National Defense Industrial Association
Integrated Program Management Division

Surveillance Guide

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List of Abbreviations and Acronyms

The abbreviations and acronyms listed here are used in the main body of the guide. Additional abbreviations and acronyms are used in the appendices and are spelled out.

BAC	Budget at Completion
CAM	Control Account Manager
CAP	Corrective Action Plan
CER	Compliance Evaluation Review
CFA	Cognizant Federal Agency
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DoD	Department of Defense
EIA	Electronic Industries Alliance
EVM	Earned Value Management
EVMS	Earned Value Management System
IBR	Integrated Baseline Review
ISR	Internal Surveillance Review
IOT	Inter-organizational Transfers
IPMD	Integrated Program Management Division
IPT	Integrated Product Team
JSR	Joint Surveillance Review
NDIA	National Defense Industrial Association
PMB	Performance Measurement Baseline
RCA	Root Cause Analysis
WBS	Work Breakdown Structure

1 Introduction

1.1 Overview of Surveillance

Surveillance is the continuous process of reviewing the health of the Earned Value Management System (EVMS) as applied to one or more projects. The purpose of surveillance is to ensure the EVMS is effectively used to manage cost, schedule, and technical performance, and that the performance data generated are accurate and reliable. An effective surveillance process ensures the key elements of the system are maintained over time and on subsequent applications.

The goals of surveillance are to:

1. Ensure that the organization's EVMS has been effectively implemented in accordance with the organization's EVMS documentation.

2. Ensure the EVMS provides timely, accurate, and reliable integrated project management information for internal and customer use.

3. Assess the project's commitment and ability to maintain and use its EVMS as an integral part of its project management process.

Surveillance Reviews generally start once the Performance Measurement Baseline (PMB) is established on a newly authorized project and extend through the duration of the project.

Surveillance Reviews should not be confused with a Compliance Evaluation Review (CER), which shares the above three goals with Surveillance Reviews and includes the unique goal of ensuring the EVMS is in compliance with the intent of the EIA-748 EVMS Standard's 32 Guidelines. During Surveillance Reviews, organizations are not expected to prove compliance with the intent of the 32 Guidelines, unless there are systemic issues or material reasons to question the compliance.

Surveillance Reviews should also not be confused with an Integrated Baseline Review (IBR). An IBR is a specific programmatic event focused on project risk and the adequacy and executability of the project's PMB.

It is acceptable and encouraged that observations and findings from one type of review be shared with team members of the other review types to provide insight into different areas, so the overall quality of the PMB and project management practices can be improved.

1.2 Definitions

CER — A Compliance Evaluation Review (CER) is the formal process used to verify that the proposed EVMS is in compliance with the 32 Guidelines, the EVMS has been properly implemented by the EVMS User in accordance with the requirements of the contract and EVMS Owner's policies, and the EVMS produces reliable, timely, and actionable contract performance data. Refer to the NDIA IPMD Earned Value Management System Acceptance Guide for further information.

Customer — The government, commercial organization, or other entity for which one or more projects are being executed. Typically, the external customer is the Government or a prime contractor.

EVM	Earned Value Management (EVM) is a project management methodology, which integrates a project's technical scope, schedule, and resources with project risk in a baseline plan, against which progress is objectively measured to provide metrics indicative of progress and performance trends useful for management decision-making.
EVMS	The EVM System (EVMS) is the integrated set of policies, processes, procedures, systems, practices, and tools for managing projects using integrated program management, which meets the intent of the 32 Guidelines.
EVMS Guidelines	The 32 guidelines contained in EIA-748 EVMS Standard (current version).
EVMS Owner	The organization or party responsible for the design and maintenance of an EVMS compliant with the EIA-748 EVMS Standard. In addition, the EVMS Owner is responsible for establishing policies regarding the implementation and use of the EVMS.
EVMS User	The organization or party responsible for the implementation and use of the EVMS at the contract, program, or project level. In some cases, the EVMS Owner and EVMS User may be one in the same.
Organization	A customer or supplier entity, including agencies responsible for management of internal projects using EVMS, prime contractors, subcontractors and Inter-organizational Transfers (IOTs), with EVMS ownership and oversight responsibility for one or more sites.
PMB	The Performance Measurement Baseline (PMB) is the scope, schedule, and budget baseline subject to documented change control and against which project performance is measured.
Program	A major, independent part of a capital asset or system that involves a planned effort to achieve an outcome, the progress toward which is discretely measurable. A program may be comprised of multiple projects, delivery orders, task orders, or other recognized terms indicating a bilateral agreement between contracting parties.
Project	A project has defined technical scope, schedule, and budget to achieve a specific result. There may be multiple projects within a program. Note that often the terms project and program are used interchangeably.
Supplier	An entity, either internal or external to an organization, from which goods or services are required to complete a project. Suppliers include prime contractors, subcontractors or sub-tier contractors, as well as Inter-organizational Transfers (IOTs), which are responsible for project execution using EVMS.
Surveillance Plan	The plan that identifies the surveillance related activities to be conducted within the organization and by the Surveillance Review Teams.

