

WP 15-FC.03
Revision 0

EVMS Surveillance Plan

Cognizant Section: Project Analysis and Control

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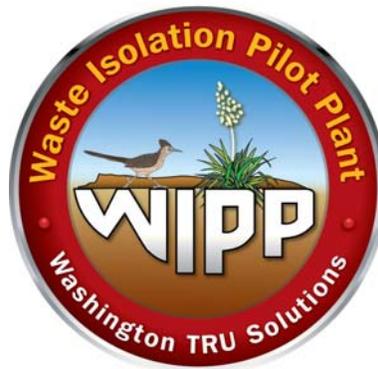


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ABBREVIATIONS/ACRONYMS

ANSI/EIA	American National Standards Institute/Electronic Industry Alliance
CAM	Control Account Managers
CV	cost variance
DCMA	Defense Contract Management Agency
EAC	Estimate at Completion
EVMS	earned value management system
LOE	level-of-effort
MCSD	Management Control System Description
OBS	Organizational Breakdown Structure
PAC	Project Analysis & Control
PMB	Performance Measurement Baseline
RAM	responsibility assignment matrix
SV	schedule variance
VAC	variance at completion
WBS	Work Breakdown Structure

1.0 PURPOSE/SCOPE

This plan defines the Washington TRU Solutions LLC (WTS) surveillance approach for its earned value management system (EVMS). A standardized approach to effective surveillance benefits all parties because it ensures a common understanding of expectations and encourages efficiencies through the use of a uniform process.

2.0 SURVEILLANCE OVERVIEW

Surveillance is the process of reviewing the health of the EVMS process. An effective surveillance process ensures that the key elements of the process are maintained over time.

The goal of EVMS surveillance is twofold. First, it ensures that company processes and procedures are being followed appropriately. Second, it confirms that company processes and procedures continue to satisfy the guidelines in the American National Standards Institute/Electronic Industry Alliance's (ANSI/EIA) 748 Standard for Earned Value Management Systems.

The surveillance process shall accomplish the following:

- Determine the effectiveness of current programs and processes in meeting customer and WTS management requirements and expectations.
- Identify problems for corrective action.
- Use results as input to the continuous improvement process.

3.0 SURVEILLANCE TEAM MEMBERSHIP

The surveillance team consists of a small number of experienced individuals, fully conversant with EVMS and the processes being reviewed, as selected by the team leader. The team leader is the WTS Internal Audit Manager or designee. The Project Analysis & Control (PAC) Manager is responsible for scheduling the surveillance.

4.0 PROCESS AND GUIDELINE SELECTION

All aspects of EVM are considered when selecting processes for surveillance. Comprehensive surveillance addresses the full content of the Management Control System Description (MCSD) and may rely on the results of other related reviews as well. Certain systems are subject to periodic reviews by internal and/or external organizations such as internal audit functions or Defense Contract Management Agency (DCMA) audits. These typically survey the procurement, accounting, and material systems. Even though several of the 32 ANSI/EIA 748 EVMS guidelines specifically address the capabilities of these systems, normally, this surveillance will not review them but will incorporate any pertinent findings resulting from these other reviews. System performance and prior assessments will be factored into which of the 32

guidelines will be assessed. Senior management may participate in this process and request that specific guidelines be emphasized due to customer concerns, known risks, or interest regarding a specific process application. In addition, relevant customer correspondence that may provide additional insight into the health of the system should be considered when selecting areas for review.

5.0 SURVEILLANCE PLAN IMPLEMENTATION

Surveillances will be done in accordance with the WTS MCSD and WP 15-GM1000, Management Assessments. Surveillances performed by the Carlsbad Field Office or other outside organizations may be substituted for a WTS internal surveillance.

The surveillance is structured to facilitate the exchange of information about the EVM process and WTS's approach to it. Surveillance will be approached as mentoring or problem solving sessions rather than an audit.

