Department of Energy
Earned Value Management Survey Results

Conducted for:

Office of Acquisition and Project Management (OAPM)

Prepared by:

Humphreys & Associates, Inc.
9910 Research Drive
Irvine, CA 92618
(714) 685-1730 Fax (714) 685-1734
www.humphreys-assoc.com

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Background

Humphreys & Associates, Inc. releases Department of Energy Earned Value Management survey results.

Humphreys & Associates, Inc. (H&A) conducted a survey of Department of Energy (DOE) Earned Value Management (EVM) and Project Management (PM) stakeholders. The survey format was developed by H&A and approved by the Office of Acquisition and Project Management (OAPM) prior to release. It was distributed on February 23, 2015 with an initial return date of March 9, 2015, later extended to April 7, 2015. A memorandum issued by the OAPM Director, Mr. Paul Bosco, February 23, 2015, Subject: Improving EVM and Project Management Integration accompanied the email distribution to establish the purpose and intent of the survey. Two versions of the survey were distributed: the DOE Federal Staff Survey (inclusive of DOE employees and contracted staff support) and the Capital Asset Project (CAP) Contractors (inclusive of DOE prime contractors and their contracted staff support). The memorandum and the two surveys are provided in the Appendix B.

The surveys were distributed to EVM and PM stakeholders and compile the results for subsequent H&A/DOE OAPM use in conducting gap analysis and identifying issues and improvements in the integration of EVM and project management.

The survey Demographic Data and the Results by one of six Topic sections include charts of the survey responses. For those questions that were asked on both surveys, some results are further divided to show responses by CAP Contractors and responses by Federal Staff. A critical piece of the survey format was to solicit comments regarding issues and suggestions for improvement. Lists of responses are also included in this report.

H&A has compiled the raw data as presented in this report based on the survey responses. Note that this Survey Report may include conflicting suggestions and recommendations based on individual responses. Further analysis of the results will be conducted and formal recommendations will be provided by H&A to OAPM as part the task.

Each survey was designed to elicit comments from the responders. Several questions provided a selection of choices plus an option to select 'Other' and write in a description. Space was also provided at the end of each of the six Topics for comments. In an effort to capture the variety of comments provided, lists are provided in this report based on responder remarks. To ease readability, H&A included select samples of similar comments and grouped them into categories. Specific comments are preceded by a (C) or (F) to identify if the response came from a CAP Contractor or Federal staff unless previously stated, as in the case of questions that were only asked of one group or the other.

The majority of the comments are included as Appendix A, with some interspersed throughout the report to provide insight into the range of issues and recommendations. Specific project / contractor/ site names have been removed from all comments to assure a non-attribution environment of open and honest discussion and recommendations.

No opinions of H&A are incorporated into this report nor were any adjudication actions taken to dispute or concur with any responder's opinion. This is also true with the follow up phone calls which were conducted for clarification of input by responders per their request.

For those who participated in the survey, we appreciate your participation and contribution to OAPM's efforts to improve EVM and Project Management integration.

Karen Urschel, EVP

Engagement Manager

Humphreys & Associates, Inc.

Purpose

The initiative to improve EVM and PM integration was chartered by OAPM, the DOE organization responsible for EVMS policy and compliance under DOE O 413.3B. H&A was tasked with conducting the initiative by conducting a gap analysis, provide recommendations, and a path forward to improve EVM integration with PM on both the Federal and contractor levels across the DOE complex. EVM and PM stakeholders in DOE participated in this survey, allowing them to be part of the solution.

Executive Summary

In total 95 surveys were submitted; 48 people responded to the Federal staff survey and 47 people responded to the CAP Contractor survey. The surveys covered Demographics and 6 Topic Areas including: Topic 1 – DOE Policies and Procedures; Topic 2 – Training; Topic 3 – DOE Skilled Labor Resources; Topic 4 – Tools; Topic 5 – Use of EVMS Data; and Topic 6 – Improving Communication.

The primary feedback from this survey was concerns about lack of consistency regarding determinations of EVMS compliance. The concerns stem not only from inconsistency between compliance reviews conducted by Federal Site, PMSO, or OAPM levels, but also from within these organizations, primarily OAPM. Responders expressed frustration with OAPM turnover in Review Directors and methods applied causing differing interpretations. Responders want clear direction on the DOE interpretations of the EIA-748 EVMS standard.

