NATIONAL DEFENSE INDUSTRIAL ASSOCIATION
STRENGTH THROUGH INDUSTRY & TECHNOLOGY

2111 Wilson Boulevard, Suite 400
Arlington, Virginia 22201-3061
Tel: (703) 522-1820 • Fax: (703) 522-1885
Web page: http://www.ndia.org

*The Voice of the Industrial Base*

May 11, 2007

The Honorable James I. Finley
Deputy Under Secretary of Defense
(Acquisition & Technology)
3010 Defense Pentagon, Room 3E1006
Washington, DC 20301-3015

Dear Dr. Finley:

On December 19, 2006, you were kind enough to meet with Neil Albert and Peter Wynne, who represented the National Defense Industrial Association's Program Management Systems Committee, to discuss various issues of mutual concern. Shay Assad, Director, Defense Procurement & Acquisition Policy, was also present at this session.

As you know, the National Defense Industrial Association (NDIA) is a non-partisan, non-profit organization with a membership that includes 1,375 companies and nearly 47,000 individuals. NDIA has a specific interest in government policies and practices concerning the government's acquisition of goods and services, including research and development, procurement, and logistics support. Our members, who provide a wide variety of goods and services to the government, include some of the nation's largest defense contractors. The association's Program Management Systems Committee makes recommendations on policy, regulations and law in matters regarding industry program management systems affected by government acquisition policy and regulations, and provides a forum for building effective working relationships to promote integrated program management processes using Earned Value Management Systems (EVMS).

At the meeting on December 19th, concerns were raised about using EVM reporting as a metric for award fee incentives. These concerns are described in greater detail in the attached point paper entitled "Award Fee Incentive Provisions Using Earned Value Management (EVM) Reporting." While some issues were addressed – at least at a high level - in Mr. Assad's April 24th 2007 memorandum, our members believe that more specific problems involved in using EVM metrics at the working level still exist and need to be addressed. To help solve these issues, we have also included a set of recommendations in the paper. The NDIA Program Management Systems Committee would be pleased to support any studies or initiatives regarding this subject. Taking on these issues as a joint industry/government effort would, we believe, help identify, communicate and resolve existing problems.

Thank you for the opportunity to present NDIA views on this important subject. For additional information, or to continue the dialogue, please contact NDIA Procurement Division Director Ruth Franklin at (703) 247-2598 or at rfranklin@ndia.org.

Sincerely,

Peter M. Steffes
Vice President, Government Policy

Attachment:
Point Paper

cc – Mr. Shay Assad

**Award Fee Incentive Provisions Using Earned Value Management (EVM) Reporting**
**NDIA PMSC Position Paper**

## Background

Defense and industry EVM specialists realize the importance of incentivizing contractors to achieve program contractual outcomes; however, in recent years, some defense contracts have misused these incentives by tying achievement of certain EVM cost and schedule metrics to award and incentive fees and thereby sacrificing objective program status reporting in favor of "making the number". This has detracted from the original intent of providing good management of data and information and ultimately has tended to undermine the intent of using EVM on Defense programs, The members of the NDIA Program Management Systems Committee feel strongly that managing cost, schedule, and technical baselines through the application of earned value management should be to execute to the acquisition funding profile and minimize risk and surprises along the way. The NDIA PMSC also feels strongly that the use of EVM metrics (i.e., CPI and SPI) in award and incentive fee contracts detracts from the true application of earned value management.

Although existing Service guidance focuses management attention on contractor Estimates at Completion (EACs), our membership is experiencing an undue focus on performance indices derived from raw EVM data. (See, e.g., Navy ASN (RDA) memorandum dated October 28, 2003, subject "Contract Incentives, Profits and Fees": "A broken shareline can provide a substantial increase (or reduction) in profit based on achieving (or not achieving) a specific cost threshold. For example, if target profit were set at 10%, a contract might provide for no adjustment to profit for cost outcomes within ± 2% of target cost, but an immediate increase of 1% for staying under 98% (or reduction of 1% for exceeding 102%). These steps in the profit will focus aggressive management attention on controlling costs if the estimate at completion [EAC] begins to rise above the target."