Surveillance Procedure	This is an optional product documenting the organization's commitment to internal surveillance, if not already contained in the EVMS Policy or EVMS documentation. The Procedure may also include other relevant surveillance related activities, such as how the organization engages in external reviews.
Surveillance Program	A surveillance program comprises an organization's people, practices, plan, tools, and training necessary to execute internal and subcontractor surveillance, independent of customer surveillance activities or requirements, for the purpose of ensuring that its projects are effectively managed to meet their cost, schedule, and technical objectives.
Surveillance Review	The process of reviewing an individual project's implementation and use of the organization's EVMS. Internal Surveillance Reviews may be conducted by a project or an organization. Joint Surveillance Reviews are conducted jointly by the customer and supplier.
System Surveillance	Cross-project EVMS surveillance is used to assess an organization's capability to consistently implement and use its EVMS on all projects with EVMS requirements. Cross-project EVMS surveillance is also known as System Surveillance, because it can identify findings common to multiple projects, which are indicative of systemic problems. Therefore, System Surveillance comprises a summarization of multi-project surveillance results rather than a separate system level Surveillance Review.

1.3 Purpose of the Guide

This document provides surveillance guidance and characteristics of successful EVMS Surveillance Programs. It is intended to assist suppliers in the planning and execution of both internal and subcontractor surveillance, as well as to provide guidance for customers and organizations with EVMS oversight responsibility. Suppliers planning their Surveillance Programs should refer to the latest customer surveillance guidance for information on how the customer plans and conducts EVMS Surveillance Reviews to enable better coordination of their internal, subcontractor, and joint surveillance planning and execution.

A standard approach to effective surveillance benefits all parties. It ensures a common understanding of expectations, encourages efficiencies through the use of a uniform process, and gives consistent guidance to organizations responsible for EVMS surveillance. This NDIA IPMD Surveillance Guide is recommended for use by all stakeholders involved in EVMS surveillance.

1.4 Surveillance Responsibility

The organization's commitment to conduct internal surveillance and the identification of the responsible organization or party is referenced in the organization's EVMS policy, the EVMS documentation, or in a supplemental EVMS Surveillance Procedure.

If the EVMS Owner is responsible for the Surveillance Program, then the EVMS Owner must work diligently to balance the distinct responsibilities of maintaining the EVMS and in objectively executing the Surveillance Program. Furthermore, if the EVMS Owner also serves as the EVMS User on a project, then a person independent of the project should be engaged to conduct the Surveillance Review on that specific project. Similarly, if an organization or party,

separate from the EVMS Owner, is responsible for executing the Surveillance Program and also served as the EVMS User on a project, then a person independent of the project should be engaged to conduct the Surveillance Review.

The independence of the organization or party responsible for the Surveillance Program is of the paramount importance. Examples of instances where this independence may be compromised include:

- Customer input drives the outcome of internal Surveillance Reviews.

- Management provides incentives or punishments based on the review results.

- EVMS Owner conducts Surveillance Reviews based on "subjective" views of the intent of the EVMS documentation (an interpretation bias) versus the objective comparison of the documented EVMS as compared to the project's executed practices.

- The EVMS User or project team members participate on the Review Team evaluating the same project they are affiliated with, thus creating a conflict of interest.