The surveillance review will be conducted both through interviewing CAMs and PAC personnel, and verifying the integrity of project information. Project information will be verified through the review of the following documents:

- EVMS reports
- EVM variance analyses
- Project schedules
- Management Control System Description and supporting implementation instructions
- Work Breakdown Structure (WBS), Organizational Breakdown Structure (OBS) and WBS dictionary
- Responsibility assignment matrix (RAM) identifying control account managers (CAMs)
- Supporting documentation for Estimate at Completion (EAC) preparation
- Baseline change log
- Contract deliverables
- Work authorization documents
- Findings from prior reviews

The team will provide adequate advanced notification of specific control accounts and processes that will be reviewed. It will also provide adequate notice to ensure that

access to documentation and resources will not interfere with on-going work. The team will not require extensive presentations or preparations, and it will review data provided in the projects native formats.

Personnel should be prepared to demonstrate through objective program information that they are complying with applicable procedures. The WTS PAC department should coordinate with the surveillance team to ensure that control account managers responsible for areas of specific interest are available and cause the least possible disruption of ongoing efforts.

The surveillance may be as simple as conducting interviews with PAC staff and sampling a few CAMs, or it may be more detailed, exploring identified problem areas. A CAM that has demonstrated continued compliance through earlier surveillance might be a candidate for less intensive reviews. During each interview, the surveillance team assesses the level of understanding and compliance with procedures and processes, and monitor practices to assess how well they comply with the intent of the EVM guidelines. Attached is a checklist of typical outputs that can be used to verify compliance with a given guideline.

6.0 SURVEILLANCE RESULTS

A key component of surveillance is communicating timely, pertinent, and candid feedback. The team should clarify any findings that might be a result of misunderstandings. Additional data and/or communication may be required to resolve the issue. Misunderstandings that are not resolved become findings.

Findings fall into two broad categories: (1) compliance with the accepted EVMS description as documented in the MCSD, and (2) compliance with EVMS guidelines. Findings are presented by the team leader to the Manager of PAC for possible clarification or correction as soon as practical. PAC personnel will prepare a corrective action plan including corrective actions and completion dates. Corrective actions will be tracked in the commitment tracking system. The review is considered complete when the team leader concurs that all findings have been satisfactorily closed.

Attachment 1 - Earned Value Management System Surveillance Checklist

Earned Value Management System Surveillance Checklist

The checklist below complies with the Earned Value Management System Guidelines (ANSI/EIA-748-1998) for applying earned value.

Guideline #1 - Define the authorized work elements for the program. A work breakdown structure (WBS), tailored for effective internal management control, is commonly used in this process.

- Is only one WBS used and does it contain all project work including revisions for authorized changes and modifications?
- Are all WBS elements through level 4 defined in the WBS Dictionary?

Objective evidence may be found in these typical outputs:

- WBS
- WBS dictionary

Guideline #2 - Identify the program organizational structure including the major subcontractors responsible for accomplishing the authorized work, and define the organizational elements in which work will be planned and controlled.

- Is all work identified in the WBS assigned to a specific organization?

Objective evidence may be found in these typical outputs:

- Organization breakdown structure (OBS)
- Responsibility Assignment Matrix (OBS intersection with the WBS)

Guideline #3 - Provide for the integration of the company's planning, scheduling, budgeting, work authorization and cost accumulation processes with each other, and as appropriate, the program WBS and the program organizational structure.

- Is a single management control system with a common information database which flows through the WBS and contractor's organization in use?
- Are the following processes and the WBS and OBS integrated?
 - Planning
 - Scheduling
 - Budgeting
 - Work authorization
 - Cost accumulation

Objective evidence may be found in these typical outputs:

- Master, intermediate, and detail level schedules
- Control account plans

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- Performance reports by WBS and OBS
- Responsibility assignment matrix (RAM)
- Statement of work
- Work authorization
- WBS and OBS

Guideline #4 - Identify the company organization or function responsible for controlling overhead (indirect costs).

- Is overhead applied in accordance with the disclosure statement?
- Does the disclosure statement define how overhead resources are assigned, budgets are established, and expense is controlled?
- Does the disclosure statement define who is responsible within the organization for establishing overhead budgets?

