

Space and Missile Systems Center (SMC)



Integrated Baseline Review (IBR) Team Handbook

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Forward

This handbook provides the Program Manager and all team members with a basis for understanding the IBR process. It is a guide for conducting an IBR and documenting the results. The following sections provide an IBR overview for program managers, pre-contract award activities prior to the start of an IBR, review responsibilities and selection criteria for team membership, planning for the IBR, training prior to the IBR, guidelines for conducting an IBR, and background information the team should review concerning the contract to be reviewed.

The intent is not to establish a rigorous process for conducting IBRs but rather to provide the PM with sufficient information so that the IBR may be tailored to be most effective with the least impact to time and resources.

Please provide any suggestions or comments for improving this handbook to SMC/FMC, 2430 E. El Segundo Blvd, Suite 2010, El Segundo, CA 90245-4687

Chapter 1

Program Manager's Executive Overview

1-1. Purpose. The purpose of an IBR is to confirm that the contract performance measurement baseline (PMB) covers the entire technical scope of work, that the work is realistically and accurately scheduled, and that the proper amount and mix of resources have been assigned to accomplish all contractual requirements. Air Force Guidance requires that this review be conducted within six months of contract award for any contract requiring the submission of a Cost Performance Report (CPR) or Cost/Schedule Status Report (C/SSR). A reliable PMB naturally leads to effective management of acquisition efforts. This is accomplished through proper control of cost, schedule and technical issues.

1-2. Reference. SAF/AQ Policy 94A-015, September 1994, provided basic guidance for the conduct of the Integrated Baseline Review. It establishes the goals and objectives of the review and assigns responsibilities to various organizations for managing the IBR process. This Handbook implements the directives in SAF/AQ Policy 94A-015.

1-3. IBR Success Factors. In accordance with AQ Policy 94A-015 dated 22 September 1994, it is the Program Manager's responsibility to ensure the accuracy of these baselines. Responsibility for the success of the IBR process is with each Program Manager. The key to success is the enthusiastic involvement and support of the Program Manager from the outset. Program Manager "ownership" of the IBR will improve the use of contract performance measurement data by government and contractor managers.

1-4. IBR Objectives.

(1) Enhance the Program Manager's and the Technical Staff's confidence in the Cost/Schedule Management Process.

(2) Improve the use of cost/schedule performance data by contractor and government managers and engage integrated product teams.

(3) Reduce the number of system oriented, in-plant Earned Value Management reviews at contractor facilities to save resources

1-5. IBR Goals

(1) To ensure the technical content of work packages and control accounts are consistent with the scope of work defined in the Contract Work Breakdown Structure (CWBS) Dictionary and the Contract Statement of Work (SOW).

- (2) To assess that there is a logical sequence of effort that supports the contract schedule.
 - (3) To assess the adequacy and appropriateness of allocated control account resources, both in terms of ability to complete work content and time-phasing.
 - (4) To understand the earned value methods to be used for measuring accomplishment and that objective and meaningful performance data is provided in terms of technical accomplishment.
 - (5) to establish a forum through which the government program manager and the PM's staff gain a sense of ownership of the cost/schedule management process.
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Chapter 2

Background

2-1. Background. The application of the Earned Value Management System (EVMS) is the prescribed approach for performance management of major contracts required by DoD 5000.2-R. In the past few years, there has been increased attention in this area. Some of the more recent events that have contributed to continual process improvement in EVMS implementation include:

(a) September, 1994 - SAF/AQX issued Air Force Policy 94A-015, Improved Contract Cost and Schedule Performance Management. This document formalized the process to be used by Air Force Program Managers in the conduct of the Integrated Baseline Review (IBR). This handbook utilizes this guidance.

(b) December 1996 – Earned Value Management Implementation Guide issued by DLA/AQOF superseding AFSCP/AFCC/AFLCP 173-5. This document provides guidance to be used during the implementation and surveillance of Earned Value Management Systems (EVMS) established in compliance with DoD Criteria. IBR implementation policy is included in Part II, Section 4 of this guide.

2-2. Component Relationships. A Component is defined as a service or agency with acquisition authority and also includes the Defense Contract Audit Agency (DCAA) and the Defense Contract Management Command (DCMC). There are many organizations which depend on earned value information and it is important that the needs of each organization are acknowledged and recognized. These needs must be balanced to ensure that the wants of one do not encroach on the basic needs of another. The Performance Management Advisory Council is responsible for achieving this balance.

2-3. Roles and Responsibilities.

a. DoD Executive Agent. DCMC, as the assigned DoD Executive Agent, is responsible for ensuring the effective implementation and coordination of earned value management within DoD. The Executive Agent is responsible for ensuring the integrity and effectiveness in application of processes related to earned value management. The Executive Agent maintains information related to contractor system acceptance and review schedules (including IBRs) and provides for the conduct of EVMS review activities with components. The Executive Agent maintains liaison functions with Industry, as a DoD representative for issues related to earned value management

b. Performance Management Advisory Council (PMAC). The PMAC is an IPT which assists DCMC, OSD, the Services and other participating Federal Agencies to promote and improve the utility and practice of earned value management. The PMAC is responsive to directions from the Integrated Program Management Executive Steering Group in establishing its mission and objectives. The PMAC consists of representatives experienced in program

management and/or earned value management from DoD components, and other participating Federal Agencies active in program management.

c. Focal Points. Each component establishes a focal point to serve as a point of contact for coordination and exchange of information on earned value management. The focal point within the Air Force is SAF/AQXA and is responsible for effective policy implementation within the Service; including ensuring consistency with DoD policy. Centers have earned value management support offices (EVMSO), responsible for ensuring effective earned value management implementation regarding the establishment of contract provisions, and supporting review activities.

d. Procuring Activity. The responsibility for implementation of earned value management on a contract is assigned to the organization tasked with executing the procurement. This organization is normally referred to as Procuring Activity. The procuring activity offices tasked with ensuring proper implementation of EVM include the Program Management Office (PMO), the contracting organization, and the integrated component activities that support the PMO. The DoD Executive Agent will organize a team of qualified individuals, in coordination with the procuring activity, to conduct, when necessary, in-plant reviews of the contractor's management control systems.

e. Contract Administration Office (CAO). The CAO is the cognizant office which is assigned to administer contractual activities at a specific facility in support of the Program Management Office. The cognizant CAO will normally be part of the Defense Contract Management Command (DCMC). Where contract administration responsibilities are retained by the procuring activity, that organization will function as the CAO. Additional guidance regarding CAO functions is provided in Part II, Section 3, FAR Part 42, and DLAM 8000.5.

f. Contract Auditor. The Defense Contract Audit Agency (DCAA) is responsible for conducting audit reviews of the contractor's accounting system policies, procedures and activities. The contract auditor assigned by DCAA participates in surveillance and earned value management system reviews.