For simplicity of subsequent references, this guide refers to the entity executing the Surveillance Program as the EVMS Owner. If the Surveillance Program is executed by another entity, it is expected the entity will provide the relevant insight, status, and results on the Surveillance Program to the EVMS Owner to maintain the organization's EVMS.

2 Organizational Surveillance Activities

The organizational surveillance activities include establishing and maintaining a Surveillance Plan, defining the review scope, selecting projects for reviews, establishing the review team, overseeing reviews, and learning from the results of the reviews.

2.1 Establish and Maintain the Organization's Surveillance Plan

The EVMS Owner establishes and maintains the organization's Surveillance Plan. The Surveillance Plan provides the specific activities the organization and the Surveillance Review Teams execute as part of the organization's Surveillance Program. An example framework for the Surveillance Plan is contained in Appendix A. The content of the Surveillance Plan reflects the practices that the organization has adopted from industry such as this guide and other source material. The expectation is that an organization adopts, scales, or tailors the practices as needed to support its Surveillance Program.

2.2 Define Review Scope and Select Projects for Surveillance Reviews

2.2.1 Define Review Scope

Surveillance Reviews are conducted on projects to ensure adherence to the organization's EVMS. Organizations may review a project against the entire EVMS or a subset of the EVMS. The scope of the EVMS included in a specific review is documented in advance. Organizations may also take different approaches as to how they execute the reviews. For example, some organizations include artifact data trace reviews and formal deliverable reviews in addition to the Surveillance Reviews as part of their Surveillance Program and include them in their Surveillance Plan.

The review scope and projects selected are typically time phased (e.g., quarterly, annual cycle, three year cycle) with the goal of reviewing projects against the EVMS over the course of a specific time period. However, the frequency of reviews and the defined scope or selected projects may vary based on new project awards, project changes, EVMS practice updates, other reviews, and systemic findings during other reviews, or new material information.

2.2.2 Select Projects

The project selection process includes selecting projects, defining the frequency of the reviews, and the EVMS scope to be covered in each review. The project selection process is initiated by reviewing a list of potential candidate projects and considering the planned time phasing of the EVMS scope selected for review. Potential candidate projects may be determined by an additional down-selection process which identifies those projects with the greatest risks related to effective project management through the use of an EVMS. This provides the opportunity to select and focus on the projects that would benefit most from an EVMS Surveillance Review. Table A includes sample factors considered in making the project selection.

Table A: Sample Factors in Selecting Projects

Factor	Description
Contract value	The contract value is viewed in relative terms for the organization. The higher the dollar value of the contract, the more likely the project is selected for a review.

Factor	Description
Type and phase of contract	The type and phase of a program may provide good indications of risk. Development and notable customer contracts (e.g., DoD ACAT I/ACAT II programs) are typically larger with more discrete effort using EVM scheduling and work/budget practices whereas production and operations and maintenance contracts are considered lower in risk due to the repetitive or level of effort nature of the project. High dollar Firm Fixed Price (FFP) contracts primarily hold significant risks internally and may contain EVMS clauses containing reporting requirements on schedule performance. The type of program may be determined by the phase of the contract effort, for example, when transitioning from Development to Production. Development programs benefit from work definition, budget, and authorization practice reviews, whereas Production programs may lend themselves more readily for assessment of manufacturing scheduling and material management and control.
Value and nature of remaining work	The higher the dollar value of the remaining work, the more likely the project is selected for a review. The technical content of remaining work is also reviewed to determine the level of performance risks on the contract.
Experience of organization project office	The project office's experience with implementing and using EVM processes may influence the selection of projects for surveillance. The lack of experience with EVM in the project office's personnel might allow project baseline planning to be accomplished without following documented procedures, thereby increasing the risk of poor applications with unreliable project data. Conversely, the expectation for those project offices that are more experienced with EVM would be that appropriate EVM project applications and data use would produce better data integrity and project reporting, thus lowering risk.
Internal Surveillance	Some project teams engage in internal surveillance. In these instances, the organization may take into account the frequency, quality, and confidence it has in the project team's internal surveillance when determining the frequency and selection of the project for surveillance.
Current or cumulative cost or schedule variances or variances at completion	Projects experiencing difficulty in maintaining cost or schedule control are more likely to be selected for a review. Variances may be indicators of possible issues and may be further investigated within work/budget, scheduling, managerial analysis, or change management practices.
Baseline volatility, resets or changes	The frequency of baseline resets or changes, especially when accompanied by elimination of cumulative cost or schedule variances, may be indicative of a number of situations: poor original baseline planning, a change in work approach, make or buy determinations, or significant schedule/technical changes. Projects reflecting a significant number of baseline resets are more likely to be selected for a review.