Objective evidence may be found in these typical outputs:

- Cost accounting standards (CAS) disclosure statement
- WTS Accounting Manual

Guideline #5 - Provide for integration of the program WBS and the program organizational structure in a manner that permits cost and schedule performance measurement by elements of either or both structures as needed.

- Can cost and schedule performance be measured by WBS and OBS?
- Is data consistent between the two structures?

Objective evidence may be found in these typical outputs:

- Control account plans (CAPs).
- Cost performance reports
- Responsibility assignment matrix (RAM)

Guideline #6 - Schedule the authorized work in a manner which describes the sequence of work and identifies significant task interdependencies required to meet the requirements of the program.

- Is an integrated network scheduling system in use?
- Does the schedule reflect all the time phased discrete work to be accomplished that is traceable to the WBS and the fiscal year execution plan?
- Are critical target dates, project milestones, contractual events, accomplishment criteria, and project decision points identified and being used to plan, status, and monitor progress of the work?

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- Is the critical path method of scheduling used and does the schedule describe the sequence of work through use of the significant interdependencies that are indicative of the actual way the work is accomplished and link key detail tasks with summary activities and milestones?
- Is the baseline schedule the basis for measuring performance?
- Does the schedule provide current status and forecasts of completion dates for all discrete authorized work?
- Can the schedule network relationships support the development of a critical path for projects?

Objective evidence may be found in these typical outputs:

- Integrated schedules including master, intermediate, and detailed schedules.

Guideline #7 - Identify physical products, milestones, technical performance goals, or other indicators that will be used to measure progress.

- Are critical target dates, project milestones, contractual events, accomplishment criteria, and project decision points identified and being used to plan, status, and monitor progress of the work?
- Are interim milestones and lower tier tasks used as indicators of progress against which progress is monitored by the control account manager?

Objective evidence may be found in these typical outputs:

- Integrated schedules including master, intermediate (if any), and detailed schedules.

Guideline #8 - Establish and maintain a time-phased budget baseline, at the control account level, against which program performance can be measured.

- Does the Performance Measurement Baseline (PMB) reflect the work scope and is it time phased with the integrated schedule?
- Does the PMB reflect the budget value for the work scope in control accounts?
- Are indirect costs included in the PMB?

Objective evidence may be found in these typical outputs:

- Control account plans
- PMB
- Work authorization document

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Guideline #9 - Establish budgets for authorized work with identification of significant cost elements (labor, material, etc.) as needed for internal management and for control of subcontractors.

- Are budgets for each control account reconcilable to the budget values shown on the latest work authorization documents?
- Do cost account/work package plans identify budgets by element of cost (i.e., direct labor dollars/hours, material and/or subcontract dollars, and other direct costs)?
- Do functional (OBS) cost reports represent the complete budget?

Objective evidence may be found in these typical outputs:

- Control account plans
- Work authorization documents
- PMB
- Resource schedules

Guideline #10 - To the extent it is practical to identify the authorized work in discrete work packages, establish budgets for this work in terms of dollars, hours, or other measurable units.

- Has the authorized work been allocated, to the extent it is practical, to discrete work packages?
- Has a single control account manager been given responsibility for completion of identified work packages?
- Have work package budgets been established for this work in terms of dollars, hours, or other measurable units?

Objective evidence may be found in these typical outputs:

- Control account plans divided into work packages and planning packages
- Work authorization documents
- Responsibility Assignment Matrix

Guideline #11 - Provide that the sum of all work package budgets plus planning package budgets within a control account equals the control account budget.

- For those cost accounts that have work packages, does the sum of all work package budgets and planning package budgets equal the total budget assigned to the cost account?

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Objective evidence may be found in these typical outputs:

- Control account plan total budget
- Work package budget
- Planning package budget

Guideline #12 - Identify and control level-of-effort (LOE) activity by time-phased budgets established for this purpose. Only that effort which is not measurable or for which measurement is impractical may be classified as LOE.

- Are LOE budgets substantiated and planned as direct labor, material/subcontract, or other direct costs?
- Does the earned value for LOE work packages equal the time phased budget (planned value)?