2-4. IBR Schedule Flowchart. The table below lists the activities that lead to the Integrated Baseline Review, including pre-contract events. Each of these areas will be covered in succeeding chapters.

IBR Schedule of Events				
RFP	SOURCE SELECTION	CONTRACT AWARD	+60 DAYS	WITHIN 6 MONTHS
<ul style="list-style-type: none"> •Proper Reporting •Contract Clauses •Prelim WBS •Proper CDRL/DID •IMP/IMS 	<ul style="list-style-type: none"> •EVMS Evaluation 	<ul style="list-style-type: none"> •IBR Team Chosen 	<ul style="list-style-type: none"> •IBR Planning Letter •IBR Team Training •IBR Workshop 	<ul style="list-style-type: none"> •Conduct IBR •Issue IBR Memo for Record

2-5. Preparation. Pre-contract award activities include ensuring proper program and financial management reporting requirements are included in the request for proposal. The source selection evaluation factors should include an evaluation of the contractor's proposed earned value management system and how it will be used to manage the cost, schedule and technical efforts of the procurement.

The IBR shall occur as soon as the performance measurement baseline is in place. Every effort should be made to complete the IBR process not later than six months after contract award. Initial planning for the IBR includes team selection and an IBR planning letter to the team and contractor prior to the start of the review.

The IBR requires "up-front" involvement of the Program Manager and technical staff with training support from the Comptroller EVMS Field Command Focal Point support organization. Program Office technical staff and other team members should be trained in the basics of earned value management, the contractor's management control system, including live data examples, and an IBR preparation session prior to the contractor plant visit. Adequate preparation is essential to ensuring a successful IBR. In order to effectively utilize the information generated by the contractor's EVMS and reported in the external reports, program office, CAO, DCAA FAO and contractor personnel should receive training in the analysis of earned value data. There are three general sources of training: formal training classes (DAU, DSMC, etc.); contractor sponsored training; and, informal, on-the-job training.

a. Formal training. Courses on the basics of earned value and the analysis of data should be provided for all personnel associated with the program, and refresher training should be offered. This training is available from the member organizations of the Defense Acquisition University (DAU) as well as other recognized educational institutions.

b. Contractor Sponsored Training. The majority of contractors with approved EVMS's conduct training classes in the operation of their system. Where the contractor provides

training in the EVMS, the program office, the CAO and DCAA may seek to participate in these training opportunities.

c. In-house training. Each acquisition component with an Earned Value Management Support Office (EVMSO) normally provides in-house training. Where this capability exists, all organizations involved in an acquisition should be invited to participate in this training. This training may consist of specialized training, on-request, focused on an individual contract or, it may be generalized training addressing the concepts of earned value and the analysis of earned value information. When in-house training is conducted for an individual program office, every effort should be made to incorporate the specifics of the contractor's EVMS into the course.

2-6. IBR Review Content. The purpose of an IBR is to confirm that the contract performance measurement baseline (PMB) covers the entire technical scope of work, that the work is realistically and accurately scheduled, and that the proper amount and mix of resources have been assigned to accomplish all contractual requirements. Control account managers (CAMs) and other senior managers meet with IBR team members to discuss their detail planning of work, with team members noting their findings and concerns as each day progresses. As the Team Chief, the Program Manager assesses the review progress with the team and contractor on a daily basis. Documentation includes CAM Evaluation Sheets, Control Account Evaluation Sheets, and IBR Concern Forms.

2-7. Post Review Documentation. As Team Chief, the Program Manager reviews and approves a post review IBR memorandum for the record (MFR) which includes review results and concern corrective actions. Follow-up actions are noted in this IBR MFR.

Chapter 3

Pre-Contract Award Activities

3-1. RFP Review. The solicitation phase involves the preparation of the Request for Proposal (RFP) which establishes the foundation for proper program and financial management. It is essential to ensure DoD 5000 series and Air Force policies are being followed. Review of the Acquisition Plan should ensure the requirement for cost, schedule and technical performance management are described in the management section of the plan.

a. EVMS Requirement. The implementation of an Earned Value Management System (EVMS) by the contractor is required if the prospective contract or subcontract value with all expected options will be over \$300M (Production) or \$70M (Development). This EVMS must comply with the intent of the 32 Criteria listed in DOD 5000.2-R, Appendix VI. Ensure the proper EVMS solicitation clause (DFARS 252.234.7000) is in Section L of the RFP and the proper EVMS contract clause (DFARS 252.234.7001) is in Section H.

Contracts over \$6M but less than \$300M (Production) or \$70M (Development) do not require the application of criteria compliant EVMS, but should have effective management processes that will provide valid and timely earned value information to the program office. DFARS 252-245-7005 should be included in Section H and DFARS 252.245-7006 included in Section L.

All values are FY 1996 constant dollars. All waivers must be approved by the Milestone Decision Authority or the designated representative.

b. Proper Reports. A criteria-compliant EVMS application requires the submission by the contractor of the Cost Performance Report (CPR) (Data Item Description DI-MGMT-81466). For those applications where compliance with the 32 criteria is not a requirement, either the CPR or the Cost/Schedule Status Report (C/SSR) (DI-MGMT-81467) may be applied. The decision as to which report is more appropriate should be based on the need for management visibility into cost, schedule, and/or technical risk. In all cases, the Contract Funds Status Report (CFSR) (DI-MGMT-81468) should be required.