## Problem

Rather than focus on management of contractor outcomes by linking incentives to baseline management, incentives (in particular, award fees) are instead being tied to achievement of performance indices derived from raw EVM data which are tied to cost and schedule baselines. For example, some contracts permit contractors to earn the highest incentive fees by reporting a cost performance index (CPI) of .97 or higher, with the incentive dropping sharply when less favorable CPIs are reported.

Attachment A provides examples of current contract clauses from four different programs with contractual incentive fee language and guidelines which encourage this type of incentive reporting. (Note: We have kept the specific sources of these representative contracts clauses confidential; however, they represent three Navy programs and one Air Force program.)

As desirable and logical as it may seem, the payment of incentives based on monthly EVM reports is inconsistent with policy and of good management practice. FAR policy in Part 16

requires that incentive payments be made after specific contract performance is completed, such as after a measurable event during contract execution or at the end of the contract, when a full accounting of accomplishment and cost can be made. Monthly EVM data provide objective contract status relative to the performance measurement baseline, but their relationship to the final cost and schedule outcome depends on additional variables, including the amount of cost and schedule management reserve and the equitable distribution of performance budgets. It is therefore questionable whether we are collectively getting the best value from these types of provisions currently in use. These types of incentive provisions could fundamentally be driving higher proposal cost and longer schedules to ensure the desired incentives are achieved. In addition this practice could drive greater obligation of funds earlier in the program life cycle by Government as a result of from the conservatism that could be driven into future proposals and contracts.

A greater risk posed by the use of these monthly incentives is that they can provide the wrong focus (i.e., management of data and reports). Managing a program using these data outcomes could cause contractors to cut corners, inject unnecessary conservatism in establishing their baselines, not doing re-design or re-test even when it might be appropriate to the situation, or taking other actions that might be less than optimal in order to maintain high ratios between budgeted cost and schedule and actuals.

Good earned value management practice is to establish a challenging and executable cost and schedule plan for contract performance, measure variance from plan objectively, make sound decisions and estimate reliably the contract outcome. A key principle is the use of cost and schedule management reserve, the net effect of which is to drive the plans earlier and use the reserve to manage the risks. Used this way, cost and schedule variances should be expected and considered "good" because they provide essential information upon which to assess performance and outcomes on complex contracts. Attachment B provides an example of a contractual "Space Program Award Fee Plan for Cost Management" which results in effective forward-looking analyses and an integration of cost, funding, and scheduling information.

**Recommendations**

The Department of Defense should survey active contracts to determine the extent of use of EVM reporting incentives, assess their effectiveness, issue any necessary guidance, and convene a working group of EVM and contract specialists to consider contracting policy and process changes. The following specific recommendations are offered to stimulate discussion on effectively integrating EVM and the contracting process: [1/]

- Assess how widespread the use of EVM incentives has been deployed and how successful the use of EVM incentives has been. Encourage the use of those that are most effective in the execution phases of the contract.

- Recommend focusing on programmatic outcomes rather than reporting metrics. For example, consider performance-based incentives on the achievement of key interim events such as preliminary design review, critical design review, and major testing milestones, instead of interim metrics, or indices. Managers need to know at each of

those milestones the objective status of the contract so they can make well-informed decisions to plan for and to proceed to the next phase. Such "performance-based reporting" would support performance-based acquisition and reward contractors for managing effectively, reducing the need for oversight.

- Break the link between monthly EVM reporting and incentives. The EVM focus should be on objective, risk-based reporting (including projected management reserve use), and on the EAC. Contractors should not be paid to maintain cost and schedule performance indices within predetermined boundaries, but rather to report current status accurately derived from timing, justification, corrective action and predictability, and based on that status, report a reasonable EAC. Existing contract incentives and shareline practices are sufficient to reward underruns and penalize overruns.

- Align anticipated risk with contract type and EVM expectations. It is unrealistic to award a high-risk, billion-dollar cost type contract and expect performance to deviate less than three percent from perfection. If that were the case, a fixed price type contract would be appropriate.

- Assess whether EVM is taught effectively in government training courses across the acquisition curriculum, targeting the right audience, building expectations for the application and use of EVM, and whether EVM is taught as a part of the Program Management curriculum.