Objective evidence may be found in these typical outputs:

- Control account plans identify LOE work packages and budgets
- Cost performance reports

Guideline #13 - Establish overhead budgets for each significant organizational component that is identified as indirect costs. Reflect in the program budgets, at the appropriate level, the amounts in overhead pools that are planned to be allocated to the program as indirect costs.

- Is the contractor's overhead policy generally referenced in the contractor's system description?
- Does the CAS disclosure statement define the content and processes of the contractor's management of indirect costs and generally include a definition of indirect expenses and overhead pools?

Objective evidence may be found in these typical outputs:

- Contractor's system description
- CAS disclosure statement

Guideline #14 - Identify management reserves and undistributed budget.

- Is management reserve identified?
- Is management reserve reported separately from the PMB?
- Are monthly performance reports consistent with various logs?

Objective evidence may be found in these typical outputs:

- Project control logs (Budget Baseline Status Report)
- Performance reports

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Guideline #15 - Provide that the program target cost goal is reconciled with the sum of all internal program budgets and management reserves.

- Does the near-term baseline reconcile with the sum of all control account budgets and nonperformance measurement baseline accounts?

Objective evidence may be found in these typical outputs:

- Budget Baseline Status Report
- Cost performance reports
- Change control logs

Guideline #16 - Record direct costs in a manner consistent with the budgets in a formal system controlled by the general books of account.

- Do actual costs reported in the performance reports agree with the costs recorded in the general books of account (accounting system)?
- Are direct costs accumulated in the contractor's accounting system in a manner consistent with the way the related work is planned and budgeted?

Objective evidence may be found in these typical outputs:

- Reconciliation of project costs with the accounting system
- Actual costs are collected at the control account level

Guideline #17 - When a WBS is used; summarize direct costs from control accounts into the WBS without allocation of a single control account to two or more WBS elements.

- Do costs collected at the cost account level roll up through the WBS structure without being divided at any level among two or more higher level elements?

Objective evidence may be found in these typical outputs:

- WBS structure (roll-up scheme)
- Monthly performance report

Guideline #18 - Summarize direct costs from the control accounts into the contractor's organizational elements without allocation of a single control account to two or more organizational elements.

- Do costs collected at the cost account level roll up through the OBS structure to the top level without being divided at any level among two or more higher level elements?

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Objective evidence may be found in these typical outputs:

- Responsibility assignment matrix
- Organization charts
- Functional cost performance report

Guideline #19 - Record all indirect costs which will be allocated to the contract.

- Are indirect costs recorded in the accounting system?
- Does the CAS disclosure statement define the content and processes of the contractor's management of indirect costs and generally include a definition of indirect expenses and overhead pools?

Objective evidence may be found in these typical outputs:

- Cost accounting standards disclosure statement

Guideline #20 - Identify unit costs, equivalent unit costs, or lot costs when needed.

- Not Applicable

Guideline #21 - For EVMS, the material accounting system will provide for:

- Accurate cost accumulation and assignment of costs to cost accounts in a manner consistent with the budgets.
- Cost performance measurement at the point in time most suitable for the category of material involved, but no earlier than the time of progress payments or actual receipt of material.
- Are material costs charged to cost accounts?
- Do variance reports show cost/schedule variances related to material?

Objective evidence may be found in these typical outputs:

- Cost performance reports
- Variance analysis reports

Guideline #22 - At least on a monthly basis, generate the following information at the control account and other levels as necessary for management control using actual cost data from, or reconcilable with, the accounting system:

- Comparison of the amount of planned budget and the amount of budget earned for work accomplished. This comparison provides the schedule variance.

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- Comparison of the amount of budget earned with the actual (applied where appropriate) direct costs for the same work. This comparison provides the cost variance.
- Does the system provide the following information?
 - Budget, earned value, and actual costs (reconcilable with accounting system)
 - Cost variance (CV)
 - Schedule variance (SV)
 - Variance at completion (VAC)
 - Variance analysis narrative (root causes, impacts at completion, and management actions)
 - Summarized performance measurement data from control account (minimum) through WBS/OBS hierarchy to the program level

Objective evidence may be found in these typical outputs:

- Monthly performance report (cost variance, schedule variance, and VAC analysis)
- Variance analysis data (root causes, impacts at completion, and management actions)

Guideline #23 - Identify, at least monthly, the significant differences between both planned and actual schedule performance and planned and actual cost performance, and provide the reasons for the variances in the detail needed by program management.

