Earned Value Management

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• **Earned Value Management (EVM)** is a project management technique used for measuring project progress in an objective manner.

  — EVM combines measurements of
    • technical performance (i.e., accomplishment of planned work),
    • schedule performance (i.e., behind/ahead of schedule)
    • cost performance (i.e., under/over budget)

  — When properly applied, EVM provides an early warning of performance problems.

  — EVM promises to improve the definition of project scope, prevent scope creep, communicate objective progress to stakeholders, and keep the project team focused on achieving progress.
• HHS Acquisition Regulation 352.234 (Notice of Earned Value Management System) cites compliance with ANSI-748 EVM Guidelines and that the contractor has to obtain validation and acceptance of its EVM system by the Cognizant Federal Agency.

• BARDA follows HHSAR EVM Regulation for all IT projects and construction contracts

• Biomedical projects may not meet “major systems investment” requirement

• BARDA implementing “7 Principles of EVM” requirements in place of ANSI-748 EVM Guidelines
  — Provides flexibility to BARDA and contractors
  — Removes requirement for contractor to be compliant with ANSI
  — Implemented a Tiered Approach to EVM
• Tier 1
  — HHSAR requirement of full EVM requirement ANSI 748 compliant (334.2 and Full EVM-Contracts greater than or equal to $25M and must be a major systems investment (facility or IT).

• Tier 2
  — Contracts greater than or equal to $25M and/or TRL less than 6, 7 Principles Tier 2 Implementation

• Tier 3
  — Contracts greater than or equal to $10M but less than $25M and/or TRL less than 6, 7 Principles Tier 2 Implementation with reduced requirements.
• Since implementing Earned Value Management at BARDA in 2009 we currently have 26 projects with EVM requirements.
  — Tier 1
    • 3 (Flu Division)
  — Tier 2
    • 16 (16 CBRN, 3 Flu)
  — Tier 3
    • 7 (CBRN Division)
BARDA’s Approach to EVM and Contractors

— We view the relationship as collaborative
— Support is always available
  ➢ Tools support
  ➢ Process support
  ➢ Report templates and examples
— Belief in utilizing “EVM Lean” as an effective program management tool
— EVM should not be cost prohibitive and a “chore”
  ➢ Studies indicate that cost of EVM should be no greater than 1-1.5% of total program cost
  ➢ Misunderstanding of true EVM requirement can lead to unnecessary rigor where the time and cost can outweigh the benefits
— We are here to help!

Why does BARDA use EVM?

• To ensure that contractors use effective, disciplined management control systems and procedures which provides data that:
  ─ Properly relate cost, schedule and technical performance
  ─ Are valid, timely and auditable

• Confidence in contractor’s internal management system translate to BARDA receiving
  ─ Objective (rather than subjective) contract performance information
  ─ Cost and schedule impact of technical problems
  ─ Capability to trace problems to source (hardware, software, etc.) and responsible organization
  ─ Narrative analysis of problem identification, impact to the program and corrective action
  ─ Assist BARDA in identifying and managing risks
Example of BARDA Internal EVM Data Reporting

CV/SV Chart thru August 2012

- Behind schedule and over budget most months since November 2011

Cum CPI/SPI Chart thru August 2012

- CPI is less than one and the TCPI is greater than one. Since programs are still in early stages performing at TCPI is still possible.

Contractor Dashboard

- Through August 2012, Contractor has a negative schedule variance of $5.65M (negative change of $1.036M in August) and a $432K negative cost variance (positive change of $121K in August).
- 21% (-$1.016M) of the cumulative negative schedule variance is WBS 1.6.3. The delay in the development impacted the start of the manufacturing campaign by 3-4 months. However, by selecting a single format for the candidates based on previous data, has allowed the Contractor to pull the projected start of the phase 1 clinical study (WBS 1.4.1) forward to offset any delays in the start of manufacturing.
- 20% (-$1M) of the cumulative negative schedule variance is in WBS 1.3.1. Variance is due to delays in the development program and team’s decision to advance candidate first for manufacturing.

Performance Assessment = Yellow

SPA Graph

- Behind schedule and over budget when compared with baseline estimates. However, at this point there is plenty of management reserve to handle any additional cost overruns in the future.

BCWS = Budget Cost of Work Scheduled; the spending plan
ACWP = Actual Cost of Work Performed; actual spending
BCWP = Budgeted Cost of Work Performed; value of work performed
Questions?