When preparing the Contract Data Requirements List (CDRL) for these reports, Block 16 must include the American National Standards Institute (ANSI) Accredited Standards Committee (ASC) electronic data transfer requirement using the proper Convention Guide. Other elements to include are (a) proper variance analysis reporting (usually requiring the top variances to be explained) and electronic delivery of the Integrated Master Schedule. The provision of Electronic Data Interchange (EDI) is mandatory and must be satisfied in the contract.

c. Section M Evaluation Criteria. This section of the RFP should describe how the contractor's proposal will be evaluated to ensure an adequate earned value management

system will be used to manage the proposed effort. Inputs from the appropriate CAO's should facilitate this evaluation.

d. Statement of Work/Objectives (SOW/SOO). Ensure the contract SOW/SOO contains appropriate flowdown requirements to subcontractors consistent with the thresholds described in a above. The statement of work should contain a requirement for the contractor to perform the contract technical effort using a criteria-compliant EVMS that correlates cost and schedule performance with technical progress. Progress and problems would be presented and discussed in periodic program management reviews. Technical issues should be covered in terms of performance goals, exit criteria, schedule progress and/or cost impact.

e. Integrated Master Plan/Integrated Master Schedule. Ensure there is a requirement for an IMP/IMS and that proper scheduling requirements are outlined including electronic delivery of the IMS schedule file to the government for status.

g. Preliminary WBS. The development of the contract work breakdown structure (CWBS) is very important to the effectiveness of an earned value management system. A too-detailed or poorly-structured CWBS can increase the cost of implementing and maintaining an EVMS on a project. The PM should exercise considerable care in its development. A preliminary WBS is made part of the solicitation. This preliminary WBS should be structured in accordance with the guidelines established by the acquiring government agency. Guidance for DoD procurements, for example, is provided in DOD 5000.2-R, Part 4, paragraph 4.4.2 and MIL-HDBK 881 (latest version). This preliminary WBS is expanded by the contractor (a) to reflect the manner in which the work will be accomplished on the contract and, (b) to facilitate management, data collection, and reporting.

3-2. Source Selection. In response to the solicitation, each proposal should describe how the offeror plans to meet the EVMS requirement, WBS extension, IMP/IMS and proper financial reporting. For continuity, the Team Chief should try to choose some of the same team members for the source selection team to be a part of the IBR. The prospective contractor's management systems should be explained in sufficient detail to describe compliance with EVMS. A contractor proposing to use a previously accepted management control system may satisfy the EVMS requirement by citing prior acceptance agreements of their system. This may take the form of a Letter of Tri-service Acceptance, a Memorandum of Understanding (MOU) or an Advance Agreement (AA). The latter two documents are signed by both the contractor and a representative of the Contract Administration Office (CAO), usually the Administrative Contracting Officer.

Chapter 4

Review Responsibilities

4-1. Team Goals

- a. Conduct a complete review of the contractor's detail planning to ensure all technical efforts defined in the Contract Work Breakdown Structure (CWBS) and the Statement of Work are included in a logical plan and supported with sufficient resources.
- b. Place ownership of cost, schedule and technical accomplishment with the program office technical staff.
- c. Conduct professional discussions with contractor personnel in a team building environment, ensuring the adequacy of control account planning and confirming/identifying potential risk elements for future risk management.
- d. Review about 80% of the total contract direct effort. By focusing on the critical, risky and/or high-dollar value control accounts, this objective should be easily obtained.

4-2. Team Members. The primary team members for this review should come from the Program Manager's technical staff, with support from financial management personnel with expertise in EVMS's. Emphasis must be placed on the technical effort planning versus a compliance inspection. The Team Chief for this review shall be the Program Manager or Deputy Program Manager with assistance from the EVM Support Office. Program Manager leadership and technical staff IPT participation are essential for the success of the IBR. If an organization (center, etc.) does not have an EVMSO, HQ AFMC can fulfill this role upon request with commensurate funding. Recommended team membership includes:

- (a) Program Manager or Deputy PM as Team Leader.
- (b) EVMSO representative.
- (c) Program Office technical staff or IPT Members (various engineering, manufacturing, quality, and other disciplines that align with the contract tasks).
- (d) Program Office and staff EVMS specialists (as required).
- (e) Contractor representative(s) (Program Manager's discretion).
- (f) Defense Contracts Management Command (DCMC) personnel.

4-3. Team Chief Responsibilities

- a) Provide technical direction and leadership emphasizing the importance of thorough cost, schedule and technical integration of contract work.
- b) Choose team members early in the process and assign responsibilities to the team.
- c) Ensure team members are adequately trained and prepared for the IBR.
- d) In conjunction with the Deputy Team Chief, provide an overall evaluation of the IBR and assess whether or not a follow-on EVMS review will be required.

4-4. Deputy Team Chief Responsibilities

- a) Provide policy and interpretation of the EVMS DFARS clause implementation.
- b) Ensure all required training occurs prior to the start of the IBR.
- c) Collect all documentation from IBR team members and organize daily team meetings.
- d) Assist the Team Chief in writing the IBR end of review MFR and overall evaluation.

4-5. Team Member Responsibilities

- a) Attend all IBR training and the IBR workshop (if applicable) prior to the start of the IBR.
- b) Review contract documentation prior to baseline discussions with contractor personnel.
- c) Conduct control account manager and senior manager discussions professionally.
- d) Keep Team Leadership informed of the status of his/her area of the review.

4-6. Contractor Responsibilities

- a) Provide baselining documentation to the team prior to the start of the IBR to educate the team on the earned value management system processes in this area.
- b) Provide working space and support for the IBR team including a working area (conference room), administrative support, and security badges, as required in the IBR Notification Letter.
- c) Arrange manager discussion schedules, ensuring personnel are available.

Chapter 5

Conduct of the IBR

5-1. Pre-Review Time. The following actions should take place prior to the start of the review.

(a) The Team Chief and Deputy Team Chief should meet, shortly after contract award, with the contractor program manager and key staff to discuss the IBR strategy including tentative dates for the IBR.

(b) Collect contract information including contract/program name, period of performance, contract number, contractor address, contract number, award date, contract price/cost, contract type, subcontract information and other pertinent information.

(c) Team Members should be identified including program office technical and financial personnel, local DCMC personnel, and key contractor focal points.

(d) Contact DCMC to determine if there are any outstanding earned value management system problems that would affect the quality of the performance measurement baseline.

(e) Request copies of the contractor's system documentation and start tailoring training material with this information.