Factor	Description
Schedule risk analysis confidence level	The project schedule is a foundational element of the EVMS. The lower the confidence in the quality, analysis, executability of the schedule as well as questionable outcomes resulting from schedule risk assessments increases the likelihood of selecting the project for review.
Risk and opportunity assessment	The management and maintenance of the risk and opportunity management process needs to be considered, to include: (1) the quality of the risk and opportunity assessment and the related risk and opportunity handling plans; (2) the extent of risk and opportunity management integration with EVMS, as well as adequate management reserves to address risks and opportunities not included in the PMB. Other factors to consider are the confidence level of the PMB and the project's risk and opportunity trends.
Findings or concerns from prior reviews	Past results may indicate the need for adjusting the frequency of the reviews.
Customer or management interest	The degree of customer or management concerns or interest in the project may be a factor influencing the selection process.
Subcontractor considerations	The inclusion of subcontractors on the project can influence the selection process. Example considerations: the number of subcontractors, the degree of experience with EVMS, EVMS contractual requirements (e.g., formal EVMS flow-down, integrating the subcontractor into the Prime's EVMS, reporting only).

Appendix B provides an example of an approach to quantify a related set of factors using the results of the project's score as an element in the selection process. This example has a list of predefined risk factors, each with a weighting, and three potential selections with a score of 1, 2 or 3. Based the project details, the appropriate selection for each risk factor is made. The resulting score is then multiplied by the weighting for that risk factor. The higher the score, the more associated risk. The individual weighted scores are summed for a total risk based score for the project to aid in objectively evaluating projects in the selection process.

2.3 Establish the Project Surveillance Review Team

The EVMS Owner establishes a qualified Review Team and Team Leader. A Review Team can be a single person or multiple people depending on the review. The EVMS Owner may also serve on a Review Team or as the Team Leader.

2.3.1 Attributes of Review Team Members

Members of an effective Review Team should have the following general attributes:

- Independent of the project and management chain of the project under surveillance
- Multi-disciplinary knowledge and experience (e.g., project control, scheduling, risk management, specialized technical areas, understanding the integration of these practices)
- Practical experience using EVMS
- Knowledge and understanding of EVM

- Knowledge of the EVMS and supporting toolsets
- Knowledge of assessment techniques (e.g., examining, questioning, evaluating, reporting)
- Effective team skills

Specific guidelines for selecting the Team Leader are:

- Understanding and experience in the development, implementation, and maintenance of an EVMS compliant with the EIA-748 EVMS Standard
- Experience using assessment techniques and documents (e.g., examining, questioning, evaluating, and reporting)
- Knowledge and understanding of the review process
- Previous experience as a member of Surveillance Review Teams

Representatives from other projects or locations may be invited to observe the Surveillance Review. Individuals may also be included from the project under surveillance to facilitate communication and early problem resolution. However, they may not actively participate or be assigned to any of the roles and responsibilities of the Review Team.

The role of customers and subcontractors on the project is determined by the EVMS Owner when establishing the Review Team. If the customer and EVMS Owner execute the review as a Joint Surveillance Review (JSR), then both parties would be participants of the review. Subcontractors may also be invited to participate or be observers on the Review Team. For example, if the EVMS requirement is formally flowed down to the subcontractor, the prime should consider executing JSRs with the subcontractor's EVMS Owner instead of conducting separate reviews. Additionally, if the prime serves in a mentor-protégé relationship with a subcontractor, the prime may invite employees of the subcontractor to observe the Surveillance Review as a way to improve the subcontractor's EVMS and experience.

2.3.2 Training of Review Team

The EVMS Owner is responsible for providing Surveillance Review training to Review Team members so they understand their roles as defined in the organization's Surveillance Plan.

