assignments

Team Member	Responsible Area	Guidelines
Jennifer Fortner	Organization	1-5
Peter Selgrad / Dean Hoffer	Planning, Scheduling, & Budgeting	6-15
Betsy O’Connor	Accounting Considerations	16-21
Pamela Utley / (Bob O’Sullivan)	Analysis & Management Reports	22-27
Lynda Gauthier / (Bob O’Sullivan)	Revisions & Data Maintenance	28-32

Process And Guideline Selection

All aspects of EVM will be considered during this system surveillance. A comprehensive surveillance will address the full content of the JSA Project Controls Manual and will also rely on the results of other DOE and EVMS related reviews as appropriate.

This EVMS surveillance will be based upon the recent 12 GeV project rebaselining and subsequent remaining work and content that is specific to the 12 GeV Upgrade project. The selection of EVM guidelines and processes reviewed will be relevant to the project phase.

This surveillance execution will be organized to provide a structured setting to assess the 12 GeV Upgrade project's approach to EVM process implementation and its consistency across the project's CAMs. This can be facilitated by:

- A clear code of conduct;
- Understanding of how results will be used;
- Including contractor and customer project office personnel as observers on the surveillance team;
- Obtaining out-briefings and discussions of potential findings before a report is generated;
- A clearly defined format for reporting findings and recommendations.

Code Of Conduct

Responsibilities

The surveillance team will provide adequate advanced notification of specific control accounts and processes that will be reviewed based on data that will be provided by the project team prior to surveillance date. It is also the intent of this surveillance to not interfere with on-going work to the extent possible. The surveillance team will not require extensive presentations or preparations, and it can review and interpret data provided in the project's native formats. The review will be conducted in a professional manner and in a spirit of constructive assessment and discovery. The surveillance team leader is solely responsible for the final determination of findings and recommendations and ensuring that the results are communicated to the project and Laboratory management.

Project personnel should be prepared to demonstrate through objective project information that they are complying with applicable policies and procedures. The project team should coordinate with the surveillance team to ensure that Control Account Managers (CAMs) responsible for areas of specific interest are available and cause the least possible disruption of on-going efforts. The project personnel should also ensure that adequate data and project policies are available to the surveillance team sufficiently in advance of the review to allow for meaningful analysis. For this review, sufficiently is defined as three consecutive months of recent data at least one week prior to review, in this case August, September, and October.

The surveillance team leader will ensure that the review focuses on system compliance and does not become involved with non-system-related issues. Additionally, the surveillance team leader will make certain that documented findings and corrective action plans are available and used to close out issues identified during the review.

Successful surveillance is predicated upon demonstration of compliance with the JSA Project Control System Manual processes and procedures through explanations and illustrations using objective project information consisting of documents, computer files, working papers, notes, or other forms of data and communication which demonstrate compliance/non-compliance with a policy, procedure, or process. Objective project information is created in the normal conduct of business and is not prepared solely for the review of a surveillance team. This surveillance team will be located in a central location that facilitates access to project information within the Laboratory. Examples of objective project information include work authorizations, critical decision documentation, cost and schedule status databases, variance analysis reports, and estimate-to-complete rationale. A complete list of required documents will be provided to the project team at least two weeks prior to the review date but additional documents may be requested during or prior to the actual review.

Observer Participation

Observers are guests approved by the team leader to accompany the team, and observe the review process to ensure that the system under review is compliant.

Orientation

An orientation will be included at the start of the review to introduce members of the surveillance and project teams and to discuss key EVMS-related forms and procedures. A brief overview of the nature of the projects will be beneficial to understand its unique language and goals and any unusual organizational relationships. The surveillance team will use the orientation period to explain the goals and scope of the review, the code of conduct, the disposition of finding/concerns, and the resolution process.

Data Gathering

The surveillance review will be conducted both through interviewing CAMs and project staff and verifying the integrity of objective project information. The initial number and scope of interviews will be defined after the project team has provided a dollarize Responsibility Assignment Matrix (RAM) no later than two weeks prior to the review date. At least one week prior to the review, the surveillance team will provide a list of CAM and project staff interviews to the project team. The surveillance team will request a number that is balanced between obtaining sufficient data for an opinion without overburdening the project. The project team will coordinate the scheduling of these interviews and provide an agenda to the surveillance team prior to the review. Based on surveillance results, additional interviews may be conducted.

Interviews will generally be conducted in a location close to the CAM's office or other facility which will facilitate ease of access to objective project information. During each interview, the surveillance team assesses the level of understanding and compliance with company policies, procedures, and processes, and monitors local practices to assess how well they comply with the intent of the EVM guidelines. The surveillance review will be thorough and structured. This involves developing a list of subject areas to facilitate scheduled interviews, ensuring that discussions address the complete EVMS process.