(f) Prepare an IBR notification letter which includes review dates, team members, review conduct, documentation required and any other pertinent information. This letter should be sent to team members and the contractor. (See Appendix B)

(g) Conduct IBR training and workshops to prepare the team before the review starts. Suggested training materials are included in Chapter 5 of this handbook. This material is embedded in the electronic version of this handbook and may be viewed and printed by double clicking on the document cover in Chapter 5.

(h) Review the initial submittals of the Cost Performance Report (CPR) or Cost/Schedule Status Report (C/SSR) (if available).

(i) Have the team send visit requests, attain travel orders and make travel plans.

5-2. Review Time

a. Initial Team Meeting. To start the review, the team has a meeting to discuss the manager discussion schedule and the conduct of the review. In establishing this schedule, the objective is to review about 80% of the total contract direct effort. By focusing on the critical, risky and/or high-dollar value control accounts, this objective should be easily obtained. Usually additional documentation reviews, storyboard traces and contractor overviews are conducted. This meeting should be held jointly with the contractor.

b. Control Account Manager (CAM) Discussion Preparation. Team members should read the “Suggested Discussion Flow” contained in Appendix C of this handbook. This will give the team member some ideas on what to cover and how to conduct the manager discussion.

c. CAM Discussion. The Baseline Discussion with the CAM is the key event in the IBR. During this period the two technical team members (government and contractor) should cover the key aspects of the contractor’s planning of the contract scope of work. The discussion should center on the following items (additional information is provided in Appendix D):

- 1) The technical content of the control accounts/work packages relative to the manager’s authorized work scope to ensure that all of the authorized work is planned.
- 2) The integration of the work schedule within the control account with the IMP/IMS requirements. This ensures that working level plans will support contractual requirements.
- 3) The application of resources (labor, materials, subcontractors, etc.) to the scheduled work. Sufficient resources should be authorized to provide the manager the opportunity to accomplish the plan.
- 4) The identification, categorization and quantification of any risk elements contained within the plan for the control account.
- 5) The identification, categorization and quantification of any cost avoidance opportunities within the plan for the control account.

To document the results of the discussion, the “Control Account Manager Evaluation” and the “Control Account Evaluation” forms contained in Appendix E should be filled out for each manager interviewed and each control account reviewed. If there are any potential concerns noted in the discussion, the team member should fill out the “IBR Concern Form” and give it to the Team Chief or Deputy Team Chief for their review. If the concern is valid, the “IBR Concern Form” will be provided to the contractor for resolution.

5-3. End of Review Memo for Record

Reporting the results of the IBR may take the form of an informal letter or memo for record. The letter should address any action items that have been agreed upon between the contractor and the procuring activity. When applicable, it should summarize the findings that require corrective action and assign the surveillance of the corrective action to the CAO. Issues that could impact the decision to conduct a formal earned value management review should also be identified and a copy provided to the component EVMS focal point. Appendix G contains an outline of the format for either the informal letter or the MFR.

Chapter 6

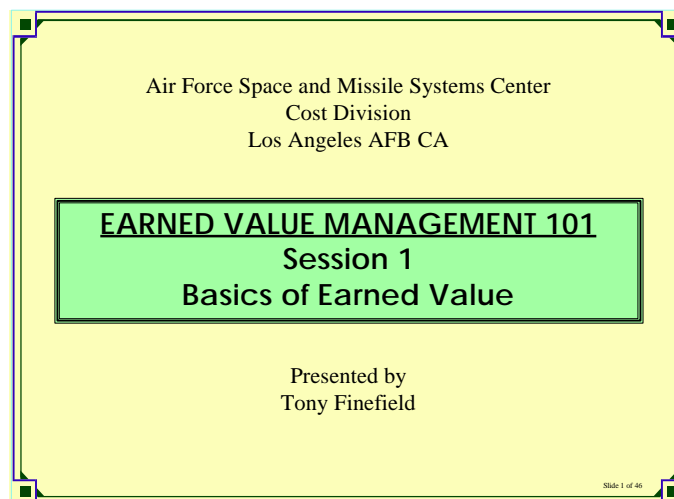
Training

This chapter contains copies of the training material presented to the team to prepare them for the IBR. In addition, the individual team members should include here the training material provided by the contractor covering their earned value management system. Finally, some “lessons learned” from previous IBRs are provided.

6-1. IBR Training: Covers the basics of what the IBR is, how to prepare for it, and how it is conducted. Double-click on the chart below to view the embedded powerpoint file.



6-2. Basics of Performance Measurement: covers the terminology of performance measurement and variances. Double-click on the chart below to view the embedded powerpoint file.



6-3. Control Account Manager Discussion Techniques: addresses some of the techniques, “do’s and don’ts” sessions with the CAMs. Double-click on the chart below to view the embedded powerpoint file. A copy of this powerpoint file was also included in the .zip file which contained a copy of this handbook.



6-4. IBR Lessons Learned. After each IBR, the PM and the EVMS staff representative should gather “lessons learned” from the team members, including the contractor. As these are collected, they are incorporated into the database and future reviews will benefit from them.

RECOMMENDATIONS AND LESSONS LEARNED

STAFF PERSPECTIVE:

1. Involve the program manager early in the process. PM “sign-in” is vital!
2. Involve the contractor (PM and staff) early in the process.
3. Establish a training schedule for program office technical personnel well in advance of the IBR dates.
4. Do not attempt to make cost analysts out of the technical folks.
5. Focus the training on the baselining aspects of the contractor’s system. Do not “overload” the technical people with extraneous information.
6. Make the contractor a partner in the entire process...not the unwilling victim!!!

7. Emphasize the “non-adversarial” nature of the review to the team. Sessions with the control account managers should be “conversations” rather than “interviews.”
8. Invite the contractor to provide participants for the IBR team. This benefits both parties.
9. The IBR is a natural fit with the Integrated Product Team (IPT) environment.
10. A well-conducted, successful IBR mitigates any requirement for subsequent management system reviews.
11. No matter how hard you try, 10% won't get the message!

PROGAM OFFICE PERSPECTIVE:

1) What would you recommend in the way of improving our training and prep for the IBR? (Examples: the initial training session, length of the training, the team meeting, clearly defining the purpose of the IBR, teaching and instructional aids provided, etc.)

“Up front training on the company's management system and basic performance analysis concepts is essential.”

“I thought the training was thorough, but it would have been helpful if we had the control account plans a little more in advance.”