2.4 Oversee Surveillance Reviews

Regardless of the degree of involvement in a specific review, the EVMS Owner still maintains oversight responsibility for the reviews.

This oversight includes:

- Engaging with the project's stakeholders (e.g., project manager, line management) to maintain an open dialog during the Surveillance Review process.
- Reviewing draft Surveillance Review reports, including documented deficiencies, and providing feedback to the Review Team Leader.
- Reviewing the project's Surveillance Review deficiencies root cause analyses and proposed corrective action plans (CAPs) to correct the deficiencies as well as to agree upon the path forward.
- Validating the completion of corrective actions.

2.5 Learn from Results of Surveillance Reviews

The EVMS Owner provides the Review Team Lead authorization to finalize and distribute the Surveillance Review Report. The EVMS Owner has the responsibility for monitoring the project's progress in defining adequate corrective action plans (CAPs) and to validate the

closure of actions on behalf of the organization. The EVMS Owner examines the Surveillance Review Report observations to identify areas to improve the EVMS documentation, Surveillance Program, or other supporting practices. The EVMS Owner is responsible for ensuring the completion of any corrective actions outside the control of a single project. These actions may correct deficiencies that are systemic in nature, across multiple projects, or owned by an entity outside of the project (e.g., training department for improved training, finance for rate issues).

3   Project Surveillance Review Activities

The project Surveillance Review activities include planning the review, assigning Review Team responsibilities, scheduling the review, planning for subcontractor surveillance, issuing review notification, analyzing the artifacts, conducting the review, issuing the review report, and conducting root cause analysis and implementing corrective actions.

3.1   Plan for the Review

3.1.1 Assign Review Team Responsibilities

The Review Team Leader provides the Review Team the EVMS documentation to review and assign review responsibilities. Team members may be responsible for leading the review of specific EVMS scope or project artifacts.

3.1.2 Schedule the Project Surveillance Review

Effective surveillance is planned well in advance to ensure it is conducted at an appropriate time in the project's cycle to minimize intrusion and disruption. For example, it should not be planned during planning package rollouts, major project milestones, or incorporation of significant contract changes. Surveillance schedules also need to be coordinated with all parties to ensure appropriate participation.

The Team Leader coordinates with the selected project's Project Manager to schedule the Surveillance Review.

3.1.3 Plan for Subcontractor Surveillance

The Review Team needs to consider the role of subcontractors and any implications for the Surveillance Review. Table B includes factors related to subcontractors to be considered while planning the review.

Table B: Factors to Consider Related to Subcontractors

Factor	Considerations
Formal flow-down of EVMS requirements to subcontractors	The prime contractor is responsible for providing oversight, which includes Surveillance Reviews, of the subcontractors. The Review Team works with the prime's Project Manager to execute this responsibility.
Integration of subcontractors into the prime contractor's EVMS	The Review Team will need to consider the representation of subcontractor data and personnel in the Surveillance Review. For example, to determine if a subcontractor employee who serves as a CAM is to be interviewed.
Integration of subcontractors EVMS reporting data into the prime's reporting	The Review Team needs to analyze the representation of the subcontractor data in the prime's artifacts and reports to ensure it is done in accordance with the EVMS documentation.

Prime contractors are responsible for performing surveillance on all subcontractors with contractual flow down of EVMS. Subcontractor surveillance follows the same practices involved in internal surveillance, but with consideration to the additional layer of ownership. The prime contractor's CAMs responsible for subcontractor oversight have the responsibility for using and validating the subcontract data while the subcontractor owns the data and the EVMS producing it. If, due to potential competitive issues, the subcontractor refuses the prime access to its proprietary or competitively sensitive data needed for EVMS surveillance, the prime may request assistance through its own Cognizant Federal Agency (CFA). The CFA then forwards the request to the subcontractor's local governing agency to conduct the surveillance of the areas of concern and report the results for use by the prime.

3.1.4 Notify the Project of the Review

Written notification of the scheduled review is provided by the Review Team Leader to the selected project's Project Manager. The written notification includes the following:

- Date, time, and location of the review
- Identification of any room or logistical items needed (e.g., size of room, number of rooms, projector, whiteboard, internet access, printing ability)
- Defined list of project information and artifacts to be delivered in advance
- Due dates for project artifacts
- Specific project team members to participate in the review
- Information on the approach for the review and the Review Team members
- Agenda for the review

A list of example project information and artifacts that might be requested in advance of the review is available in Appendix C. Care should be taken to request only the information and artifacts needed for the scope of the specific Surveillance Review.