CAM interviews are a key component of EVMS surveillance because CAMs are the source of much of the EVMS information. CAM interviews are supplemented with data integrity tests performed independently. The ultimate objective is to determine the CAMs' use of the information derived from the EVMS as an effective management tool. All interviews will incorporate common attributes based on the National Defense Industrial Association (NDIA) Program Management Systems Committee (PMSC) Intent Guide, August 2012 edition. The purpose of the interview is to assess the CAMs' understanding and implementation of the following subjects:

1. Organization
 - a. Verify that the Work Breakdown Structure (WBS) contains (Guideline 1 Intent Guide)
 - i. All project work, including revisions for authorized changes.
 - ii. All contract line items and end items.
 - iii. All external reporting elements.
 - iv. Extended to the control account level.
 - v. Map to WBS dictionary.
 - b. Verify that a Work Authorization with scope, schedule, and budget exists at control account level (Guideline 2 Intent Guide). Verify that external Work Authorization with the identified Customer exists, at least, at the project level.
 - c. Verify that the Organizational Breakdown Structure (OBS) is documented (Guideline 3 Intent Guide).
 - d. Verify that the same WBS is linked between schedules, work authorization, and control account plans (Guideline 3 Intent Guide).
 - e. Verify that there is a process and organizations established to specifically manage and control indirect costs (Guideline 4 Intent Guide).
 - f. Verify that Responsibility Assignment Matrix or equivalent documents control accounts at appropriate level (Guideline 3 & 5 Intent Guide).
2. Planning, Scheduling and Budgeting
 - a. Ensure Project Schedule specifics (Guideline 6 Intent Guide)
 - i. WBS/OBS identifiers exist in the project schedule at activity level for summarization.
 - ii. Project schedule reflects entire WBS Dictionary.
 - iii. Critical target/contractual dates are identified in the project schedule.
 - iv. The project schedule identifies significant interdependencies.
 - v. Task durations are meaningful and relatively short.
 - vi. Longer tasks use objective earned value techniques.
 - vii. Resource estimates are reasonable and consistent with the schedule.
 - viii. The baseline is reasonable to achieve project requirements as demonstrated through schedule analysis techniques.
 - ix. The project schedule baseline is established.
 - x. The schedule provides current status and forecasts of completion dates for all discrete work.
 - xi. The project has a critical path.
 - b. Verify that objective completion criteria are used as basis to determine achievement (Guideline 7 Intent Guide).
 - c. Verify that CAM updates schedule status (Guideline 7 Intent Guide).

- d. Verify that the integration of scope, schedule and budget at the control account level (Guideline 8/9 Intent Guide).
 - e. Verify that the time-phased Performance Measurement Baseline (PMB) equals the work authorization and summarizes above the control account to the contract value (Guideline 8/9 Intent Guide).
 - f. Verify that control account budgets identify elements of cost including subcontractor (Guideline 9 Intent Guide).
 - g. Verify that management reserve and undistributed budget, if any, track to logs (Guideline 9/14 Intent Guide).
 - h. Verify that schedule and cost variances are collected at control accounts (Guideline 10 Intent Guide).
 - i. Verify the work packages are uniquely identified, have a budget, and have an earned value technique (Guideline 10 Intent Guide).
 - j. Verify that planning packages are not in the current month and reflect the manner in which the work will be performed (Guideline 10 Intent Guide).
 - k. Verify that the control account work packages and planning packages (if any) add to the control account total budget (Guideline 11 Intent Guide).
 - l. Identify level of effort designated work is appropriately categorized and identifiable (Guideline 12 Intent Guide).
 - m. Verify there is a documented process for managing indirect costs with an organizational structure identifying ownership, responsibility, authority levels, and distribution of indirect costs reflected in the program budgets at the appropriate level. (Guideline 13 Intent Guide).
 - n. Verify that management reserve and undistributed budget logs reconcile with last two months of Cost Performance Reports (CPR) (Guideline 14 Intent Guide).
 - o. Verify that baseline control logs reconcile with performance measurement baseline (Guideline 15 Intent Guide).
3. Accounting Considerations
 - a. Verify that Actual Cost of Work Performed (ACWP) in the CPR reconcile with books of record (Guideline 16 Intent Guide).
 - b. Verify that WBS and OBS summarize direct costs from one control account (Guideline 17/18 Intent Guide).
 - c. Verify that indirect costs are applied to the direct costs per Laboratory Policy (Guideline 19 Intent Guide).
 - d. Verify that unit cost are identified when needed (Guideline 20 Intent Guide).
 - Guideline 20 is not applicable to Jefferson Lab projects and will not be assessed during this review.
 - e. Verify that effective performance measurement is assessed on material no earlier than point of receipt and consistent with the method budgeted (Guideline 21 Intent Guide).
 - f. Verify that an established process exists for reporting subcontractor costs and material actual costs (Guideline 21 Intent Guide).
 4. Analysis and Management Reports
 - a. Verify that variance analysis is performed to the project thresholds as required (Guideline 22 Intent Guide).