“Receiving the control account plans one month early was helpful.”

“Initial training could have been 3 to 4 half days with more actual documentation, especially for the integrated management system. A complete review of one control account starting with the AF SOW and going to the IMP/IMS. The important stuff was fed to us with a firehose. Training should be conducted on a smaller scale (groups of 4 to 5 at a time).”

“The initial training needed to be preceded with a more detailed explanation of CPR data. This would have enabled us to concentrate more on the contractor's system and less trying to figure out BCWS/BCWP/ACWP. The final training session allowed for a more detailed understanding of the system. The mock (interview) could have been effective had it been done properly. Need to be more specific on what are the most important aspects of the interview.”

“A self-study guide with a walk through example would be helpful. If we could have had one day or 1/2 day to review the CAM notebooks and discuss our purpose, that would have been helpful. Need to focus on the purpose - either a catchy phrase or continued emphasis on a single chart - there was much confusion on the purpose even up to the end.”

“What I would like is more in-depth examples of CAPs and the reports associated with them. Need more examples of someone behind/ahead schedule. As far as materials go, I needed the CAP, SOW, IMS, and IMP.”

“Project officers need to observe sample interviews to learn interview techniques prior to attending review.”

2) What would you recommend in terms of improving the agenda and interview schedule? (Examples: amount of time allocated for interviews; having interviews setup by CAM rather than WBS or other format; amount of time scheduled between interviews for interview prep and filling out evaluations; time scheduled for team meetings, report preparation, and outbriefs; etc.)

“Mandatory daily team meetings of at least one hour to allow for team preparation and guidance from the Team Chief.”

“One CAM per day or half day. One government team per CAM. Minor deviations for special cases is acceptable. The entire team should assemble each morning for the in-brief and should have a role each day in the IBR. The coming and going of team members was disruptive.”

“The amount of time allotted for interviews was adequate; splinter sessions were easy to arrange if necessary. The contractors personnel put a lot of time and effort into preparation and it made our jobs much easier; they should be commended.”

“Arrangement by CAM is best. Should be most convenient for contractor. Interviewers should, if possible, have ample time to fill out forms, debrief team members, etc., before next interview. Give team leaders a 2 hour period to review CAM’s documents before start of IBR, with no interference from other team members.”

“Subcontractor interviews need to be longer than 1.5 hours. Modify the interview to assume that the subcontract manager understands the subcontractor’s level of effort/discrete work, earned value, PMB, EAC methods and have them address it by showing us the necessary details.”

“Combine several meetings into one. Some interviews were done faster and efficiently when combined. Set up by CAMs and involve all WBS managers from SPO at one time.”

“Interview schedule was OK. Need more time beforehand to review CAM notebooks.”

“Outbrief should have been moved up. Having IPT leader in with CAM was a big help; saw how they communicated and made for a better overall picture. Organization was fine. Format needs to focus on whether we are going to get done on time” (Note: Because of time constraints with TDY schedules, the interview referenced here was scheduled as a joint interview with the IPT leader and CAM. It was the only one done this way. It is an interesting observation that future IBRs may want to consider).

3) What other resources would you have liked to have had prior to and/or during the IBR? (Examples: more copies of IMS or other documents, earlier access to particular information, better understanding of what information is available, better understanding of how to use these resources, quality of work area, access to supplies, etc.).

“Every WBS manager should have applicable SOW, IMP, IMS in front of him/her.”

“The important documentation should be provided in advance to the reviewer(s): IMS/IMP training, Cost Performance Report (CPR) training, basic cost accounting on BCWS/BCWP <ACWP, Discrete, Apportioned, LOE, etc.; with examples of variances, CPIs and SPIs; and some info on the CAM’s responsibilities and how they perform their job.”

“I needed better understanding of what information was available. Everything else was great.”

“Allow team members an opportunity to assemble own notebook of his/her WBS, IMS, IMP, SOW, etc.”

“The mock interview, if we could have gotten an actual CAM with their paperwork, that would have been a bonus.”

4) What are the lessons you learned or any helpful hints you picked-up on that might help future interviewers improve their IBRs?

“Quantify all concerns/weaknesses/discrepancies so that the Program Director (Team Chief), Segment Directors, and the Co-Team Chief can assess the potential impact of the concern.”

“Need for better preparation prior to interview.”

“Team coordination was essential to presenting a professional appearance. Having a close working relationship with the CAM was also important.”

“Internalize what is to be accomplished, then enter the interview prepared and conduct a casual interview (conversation). Coordinate with all government team members prior to the interview”

“Know your IPT leader and prep with him/her before the interview.”

“Do a thorough job of explaining your purpose and setting the CAM at ease. If he/she feels threatened, the interview is not going to be effective. Be personable and relaxed.”

“It should be a given that the CAMs know where their documentation is. If a CAM doesn’t, it would come out in the interview. The focus should be on: How did you estimate resources? How did you handle past contingencies? What risk areas lie ahead? Are resources timed and ample to meet upcoming labor-intensive periods?”

“Relax. Know what types of issues face the CAM; this helps a lot.”

“Read and investigate CAM notebooks and documentation prior to interview.”

“Know what the SOW really says.”

5) What is your overall impression of the IBR as a tool in helping to manage our contract and your WBS elements?

“I thought it was good for the program office to understand how CAMs manage the technical, cost and schedule in one system that works.”

“I believe the IBR is a good tool for a development program, but question its usefulness for a successful production program. If the contractor did not have their PMS in place, I don’t believe they could be as successful as they are.”

“Excellent tool for making sure IPT presentations reflect work accomplished.”

“It created a good basis of understanding of how the contractor operates from a business standpoint, i.e.,: how technical issues flow down into variances and ultimately the bottom-line.”

“Very useful overall. Left IPT leaders more distinct impression that they are “mini-program managers” and not just technical experts.”

“Good learning instrument; helped me gain confidence in their management structure.”

Chapter 7

Review Unique Information

This portion of the handbook is structured to allow the individual team member to collect information and documentation that will be used to conduct a specific IBR. Collection of these documents prior to the review will certainly facilitate completing the IBR in an efficient and timely manner.

This section should contain:

- a) The Integrated Master Plan/Integrated Master Schedule
- b) The Work Breakdown Structure (WBS)
- c) IPT or CAM Specific Information
 - SOW Extract
 - Schedule Extract
 - WBS Dictionary Extract (if applicable)
 - Control Account Plans
- d) Agenda for the Review including CAM Discussion schedule.