It is a challenge in any contract to ensure that performance budgets are distributed equitably and schedules reflect the technical baselines. That is a main reason why the Integrated Baseline Review process was initiated. If the contract baseline is not changed, EVM eventually will reveal the truth about a program but meanwhile at-completion projections become constrained and project managers will not receive reliable information on contract status throughout most of the Program. Contracting practices should have the goal of encouraging the realistic management of a program by providing reliable, objective EVM data to project managers as a basis for making well-informed decisions.

1/ These recommendations are consistent with the recommendations and DOD responses in GAO Report GAO-06-66 dated December 2005, "DOD Has Paid Billions in Award and Incentive Fees Regardless of Acquisition Outcomes." The GAO reported "DOD programs engage in practices that undermine efforts to motivate contractor performance and that do not hold contractors accountable for achieving desired acquisition outcomes, such as meeting cost and schedule goals and delivering desired capabilities."

# ATTACHMENT A

**Program 1 (Air Force):**

| COST CONTROL | |
|---|---|
| Excellent | • Reductions in costs to the Government below original contract estimated costs were noteworthy. *CPI > 1.02.<br>• Funds and resources were optimally used to provide the maximum benefit for the funds and resources available.<br>• Cost reporting clear and concise with virtually no areas of ambiguity.<br>• Documented savings were apparent. |
| Very Good | • Performance at or slightly below original contract estimated costs. 1.02 >= *CPI > 0.99<br>• Funds and resources were always used in a cost-effective manner.<br>• Cost reporting clear and concise with few areas of ambiguity.<br>• No resource management problems. |
| Satisfactory | • Performance slightly above original contract estimated costs. 0.99 >= *CPI >= 0.97<br>• Funds and resources were generally used in a cost-effective manner.<br>• Cost reporting clear and concise with some areas of ambiguity.<br>• No major resource management problems apparent. |
| Unsatisfactory | • Performance significantly exceeded original contract estimated costs. *CPI < 0.97<br>• Funds and resources are not used in a cost-effective manner.<br>• Cost reporting not clear and concise with significant areas of ambiguity.<br>• Major resource management problems apparent.<br>• A cost rebaseline occurred. |

| SCHEDULE | |
|---|---|
| Excellent | • Performance substantially exceeded many of the requirements of the SDD Contract Top-Level/Detailed Integrated Master Schedule (IMS).<br>• SPI* > 1.02.<br>• Proactive approach to exceed the SDD Contract Top-Level IMS was highly effective.<br>• Exceeding SDD Contract Top-Level IMS requirements were highly beneficial to overall program objectives. |
| Very Good | • Performance exceeded some of the requirements of the SDD Contract Top-Level/Detailed IMS.<br>• 1.02 >= SPI* > 0.99<br>• Corrective actions to recover from SDD Contract Top-Level IMS delays were effective<br>• Exceeding SDD Contract Top-Level IMS requirements were beneficial to overall program objectives. |
| Satisfactory | • Performance substantially complied with the requirements of the SDD Contract Top-Level/Detailed IMS.<br>• 0.99>= SPI* >= 0.97 |

| | |
|---|---|
| | • Corrective actions implemented to recover from SDD Contract Top-Level IMS slips.<br>• . |
| Unsatisfactory | • Performance failed to satisfy many of the requirements of the SDD Contract Top-Level/Detailed IMS.<br>• SPI* < 0.97<br>• Corrective actions to recover from SDD Contract Top-Level IMS delays were not effectively implemented.<br>• Frequent SDD Contract Top-Level IMS delays caused serious negative impacts to overall program objectives. |

**Program 2 (Navy):**

SCHEDULE

The following criteria are applicable for the first award fee period and will be reviewed/modified as required for each subsequent period as previously described.

**Excellent:** The sum of the Earned Value Management System (EVMS) Cost Performance Index (CPI) and Schedule Performance Index (SPI) is greater than 2, with neither being below 1, as tracked to the Integrated Program Schedule (IPS). At least one critical program milestone is ahead of schedule and all others are being met.

**Very Good**: The sum of the EVMS CPI and SPI is greater than or equal to 2, with either the SPI or CPI being no less than .98 as tracked to the Integrated Program Schedule (IPS). All critical program milestones are being met.

**Satisfactory**: The sum of the EVMS CPI and SPI is greater than or equal to 2, and either the SPI or CPI is no less than .96 as tracked to the Integrated Program Schedule (IPS). Most critical program milestones are being met.