Another common concern was expressed about use of performance metrics for means other than indicators of past and potentially future performance against the baseline. Responders feel that focus on metrics, particularly Cost Performance Index (CPI) and Schedule Performance Index (SPI), as indicators for award fee, contractor and Federal Project Directors (FPD) performance ratings, and the increased levels of scrutiny from upper levels of DOE management has caused a culture divide. Responders report this emphasis to be perfect has driven several different forms of data manipulations via both Federal and Contractor directed use of Management Reserve (MR) and/or Contingency, re-planning, overly optimistic Estimates at Complete (EACs), and improper application of Undistributed Budget (UB) to avoid delivering realistic and perceived 'bad' performance.

Suggestions were provided to shift focus to accuracy of performance, acceptance of imperfect CPIs/SPIs, and monitoring of bad practices used to mask realistic performance.

The third overarching concern was the impact of initial allocated and subsequent changes to funding on DOE projects, causing frequent re-baselining activities that often take months on large multi-year projects. It drives up costs and diverts contractor employees from managing the project scope to developing a new performance measurement baseline (PMB). Responders recommend allowing contractors to detail plan the near term work and hold remaining effort in planning packages vice the common DOE practice of detail planning the entire project too early or too far in advance of funding received to date.

The majority of responders mentioned the need for tailoring of EVMS to their particular projects because each believes their projects are 'different'. Of concern was that no one provided solutions, ideas, or recommendations as to how that should be accomplished in terms of EVMS EIA-748 standard guidelines or interpretation.

This summary provides a flavor of the concerns and recommendations provided by the survey responders. For complete details and the sharing of many more concerns and recommendations, read the remainder of this report and Appendix A.

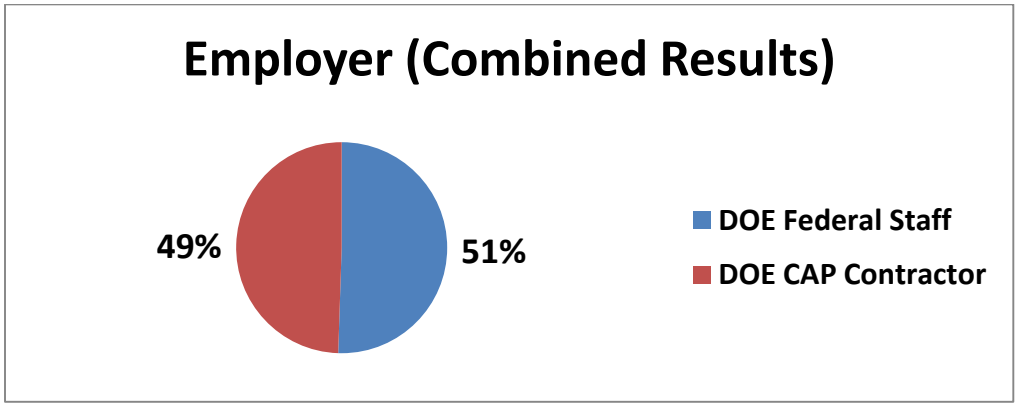
Survey Response

In total 95 surveys were submitted. Of the 95 responses, 48 people responded to the Federal staff survey and 47 people responded to the CAP Contractor survey.