- b. Verify that variance analysis contains cause, impacts, and corrective action as appropriate (Guideline 22/23 Intent Guide).
 - c. Verify that corrective actions are assessed and closed in a timely manner (Guideline 23/26 Intent Guide).
 - d. Identify budgeted and applied (or actual) indirect costs at the level and frequency needed by management for effective control, along with the reasons for any significant variances (Guideline 24 Intent Guide).
 - e. Verify that variance analysis as reported to the customer reconciles with the analysis at the control account level (Guideline 25 Intent Guide).
 - f. Verify Estimate to Complete (ETC)/Estimate at Complete (EAC) (Guideline 27 Intent Guide)
 - i. Verify that Comprehensive EACs are updated per requirements and take into account efficiencies.
 - ii. Verify that CAMs review achievability of control account EAC monthly.
 - iii. Verify that time-phased ETC reconciles with the EAC as reported externally.
 - iv. Verify that risks and opportunities are integrated into summary schedule and ETC resource plans.
5. Revisions and Data Maintenance
- a. Verify that work authorization plus any baseline change documentation equal current control account budget (Guideline 28/29 Intent Guide).
 - b. Trace last change proposal authorized. Verify schedule and cost integration at control account level and that the WBS is updated as appropriate (Guideline 28/29 Intent Guide).
 - c. Verify that change logs reconcile and contain justification (Guideline 28/29 Intent Guide).
 - d. Verify that retroactive changes are made only for correction of errors, accounting adjustments, effects of customer management directed changes to improve accuracy of data. If any have been made, verify that they are consistent with disclosed EVMS policy (Guideline 30 Intent Guide).
 - e. Verify, in at least one control account, that last month's changes as reported to the customer and this month's PMB reconcile to entries in the contractual baseline log (Guideline 30 Intent Guide).
 - f. Verify that negative earned value status, if any, has been adequately explained (Guideline 31/32 Intent Guide).
 - g. Verify that all baseline changes within a month reconcile to baseline control requests or the equivalent (Guideline 31/32 Intent Guide).

Additional interviewees may include the project director, the project controls manager, and line management.

Surveillance Results

Concerns Identified During the Surveillance

The surveillance team will gather data by reviewing documentation and interviewing members of the project team. A key component of surveillance is communicating timely, pertinent, and candid feedback. Surveillance team members and project personnel should seek clarification to fully understand questions asked, the data sought, and the responses provided. If, after fully understanding the information provided, a surveillance team member believes that there may be a question of compliance; the surveillance team will discuss the observation. If the surveillance team agrees that observation is still a question of compliance; the JSA project lead representative and pertinent members will be notified by the surveillance team of the concern no later than during initial out-brief discussions at the end of the day. This gives the project the opportunity to supply the surveillance team additional information to clarify the observation. This may result in the concern of the observation being resolved, or may result in a Recommendation, or could be a Finding of non-compliance. Findings and Recommendations are defined as:

Findings (Corrective Actions) - Findings fall into two broad categories: 1) non-compliance with the accepted EVMS description or procedures and 2) non-compliance with the EIA-748-B EVMS guidelines. Failure to resolve findings reduces confidence in the ability of project management to effectively use the EVMS process to achieve project goals and objectives of the stakeholders. A Corrective Action Plan is required for each finding.

Recommendations (Continuous Improvements) - The team members may recommend EVM implementation enhancements such as sharing of successful practices, tools, or other items that come to their attention. Recommendations, however, are not the same as findings and, therefore, need not be tracked for closure. However, should a recommendation have an asterisk (*), the team members have elected that this practice is critical enough to require tracking to closure.

Surveillance Final Out-Brief

The surveillance team will evaluate what they have observed and the information received during the interviews from the project team to come to a consensus if any Findings or Recommendations should be issued. Also, the surveillance team should identify if the Findings are systemic rather than isolated issues. Any Findings and Recommendations are to be presented by the surveillance team to the project team at the Final Out-Brief.

It is possible that the project team may disagree with the final surveillance results. When a finding is not due to a team's misunderstanding, the JSA EVMS Representative must be able to explain the impact of deviating from JSA policy and the benefits to the project and management team of non-compliance with the intent of the EVMS guidelines.

Final Report

The surveillance team will develop a preliminary report and give the JSA EVMS Representative the opportunity to give any additional feedback in a reasonable timeframe. The surveillance team will take in consideration of any feedback received when developing the final report. The final report will be issued by the surveillance team leader to the JSA EVMS Representative. Dates for report delivery will be agreed to by each team at the Final Out-brief.

Corrective Action Plan

The JSA EVMS Representative will develop a Corrective Action Plan (CAP) to address any Findings or Recommendations identified in the Final Report from the surveillance team. The CAP should include a schedule with realistic dates for when the corrective actions are to be completed. The project personnel will provide input regarding corrective actions, including estimated completion dates. The surveillance team will receive a copy of the CAP for information only; unless it is determined at the Final Out-brief that further actions are required by the surveillance team – such as a follow-on review.

Surveillance Review Close-out

The JSA EVMS Representative is to insure that CAP has been acceptably completed. The close-out of the CAP and any follow-up verification performed should be document and retained for future EVMS surveillances.