The notification needs to be clear as to when project team members are expected to be available for specific agenda items. There may be times when project team members are required to participate (e.g., they are the CAM to be interviewed or provide support to the CAM), encouraged to participate (e.g., In/Out-Briefs), or have an option to observe (e.g., are non-interviewed CAMs or project members allowed to observe other interviews).

3.1.5 Analyze Artifacts Prior to Project Interviews

The Review Team reviews the requested project information and artifacts prior to the Surveillance Review. The review includes analyzing the data within an artifact and tracing the data points across artifacts for consistency and for evidence the EVMS were followed appropriately.

It may be beneficial to have a supplemental meeting with the project team before the review to clarify perceived practice and data issues arising from the data analysis.

3.2 Conduct the Surveillance Review

The agenda defines the planned topics and timing of the activities included in the Surveillance Review. The typical topics planned are:

- In-Brief by the Review Team Leader
- In-Brief by the project's Project Manager
- An interview of the Project Manger
- Interviews of Integrated Product Team (IPT) Leaders

- Interviews of Control Account Mangers (CAMs)
- Interviews of key functional support leads (e.g., scheduler, project control, business manager, deputy Project Manager, systems engineers)
- Time for the Review Team to consolidate observations
- Time for the Out-Brief by the Review Team Leader to the project team

The In-Brief by the Review Team Leader typically includes:

- Introduction of the Review Team members
- The goals and scope of the review
- How the interviews will be conducted
- How observations and findings of the Review Team will be documented and shared with the project team

The In-Brief by the Project Manager typically includes:

- Introduction of project team members
- Overview of the nature of the program to understand its unique circumstances
- Discussions of customer perspectives and concerns
- New developments, issues or concerns, or other pertinent information

Interviews typically include:

- Explanation by a Review Team member of the how the interview will be conducted
- Brief introduction and disclosure of any relevant context information from the person being interviewed
- A series of questions, answers, and review and demonstration of supporting points from the artifacts by the Review Team and interviewee

The Out-Brief typically includes:

- A summary of the scope of the review
- Listing of the Review Team members
- The agenda
- Listing of who was interviewed
- General and specific observations from the data analysis and interviews
    - Areas in the scope of the review that were not evaluated
    - Areas of adequate practices or any noted as "best practices"
    - Areas for improvement
    - Deficiency findings
    - Categorization of the observations (e.g., systemic, isolated, training related)

3.3 Deliver the Formal Surveillance Review Report

The Review Team documents the key elements and results of the review in a report that is ultimately issued to both the Project Manager and the EVMS Owner. The content of this report includes the items in the review Out-Brief, along with additional details and supporting documentation of the observations. The Review Team Leader provides the draft report to the EVMS Owner to ensure a shared understanding and agreement on the content. The Review Team Leader provides the final report to the Project Manager and to the EVMS Owner.

3.4 Root Cause Analysis and Corrective Actions by the Project Team

The Project Manager has the responsibility for conducting Root Cause Analyses (RCAs) and implementing appropriate Corrective Action Plans (CAPs) to correct the deficiencies identified in

the Surveillance Review Report. The Project Manager provides the draft CAPs to the EVMS Owner for discussion and agreement on the adequacy of the plans. The EVMS Owner has the responsibility for tracking actions and validating the closure of actions on behalf of the organization. The EVMS Owner has responsibility for ensuring the completion of corrective actions outside the control of the Project Manager.

A CAP typically includes:

- Description of deficiency finding
- Relevant context
- Root cause analysis of the reason for the deficiency
- Explanation of the impact of the deficiency
- Corrective actions, schedule, and responsible persons to complete them
- Preventive measures, schedule, and responsible persons to mitigate the potential of recurrence

Once the Project Manager and EVMS Owner agree on the CAPs, and the associated actions and measures are completed, it is common for the Project Manager to provide a revised CAP document containing evidence of the completion of the actions and measures. This revised document serves as objective support for the EVMS Owner to verify the closure of the CAP and becomes a project artifact.