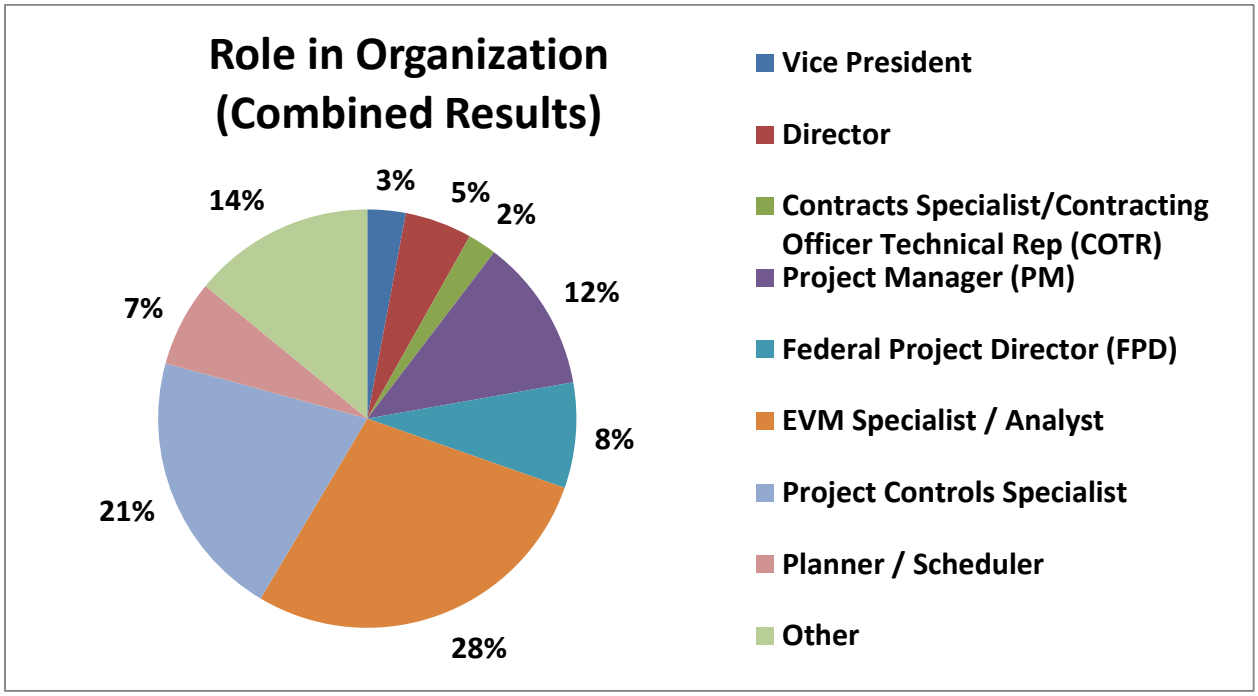
Demographics

This section provides information about the demographics of the responders so that readers of this report fully understand the diversity of the responders before proceeding into the specific survey results by Topic. The results indicate that the responses came from a broad cross section of employers, roles and responsibilities, organizational departments, locations, experience, and educational levels. Each demographic graph has the variety necessary to prove that the responses are representative of the EVMS and PM stakeholders across the DOE Federal staff and CAP Contractor communities.

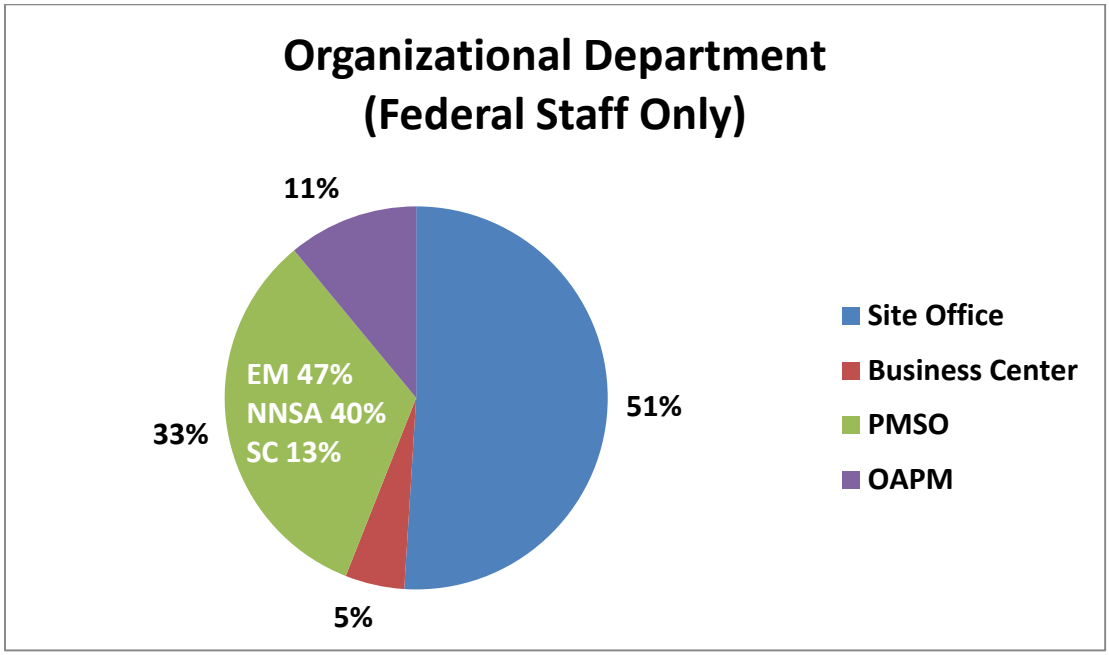
The following chart shows the combined results when all responders were asked to identify their employer. Forty-nine percent of the responders were DOE CAP Contractors and 51% were DOE Federal Staff.