- Are schedule and cost variances identified?
- Are cause and impact of the variances identified?
- Are corrective actions assessed in a timely manner?
- Is a formal scheduling system used to determine the status of specific activities and milestones?

Objective evidence may be found in these typical outputs:

- Variance analysis reports
- Monthly performance reports
- Project schedules and schedule analysis outputs

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Guideline #24 - 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.

- Are variances between indirect budgets and costs evaluated?
- Are reasons for variances explained?

Objective evidence may be found in these typical outputs:

- Variance analysis reports
- Monthly performance reports
- Accounting Manual

Guideline #25 - Summarize the data elements and associated variances through the program organization and/or WBS to support management needs and any customer reporting specified in the contract.

- Does the EVMS accurately summarize budgets, earned value, actual costs and the associated variances up through the WBS and the contractor's organization?
- Is the same data used for internal reporting and for reporting to CBFO?

Objective evidence may be found in these typical outputs:

- Variance analyses
- Schedule and cost performance reports

Guideline #26 - Implement managerial actions taken as a result of earned value information.

- Is there any follow-up of the implementation to see if what was planned actually got implemented?
- Are the corrective actions reasonable?

Objective evidence may be found in these typical outputs:

- Variance analyses

Guideline #27 - Develop revised estimates of cost at completion based on performance to date, commitment values for material, and estimates of future conditions. Compare this information with the performance measurement baseline to identify variances at completion important to supplier management and any applicable customer reporting requirements including statements of funding requirements.

- Are assessments of the effort required for completing all work packages and planning packages performed on a monthly basis?

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- Has the Control Account Manager updated the EAC to reflect changes in budget and/or integrated master schedule when there is material significance?
- Are EACs generated at the work package and planning package level and then summarized by WBS and OBS?
- Are EAC results communicated to the customer in internal reports?

Objective evidence may be found in these typical outputs:

- Cost performance reports

Guideline #28 - Incorporate authorized changes in a timely manner, recording the effects of such changes in budgets and schedules. In the directed effort prior to negotiation of a change, base such revisions on the amount estimated and budgeted to the program organizations.

- Are authorized changes incorporated in the PMB in an expeditious manner?
- Does the contractor's change request form provide the rationale/justification, work scope additions or deletions by WBS, dollars, and changes to schedules?

Objective evidence may be found in these typical outputs:

- Change control log
- Programmatic Change Requests
- Control account/work package/planning package plans
- Master schedules, intermediate schedules (if any), and detailed schedules

Guideline #29 - Reconcile current budgets to prior budgets in terms of changes to the authorized work and internal replanning in the detail needed by management for effective control.

- Are budget revisions traceable to change authorization documents?
- Does the current budget reflect current levels of authorized work?

Objective evidence may be found in these typical outputs:

- Change documents
- Change control log
- Budget baseline status report

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Guideline #30 - Control retroactive changes to records pertaining to work performed that would change previously reported amounts for actual costs, earned value, or budgets. Adjustments should be made only for correction of errors, routine accounting adjustments, effects of customer or management directed changes, or to improve the baseline integrity and accuracy of performance measurement data.

- Have retroactive changes, other than adjustments made for correction of errors and routine accounting adjustments, been made to the baseline?

Objective evidence may be found in these typical outputs:

- Change control logs
- Change request documentation

Guideline #31 - Prevent revisions to the program budget except for authorized changes.

- Are all changes approved and implemented per the baseline change control process?

Objective evidence may be found in these typical outputs:

- Change control logs
- Change request documentation

Guideline #32 - Document changes to the PMB.

- Do change control logs reflect changes from the baseline?
- Are all changes to the baseline documented?

Objective evidence may be found in these typical outputs:

- Change control logs
- Budget baseline status report