Appendices

Appendix A DFARS Clauses and DIDs

Appendix B Contractor Notification Letter

Appendix C Suggested Discussion Flow for the IBR

Appendix D Baseline Discussion Topics

Appendix E Baseline Discussion Documentation

Appendix F IBR Concern Report Form

Appendix G Example IBR Memo for Record

Glossary of Terms

APPENDIX A

DFARS Clauses and DIDs

Defense Federal Acquisition Regulation Supplement (DFARS)

EVMS Clauses

Governing clause: 234.005
Notice of EVMS: 252.234-7000
Contract clause: 252.234-7001

C/SSR Clauses

Governing clauses: 242.1107-70
C/SSR solicitation and contract clause: 252.242-7005
C/SSR Plans solicitation clause: 252.242-7006

Data Item Descriptions (DIDs)

Cost Performance Reports (CPR)

DID Identification Number: DI-MGMT-81466

Cost/Schedule Status Report (C/SSR)

DID Identification Number: DI-MGMT-81467

Contract Funds Status Report (C/FSR)

DID Identification Number: DI-MGMT-81468

Appendix B

Sample Notification Letter

FROM: SMC
2420 Vela Way, Suite 1467 A-8
Los Angeles AFB, CA 90245-4659

SUBJECT: Integrated Baseline Review (IBR); Contract #F04701-XX-X-XXXX.

TO:

1. In accordance with the provisions of DFAR 252.234-7001, subparagraph (e) of the subject contract, an Integrated Baseline Review is scheduled for 18-22 Jul 94. *(For C/SSR contracts, cite the DFARS 252.245-7005 as the authority. If the IBR requirement has been written into the SOO or SOW, then the appropriate paragraph may be cited instead.)* The purpose of the review is to evaluate the performance measurement baseline on the subject contract. This will be accomplished through discussions with your Control Account, Product/Segment, Product Center Managers. Interviews will focus on scope of work, work authorization, scheduling, resource allocation and time phasing, and earned value managed via approved earned value management system.

2. This letter provides information concerning Team Composition, Agenda, and Review Documentation Requirements.

3. This letter is considered within current contractual requirements, target cost, and terms and conditions. If you do not concur and consider this letter as direction likely to change these are other contract provisions, notify the Contracting Officer immediately and delay implementing this letter until the matter has been resolved.

4. If you have any questions concerning this letter, please contact

SIGNED

Contracting Officer

3 Atchs

1. Team Composition

2. Agenda

3. Team Requirements

cc: SMC/FMC
DPRO
DCAA

TEAM COMPOSITION

NAME

ORGANIZATION

POSITION

(List team members, their organization and their function on the team.)

AGENDA**Tuesday, 19 July 1998**

0800-0900	IBR Inbrief
0900-1015	Documentation Review
1030-1200	Discussion Session I
1230-1330	Lunch
1330-1500	Discussion Session II
1530-1700	Government/Contractor Daily Outbrief

Wednesday, 20 July 1998

0800-0930	Discussion Session I
1000-1130	Discussions Session II
1200-1300	Lunch
1300-1430	Discussion Session III
1500-1730	Government/Contractor Daily Outbrief

Thursday, 21 July 1998

0800-1200	Review Report Compiled/ Program Outbrief Preparation
1200-1300	Lunch
1300-1330	IBR Results to (Contractor) Management
1330-1430	Total Program Outbrief

(The agenda should be adjusted to reflect the length of the IBR. This is normally a function of the number of teams and the number of sessions required to cover the critical and high dollar areas of the baseline.)

TEAM REQUIREMENTS

1. Non-escort badges.
2. Working Area with tables (including an office for the Team Chief and Assistant Team Chief.)
3. Two copies of System Description
4. Two copies of Program and Business Unit Procedures
5. Two sets of Intermediate Schedules
6. CAM/Functional Manager information to contain:
 - Org chart (1 per book)
 - Applicable WBS description of work
 - Applicable Section of Statement of Work
 - Work Authorization Document(s)
 - Control Account Plans
7. Two copies of Work Breakdown Structure and Dictionary

(This reflects the minimum requirements for the IBR. Additional information should only be requested to support special interest areas of the review.)

Appendix C

Suggested Discussion Flow For the IBR

Discussion Tips

1. Introduce yourself and members of the team.
2. Tell the Control Account Manager (CAM)/ Functional Manager what your trying to accomplish.
 - Evaluate the PMB at the Control Account level:
 - Content of Work Authorizations vs. Scope of Work
 - Scheduling
 - Resource Allocation and Time Phasing
 - Earned Value Methodology
 - Baseline Management
3. Place the CAM at ease.
 - Show the CAM/Functional manager the evaluation form.
 - Tell him/her you will be taking notes to fill out the discussion evaluation sheet.

There is no problem with you and the CAM jointly completing the sheet.
4. You could start the discussion by asking the CAM to describe what they do and how they manage their scope of work.
5. Start the baseline evaluation by jointly picking the *largest dollar value or most critical* Control Accounts to evaluate control account planning and management effectiveness.
 - This should be a "show me" type discussion.
 - Walk through documentation during discussion/explanations.
 - Feel free to ask the CAM to "show you" the documentation he/she is talking about as they explain how they manage their work.
 - Questions should focus on how the CAM built the control account plan and how they manage their scope of work.
6. As a minimum, determine if you have confidence that the following is true:
 - The scope of work is completely allocated.
 - Work authorization process was formally/thoroughly coordinated between the program office and functional managers.
 - Scheduling is logical and consistent. (Correct time phasing; horizontal (serial and parallel activities) and vertical (master, intermediate, detail constraints) relationships are in sync).
 - Resource Allocation and Time Phasing, and Earned Value Methodology are appropriate and adequate for assessing progress.

Appendix D

Baseline Discussion Topics

Discussion topics: The CAM manages this work on a daily basis. Try to draw the CAM out and have them explain how they manage their work. The questions and statements below are provided to ensure that you cover the areas needed to assess the adequacy of the baseline.

A. Scope Of Work/Work Authorization Process

(1) Discuss how the CAM was provided the scope of work:

- Should be able to show a Statement of Work (SOW) paragraph, Contract Work Breakdown Structure (CWBS) narrative, and some form of work authorization document for each control account.