**Unsatisfactory**: The sum of the EVMS CPI and SPI is less than 2, and either the SPI or CPI is less than .96 as tracked to the Integrated Program Schedule (IPS). Most critical program milestones are being met.

**Program 3 (Navy):**

For events two (2) through seven (7) identified in Tables 1-1 and 1-2 of Appendix 1, twenty-five percent (25%) of the available award fee pool will be directly tied to the contractor's CPI and SPI as identified in Table-2. The remaining seventy-five percent (75%) of each award fee pool will be tied to the contractor's performance against the event evaluation criteria identified in Appendix 3.

**Table-1 Cost and Schedule Performance Index Ratings**

| *Cumulative CPI and SPI Value | Performance Rating | Percentage of Award Fee Pool |
|---|---|---|
| CPI ≥ 0.97 and SPI ≥ 0.97 | Exceptional | 91 – 100% |
| CPI ≥ 0.93 and SPI ≥ 0.93 | Very Good | 80 – 90% |

| | | |
|---|---|---|
| CPI ≥ 0.90 and SPI ≥ 0.90 | Satisfactory | 56 – 79% |
| CPI ≥ 0.85 and SPI ≥ 0.85 | Marginal | 1 – 55% |
| CPI < 0.85 or SPI < 0.85 | Unsatisfactory | 0% |

**Program 4 (Navy):**

Award Fee Criteria Matrix – Adjective Definitions and Descriptions

| | | Exceptional | Very Good | Satisfactory | Marginal | Unsatisfactory |
|---|---|---|---|---|---|---|
| **Developmental Cost Control** | **EVMS Implementation** | • Exceptional cost control and reporting system<br>• Implementation and maintenance of an excellent performance Management Baseline<br>• Excellent cost performance reports<br>• Evidence of an EVMS that is seamlessly integrated with other management systems especially the Integrated Master Schedule | • High-quality cost control and reporting system<br>• Implementation and maintenance of a high-quality Performance Management Baseline<br>• High-quality cost performance reports<br>• Evidence of and EVMS that is highly integrated with other management systems especially the Integrated Master Schedule | • Adequate cost control and reporting system<br>• Implementation and maintenance of Performance Management Baseline<br>• Adequate cost performance reports<br>• Adequate integration of the EVMS with other management systems especially the Integrated Master Schedule | • Inadequate cost control and reporting system<br>• Delayed or incomplete implementation and maintenance of the Performance Management Baseline<br>• Delayed or low quality cost performance reports<br>• Poor integration of the EVMS with other management systems especially the Integrated Master Schedule | • Contractor fails to meet criteria for Marginal performance |
| | Actual Performance | • Schedule performance Index greater than or equal to 1.0<br>• Cost Performance Index greater than or equal to 1.0 | • Schedule performance Index greater than or equal to .95 and less than 1.0<br>• Cost Performance Index greater than or equal to ,95 and less than 1.0 | • Schedule performance Index greater than or equal to .90 and less than .95<br>• Cost Performance Index greater than or equal to ,90 and less than .95 | • Schedule performance Index greater than or equal to .80 and less than .90<br>• Cost Performance Index greater than or equal to ,80 and less than .90 | • Contractor fails to meet criteria for marginal performance |

## ATTACHMENT B

**Space Program Award Fee Plan – Cost Management**

This area assesses the contractor performance in the area of cost management, control, and reporting. The SPO emphasizes a proactive approach to cost management centered on early planning and notification.

a. Funding and other resources are optimally used to provide the maximum benefit to the program. Funding requirement data and projections are comprehensive, complete and accurate.
b. Cost data/reports are timely, traceable within and between reports, consistent, accurate, and contain in-depth details to support government cost analysis/review. Comprehensive Basis of Estimates (BOEs) are provided for all appropriate WBS elements.
c. Provides credible, timely, and accurate insight into cost and schedule performance.
d. Proactively notifies program office of projected cost overruns or underruns with fully documented rationale. Contractor consistently anticipates possible sources of cost growth and implements solutions to maintain cost at current or below program baseline. Provides narratives that explicitly address both current and future programmatic and cost impacts of the current cost performance.
e. Contractor is proactive and innovative in pursuit of program cost reduction; introduces concepts or initiatives which produce demonstrable reductions in total program costs without adding risk.