4 Customer Considerations

When defining the scope and selecting projects for specific reviews, the EVMS Owner should take into account the customer's surveillance activities. For example, the EVMS Owner may define the scope and time of an internal Surveillance Review to occur before a customer's review, so that an internal assessment and any deficiencies can be corrected prior to the customer review. The EVMS Owner may coordinate with the customer and decide to execute a Joint Surveillance Review (JSR) in lieu of separate reviews.

The customer may take into account the effectiveness of the supplier's internal Surveillance Program when deciding the scope and schedule of its reviews of the project. The customer may decide to observe or review the findings of internal Surveillance Reviews in lieu of conducting its own Surveillance Reviews. This is true whether the customer is a Government agency planning for prime contractor surveillance or a prime contractor planning for subcontractor surveillance. Each customer (government or prime) should consider the supplier's EVMS and Surveillance Program maturity and risk levels. In these cases, the customer would typically examine the supplier to determine if:

- The supplier's EVMS is in an accepted and approved status with its Cognizant Federal Agency (CFA).

- Internal surveillance is formal, routine, and effective.

- Internal surveillance outcomes are not influenced by stakeholders (e.g., customers, line management).

- EVMS information is reliable and used by the project.

Appendix A – Example Surveillance Plan Structure

Topics	Definitions
Purpose and scope	Includes a reference back to the governing policy statement. Discusses the Surveillance Review purpose and scope.
Overview and types of reviews	Outline of the goals for the reviews and also defines different types of reviews, if applicable. For example, some organizations include artifact data trace reviews and formal deliverable reviews in addition to the Surveillance Reviews as part of their surveillance program and note them as such in their Surveillance Plan.
Team responsibilities	Responsibilities of the EVMS Owner in relation to the specific project Surveillance Review Team Leader and Review Team.
Objectives	Objectives of the review.
Scope	Scope of the review.
Selection	Process used for selecting specific projects to be reviewed
Notification	Steps to formally notify the selected projects and stakeholders of the planned reviews.
Planning	Activities the Review Team conducts prior to the Surveillance Review.
Execution	Steps involved in executing the Surveillance Review.
Findings and resolution	Steps to document, report, and verify the completion of corrective actions.

Appendix B – Example Quantification of Factors to Select Projects

Risk Factors	Weight	High = 3	Medium = 2	Low = 1	Score	Weighted Score
Contract Value	0.10	ACAT I/ACAT II or >=$50M	ACAT III or $20-$49M	ACAT IV or <$20M	3	0.3
Type of Program	0.05	Development or FFP Organizing, Scheduling, Work/Budget, Managerial Analysis	Production Accounting, Material Management, Change Management	O & M Accounting, Material Management	3	0.15
Performance Value % Complete	0.10	< 40% Organizing, Work Budget, Scheduling, Managerial Analysis	40% to 80% Work Budget , Scheduling, Managerial Analysis	> 80% Scheduling, Managerial Analysis	3	0.3
CUM SV%, CUM CV%, CUM VAC%	0.10	> (+/-) 10% Work/Budget, Scheduling, Managerial Analysis	(+/-) 5% to 10% Managerial Analysis	< (+/-) 5% Managerial Analysis	3	0.3
Baseline Resets	0.10	3 Work/Budget, Change Management, Scheduling, Managerial Analysis	1-2 Work/Budget, Change Management, Scheduling, Managerial Analysis	0 Work/Budget, Managerial Analysis	2	0.2
Baseline Volatility / Contract Modification	0.05	> 10% of CV Work/Budget, Change Management, Managerial Analysis	5-10% of CV Work/Budget, Change Management, Managerial Analysis	<5% of CV Work/Budget, Managerial Analysis	3	0.15
Schedule Risk Analysis Confidence Level	0.10	< 80% Scheduling, Work/ Budget, Managerial Analysis, Change Management	80% - 90% Scheduling, Work/ Budget, Managerial Analysis	> 90% Scheduling, Managerial Analysis	2	0.2
Subcontract BCWR %	0.02	> 30% Work/Budget, Scheduling, Accounting, Managerial Analysis	10% - 30% Work/Budget, Scheduling, Managerial Analysis	< 10% Accounting, Managerial Analysis	2	0.04
Subcontract BCWR Tasks on Critical Path	0.02	> 30% Organizing, Work/Budget, Scheduling, Managerial Analysis	10 – 30% Work/Budget, Scheduling, Managerial Analysis	<10% Work/Budget, Scheduling, Managerial Analysis	2	0.04
Material BCWR %	0.02	> 30 % Work/Budget, Scheduling, Material Management	15 – 30% Accounting, Material Management	<15% Material Management	1	0.02
MR% of Remaining Contract Risk	0.10	< 75% Work/Budget, Managerial Analysis, Change Management	75% – 100% Work/Budget, Managerial Analysis, Change Management	> 100% Change Management	2	0.2
Risk & Opportunity Management	0.10	No R&O Management Plan Work/Budget, Managerial Analysis, Change Management	R&O Register Not quantified or EVMS integrated Work/Budget, Managerial Analysis, Change Management	R&O Plan/Register Quantified and EVMS Integrated Managerial Analysis, Change Management	1	0.1
TCPI-CPI	0.10	> (+/-) 0.1 Work/Budget, Managerial Analysis, Change Management	(+/-) 0.05 to 0.1 Managerial Analysis, Change Management	< (+/-) 0.05 Change Management	1	0.1
Prior Year CARs	0.02	> 5	> 2 - 4	< 1	1	0.02
Total EVMS Experience of Team	0.02	< 2 years Organizing, Scheduling, Work/Budget, Managerial Analysis	2-5 years Scheduling, Work/Budget, Managerial Analysis	> 5 years Work/Budget, Managerial Analysis	1	0.02
TOTAL	1					2.14