(2) Discuss how the scope of work is related to the control account plan(s)?

- SOW defines scope of work
- CWBS: The CWBS Dictionary (if applicable) defines the scope of work for each WBS element.

- The Work/Budget Authorization document(s) should show resources (in hours or dollars), period of performance, and a short narrative describing the scope of work

(3) Discuss how the CAM ensures that all elements of the authorized work scope are planned into control accounts.

B. Control Account Evaluation: Scheduling; Resource Allocation and Time Phasing; Earned Value Methodology; Baseline Management.

(1) Describe the resource development process: How did the CAM come to agreement on the scope, hours, dollars, schedule?

- Program Office, CAM, Functional manager joint agreement

(2) Discuss the schedule milestones that were used for applicable control account planning. The manager should discuss:

- How their manning levels support schedule milestones (vertical integration.
- How their schedule is impacted by or impacts other organizations. (horizontal relationships)
- Support of/constrained by horizontal and vertical schedule relationships
 - Intermediate schedule constraints
 - Relationship to Integrated Product Development Management
 - logical relationships of work packages/control accounts to milestones
- Level of Effort (LOE) tasks support a schedule, the manager should be able to show you the activity they support on the intermediate or master schedule.

(4) Discuss with the CAM how individual work packages are time phased to achieve the control account and intermediate schedules.

(5) Have the CAM describe any management challenges to meeting the cost, schedule and/or technical aspects of the plan? Identify any areas of risk or possible cost avoidance within the defined scope of work and see if they have been quantified in terms of potential cost or schedule impact to the contract.

(6) Discuss how the CAM chose earned value methods for tracking progress.

- Are the milestones used for measuring accomplishment (earned value) logical and objective?

- Level of Effort (LOE) versus Discrete

- Discuss with the CAM the possibility of converting LOE activity into discretely measured work packages. Talk about the work content of the LOE and try to identify events that are measurable.

Appendix E

Baseline Discussion Documentation

Control Account Manager Evaluation Sheet

Control Account Manager: _____
 WBS Element (s) Reviewed: _____
 Total Assigned Budget: _____ # of Control Accounts _____
 Total Budget Reviewed: _____ # of Control Accounts Reviewed _____

Team Lead: _____ Date: _____

-
1. Dollar Value of Measurable Control Accounts: _____
 2. Dollar Value of LOE Control Accounts: _____
 3. Is the SOW completely allocated Yes No
 4. Was the Work Authorization Process formally coordinated between the program office and the control account manager? Yes No
 5. Do schedules support or constrain each other from the work package to the intermediate schedule?
 - a. Vertically Yes No
 - b. Horizontally Yes No
 6. Are resources properly time phased within the control accounts to support intermediate schedule requirements? Yes No
 7. Are the earned value techniques appropriate? Yes No
 8. Based on discussions with the CAM, are you confident that the baseline is comprised of the appropriate SOW tasks; has adequate resources to achieve the program schedule; provides management timely insight into deviations to the plan; and has a process to evaluate both technical and cost impacts when determining corrective actions? Yes No

 Team Leader

Control Account Evaluation Sheet

Control Account Manager: _____

WBS Element (s) Reviewed: _____

Team Lead: _____ Date: _____ Team Member: _____

Control Account #: _____ WBS#: _____ Total Budget: _____

Start Date: _____ Stop Date: _____

Did the Control Account Manager consider the following:

- | | | | |
|--|-----|----|-----|
| a. all work required to be completed? | Yes | No | N/A |
| b. resources required to complete each work package? | Yes | No | N/A |
| c. all schedule constraints? | Yes | No | N/A |
| d. discrete method of determining earned value? | Yes | No | N/A |

Risk Areas Identified: (High, Medium, Low; Cost, Schedule, Technical)

Briefly describe the substantiation for time-phased BCWS for this account:

Is the time-phased BCWS for this account acceptable? Yes No Can't Tell

Control Account #: _____ WBS#: _____ Total Budget: _____

Start Date: _____ Stop Date: _____

Did the Control Account Manager consider the following:

- | | | | |
|--|-----|----|-----|
| a. all work required to be completed? | Yes | No | N/A |
| b. resources required to complete each work package? | Yes | No | N/A |
| c. all schedule constraints? | Yes | No | N/A |
| d. discrete method of determining earned value? | Yes | No | N/A |

Risk Areas Identified: (High, Medium, Low; Cost, Schedule, Technical)

Briefly describe the substantiation for time-phased BCWS for this account:

Is the time-phased BCWS for this account acceptable? Yes No Can't Tell

Appendix F IBR Concern Report Form

IBR Concern Report Form

1. WBS element: _____ 2. Date: _____

3. Concern: _____

4. Proposed Resolution: _____

5. Estimated Completion Date: _____

Government Team Member

Contractor Team Member

IBR Concern Report Form

1. WBS element: _____ 2. Date: _____

3. Concern: _____

4. Proposed Resolution: _____

5. Estimated Completion Date: _____

Government Team Member

Contractor Team Member

Appendix G

Memo for Record Format

- 1.) Table of Contents.**
- 2.) Introduction.** Identify the contract purpose, type, duration, amounts (total, ceiling price, target costs, etc.), the program being supported, and the cognizant government component. Also, identify the specific contract requirement for an earned value management system.
- 3.) Purpose.** Identify the purpose of the review.
- 4.) Scope.** Identify the specific contractual entity that is the subject of this review; for example, division, company, plant, and the functional organizations, such as engineering, manufacturing, quality assurance, or individual process teams. Discuss whether the review is related to development, production, or construction contract. Identify CWBS areas covered, the methodology used in conducting the review, indicating such items as range of Cam discussions, depth of review, documents examined, and traces conducted. Team members and their associated responsibilities should be identified in this section.
- 5.) Findings.** Identify areas of concern including a complete discussion of condition, cause and effect. If the concerns are not resolved by the writing of the MFR, then a schedule for their resolution should be attached.

During the course of the review, if concerns surfaced relative to the EVM System and its processes, these should be communicated to the appropriate CAO for proper resolution.
- 6.) Conclusions and Recommendations.** This portion of the report contains any conclusions and recommendations based on review findings. This should include any action items and, if applicable, specify areas needing further review. A statement concerning the validity of the performance measurement baseline and identification of associated risk/cost avoidance items should be included.
- 7.) Exhibits and Appendixes .** Individual exhibits will be included only as necessary to support the findings.

