Reinforcing the Importance of EVMS

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Agenda

- General Thoughts
- NDIA EVMS EIA-748C Intent Guide Cross Reference Checklist
- Common EVMS Findings
- EVM Implementation Observations
- What’s Trending
Projects are 2.5 times more successful and waste 13 times less money when proven project management practices are used
– PMI Pulse of the Profession 2016

Earned Value Management (EVM) has proven itself to be one of the most effective performance measurement and feedback tools for managing projects
– PMI 2005
The need remains for a discussion on how the EVMS project controls process integrates with the project delivery process:

- Per DOE O 413.3B Project Delivery requires the implementation of an integrated management system.
- For projects >$100M the certified management system (EVMS) must integrate the key project components of scope, schedule, budget, resources, and risk.
- Contractors have the flexibility to develop and implement effective management systems tailored to meet their respective needs.
- Any differences in approach for EVMS implementation during the project’s life-cycle should be addressed as part of the EVMS Description.
EVM Implementation – General Thoughts

• Degree of Acceptance
  • The EVM concept is perceived to be useful across industries
  • When implemented properly, the benefits outweigh the costs
  • There is room for improvement
  • People using EVMS need to better understand its purpose, capabilities, and limitations
  • The expertise of those responsible for implementing EVMS vary considerably
“We are reminded by the work of Dr. W. E. Deming, the father of modern quality management, in which he demonstrated that the vast majority of quality problems are rooted in processes—ignored, flawed, or misunderstood by the worker, not in the workers themselves. Clear process definition, documentation, and accompanying roles and responsibilities are vital to assuring that EVMS works as intended and compliant with ANSI Standard 748.”

EVM Implementation – Cross Reference Checklist

- EVMS compliance preparedness includes development of a cross-reference matrix mapping the sections of the EVMS Description to the 32 EIA-748 Guidelines
- Greatly assists the compliance process and serves to assure that all relevant EIA-748 requirements are addressed through documented processes and artifacts
EVM Implementation – Cross Reference Checklist
EVM Implementation – Common EVMS Findings

- CAM ownership, inattention to EVMS responsibilities
- Lack of integrated processes and management systems
- Lack of cost and schedule integration
- Work authorization policies and procedures not followed
- Lack of vertical and horizontal schedule traceability (logic network critical path)
- EV techniques not reflecting actual accomplishment
- Lack of alignment between the time-phased plan (WS) and resource allocation
- Zero budget work packages and

- Budget/data reconciliation issues
- Baseline fluctuations and frequent replanning
- Current period and retroactive changes
- Improper use of Management Reserve (MR)
- Untimely, unrealistic Estimates at Completion
- Material performance and accounting misalignment
- Lack of predictive variance analysis (impact and time)

EVM Implementation Observation
Illustrative Example for Lack of Horizontal Schedule Traceability

- Logic Metric?
- Total Float Metric?
- Project Critical Path?
- Merge Points Metric?
EVM Implementation Observation

• The importance of controls in the project management effort
  • Project controls is a project management function responsible for the implementation of the management system
  • Project controls coordinates with the project manager and control account managers to develop and maintain the project’s performance measurement baseline
  • Project controls generate the project’s cost and schedule information while the project manager and control account managers consume the information generated to support informed decision-making for the project
  • Project controls is the first line of defense for the effective implementation of the management system
EVM Implementation Observation

• Correlation is needed between the time-phased plan (BCWS), the earned value methods selected, and the allocation of resources and costs
  • The time-phased budget must be consistent with the actual way work will be executed and measured to allow for an accurate portrayal of performance
EVM Implementation Observation

- EVM Methods for measuring construction work progress sometimes missing from the EVMSD:
  - Units Completed
    - Cable/Wire Pulling
    - Concrete Placed
    - Asphalt Paved
    - Excavated Soil
  - Weighted or Equivalent Units
    - Structural Steel Erection
What’s Trending

- Future EIA-748 EVMS Standard Update
- NDIA Intent Guide Rewrite
  - Opportunity to influence the application of EIA-748 EVMS compliance towards the uniqueness of design and construction efforts
- PM-1 EVMS Certification is contractor and site specific
- PM-1 Certified EVMS Description Revision Approvals
- Next Round of RSAV Anticipated in late Spring or early Summer
- Development of the Planning and Scheduling Amplification Guide
- Work towards Automating the EVMS Compliance process continues – for those that want to participate
- EVMS Memorandum of Agreement (MOA)
Questions?