Appendix C – Examples of Project Artifacts for Review

Examples of the types of documentation that may be requested and analyzed prior to the Surveillance Review are as follows:

1. Contractual Documentation (e.g., Award, Modifications, Statement of Work (SOW), Contract Data Requirements List (CDRL))
2. EVMS documentation and supporting work instructions or practice documents
3. Project Management Plan (PMP) and EVM Plan, if separate
4. Subcontractor Management Plan and Statements of Work (SOWs)
5. Risk and Opportunity Management Plans including identification, mitigation and opportunities handling
6. Project EVM Training Record
7. Work Breakdown Structure (WBS) and WBS Dictionary
8. Organizational Chart and Organizational Breakdown Structure (OBS)
9. Integrated Master Plan (IMP), Integrated Master Schedule (IMS), other schedules
10. Bill of Material (BOM) and Other Direct Cost (ODC) Logs
11. Manufacturing Requirements Planning (MRP) or Enterprise Requirements Planning (ERP) Operational Schedules
12. Basis of Estimates (BOEs)
13. Responsibility Assignment Matrix (RAM) in hours and/or dollars
14. Control Account Plans (CAPs)
15. Work Authorization Documents (WADs)
16. Schedule Status Sheets
17. Estimate to Complete (ETC) documentation
18. Quantifiable Backup Data (QBD) for BOEs, EV assessment, and ETCs
19. Schedule Risk and Health Analyses and Reports
20. Cost Accounting Standards (CAS) Disclosure Statement
21. Indirect cost policies and procedures, indirect rate documentation and analysis
22. Charge Number Matrix
23. Actual Cost Reports
24. Timekeeping Reports
25. Subcontractor Invoices
26. Documented Reporting Thresholds
27. Performance Measurement Reports, including formal EVM reports (e.g., Contract Performance Reports (CPRs), Integrated Program Management Reports (IPMRs))
28. Direct and Indirect Rate Variance Analysis Documents
29. Comprehensive Estimate at Completion (CEAC) Documentation
30. Contract Funds Status Report (CFSR)
31. Corrective Action Log
32. Baseline Change Requests (BCRs)
33. Program Baseline Log or Logs (e.g., BCRs, Management Reserve (MR), Undistributed Budget (UB), Contract Budget Base (CBB))
34. Reports from EVMS reviews and the status of Corrective Action Plans (CAPs)
35. Other related system audit reports and findings (e.g., Defense Contract Audit Agency (DCAA) audit reports of the financial system)