Glossary of Terms

- 1. Actual Cost of Work Performed (ACWP).** The costs actually incurred and recorded in accomplishing the work performed within a given time period.
- 2. Actual Direct Costs (ADC).** Those costs identified specifically with a contract, based upon the contractor's cost identification and accumulation system as accepted by the cognizant Defense Contract Audit Agency (DCAA) representatives (See Direct Costs).
- 3. Apportioned Effort (AE).** Effort that by itself is not readily divisible into short-span work packages but which is related in direct proportion to measured effort.
- 4. Authorized Work.** That effort which has been definitized and is on contract plus that effort for which definitized contract costs have not been agreed to but for which written authorization has been received.
- 5. Budget at Completion (BAC).** The sum of all budgets established for the contract. (Also called Total Allocated Budget).
- 6. Budgeted Cost for Work Performed (BCWP).** The sum of the budgets for completed work packages and completed portions of open work packages, plus the applicable portion of the budgets for level of effort and apportioned effort.
- 7. Budgeted Cost for Work Scheduled (BCWS).** The sum of the budgets for all work packages, planning packages, etc., scheduled to be accomplished (including in-process work packages), plus the amount of level of effort and apportioned effort scheduled to be accomplished within a given time period.
- 8. Contract Budget Base (CBB).** The negotiated contract cost plus the estimated cost of authorized unpriced work.
- 9. Contract Work Breakdown Structure (CWBS).** The complete work breakdown structure for a contract, it includes the DoD approved work breakdown structure for reporting purposes and its discretionary extension to the lower levels by the contractor, in accordance with MIL-STD 881(latest version) and the contract work statement. It includes all the elements for the hardware, software, data or services which are the responsibility of the contractor.
- 10. Control Account (CA).** A management control point at which actual costs can be accumulated and compared to budgeted cost for work performed. A cost account is a natural control point for cost/schedule planning and control since it represents the work assigned to one responsible organizational element on one contract work breakdown structure (CWBS) element. The Control Account Manager (CAM) has responsibility for one or many control accounts (CAs).
- 11. Cost Performance Report (CPR).** A contractually required report, prepared by the contractor, containing information derived from the internal system. Provides status of progress on the contract.
- 12. Cost/Schedule Status Report (C/SSR).** A performance measurement report established to capture information on smaller contracts.
- 13. Cost Variance (CV).** The calculated difference between BCWP and ACWP. It is the value of resources expended greater than or less than the resource budget established for a defined segment of work. ($BCWP - ACWP = CV$)
- 14. Estimate at Completion (EAC).** Actual direct costs, plus indirect costs allocable to the contract, plus the estimate of costs (direct and indirect) for authorized work remaining.

- 15. Estimate to Complete (ETC).** That portion of the EAC that addresses total expected costs for all work remaining on the contract.
- 16. Earned Value Management System (EVMS).** The contractor's system and related sub-systems implemented on major contracts to establish a relationship between cost, schedule and technical aspects of the contract, to measure progress, accumulate actual costs, analyze deviations from plans, forecast completion of contract events and incorporate changes to the contract in a timely manner.
- 17. Level of Effort (LOE).** Effort of a general or supportive nature which does not produce definite end products.
- 18. Management Reserve (MR).** An amount of the total allocated budget withheld for management control purposes rather than designated for the accomplishment of a specific task or set of tasks. It is not a part of the Performance Measurement Baseline.
- 19. Organizational Breakdown Structure (OBS).** A functionally oriented division of the contractor's organization established to perform the work on a specific contract.
- 20. Performance Measurement Baseline (PMB).** The time-phased budget plan against which contract performance is measured. It is formed by the budgets assigned to control accounts and the applicable indirect budgets. For future effort, not planned to the control account level, the performance measurement baseline also includes budgets assigned to higher level CWBS elements, and undistributed budgets. It equals the total allocated budget less MR.
- 21. Performing Organization.** A defined unit within the contractor's organization structure, which applies the resources to perform the work.
- 22. Planning Package (P/P).** A logical aggregation of work within a control account, normally the far-term effort, that can be identified and budgeted in early baseline planning, but is not yet defined into work packages.
- 23. Responsibility Assignment Matrix (RAM).** A depiction of the relationship between the Contract Work Breakdown Structure elements and the organizations assigned responsibility for ensuring their accomplishment.
- 24. Schedule Variance (SV).** The calculated difference between BCWP and BCWS. It is the value of resources planned greater than or less than the resource budget established for a defined segment of work. ($BCWP - BCWS = SV$)
- 25. Significant Variances.** Those differences between planned and actual performance which require further review, analysis, or action. Thresholds should be established as to the magnitude of variances which will require variance analysis, and the thresholds should be revised as needed to provide meaningful analysis during execution of the contract.
- 26. Summary Level Planning Package (SLPP).** The summary level of the WBS and/or OBS where budgets are held for far-term efforts, not able to be identified to functional and/or WBS entities at the control account level.
- 27. Undistributed Budget (UB).** Budget applicable to contract effort which has not yet been identified to CWBS elements at or below the lowest level of, reporting to the Government.
- 28. Variance at Completion (VAC).** The difference between the total budget assigned to a contract, WBS element, Organizational entity or control account and the estimate at completion. It represents the amount of expected overrun or underrun.
- 29. Work Package (W/P).** Detailed short-span jobs, or material items, identified by the contractor for accomplishing work required to complete the contract. A work package has the following characteristics:
- It represents units of work at levels where work is performed.

- It is clearly distinguished from all other work packages.
- It is assigned to a single organizational element.

It has scheduled start and completion dates and, as applicable, interim milestones, all of which are representative of physical accomplishment.

- It has a budget or assigned value expressed in terms of dollars, man-hours, or other measurable units.

- Its duration is limited to a relatively short span of time or it is subdivided by discrete value milestones to facilitate the objective measurement of work performed.

- It is integrated with detailed engineering, manufacturing, or other schedules.

30. Work Package Budgets. Resources which are formally assigned by the contractor to accomplish a work package, expressed in dollars, hours, standards or other definitive units.