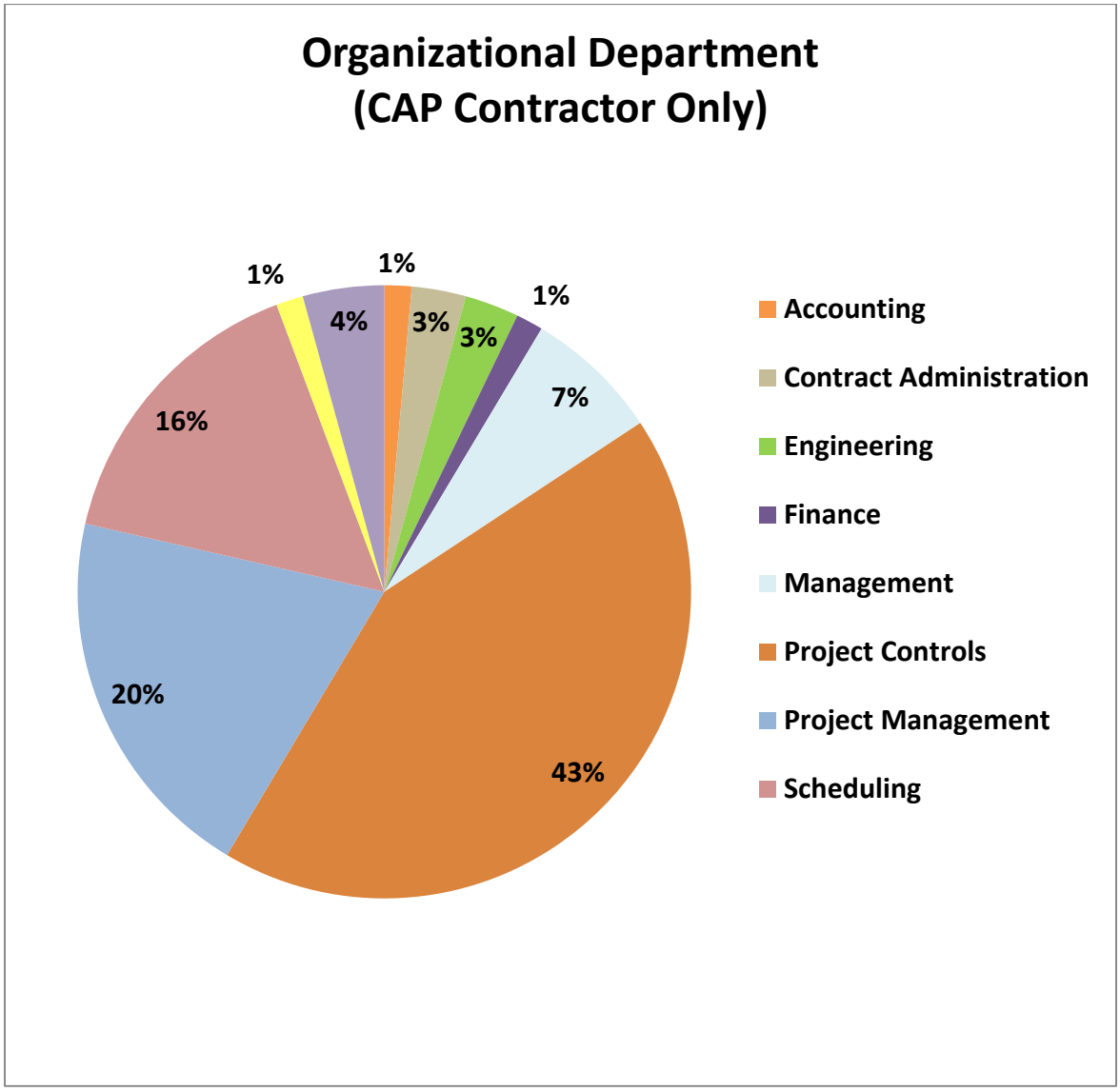
All responders were asked to identify their role in their organization. It is important to note that many responders selected more than one role in their organization, indicating that people have multi-functional responsibilities relating to project management and EVMS. Further, as shown on the following chart, the responses indicate that responders represented a broad cross-section of levels within organizations that together provide an overall perspective of the operation EVM systems.



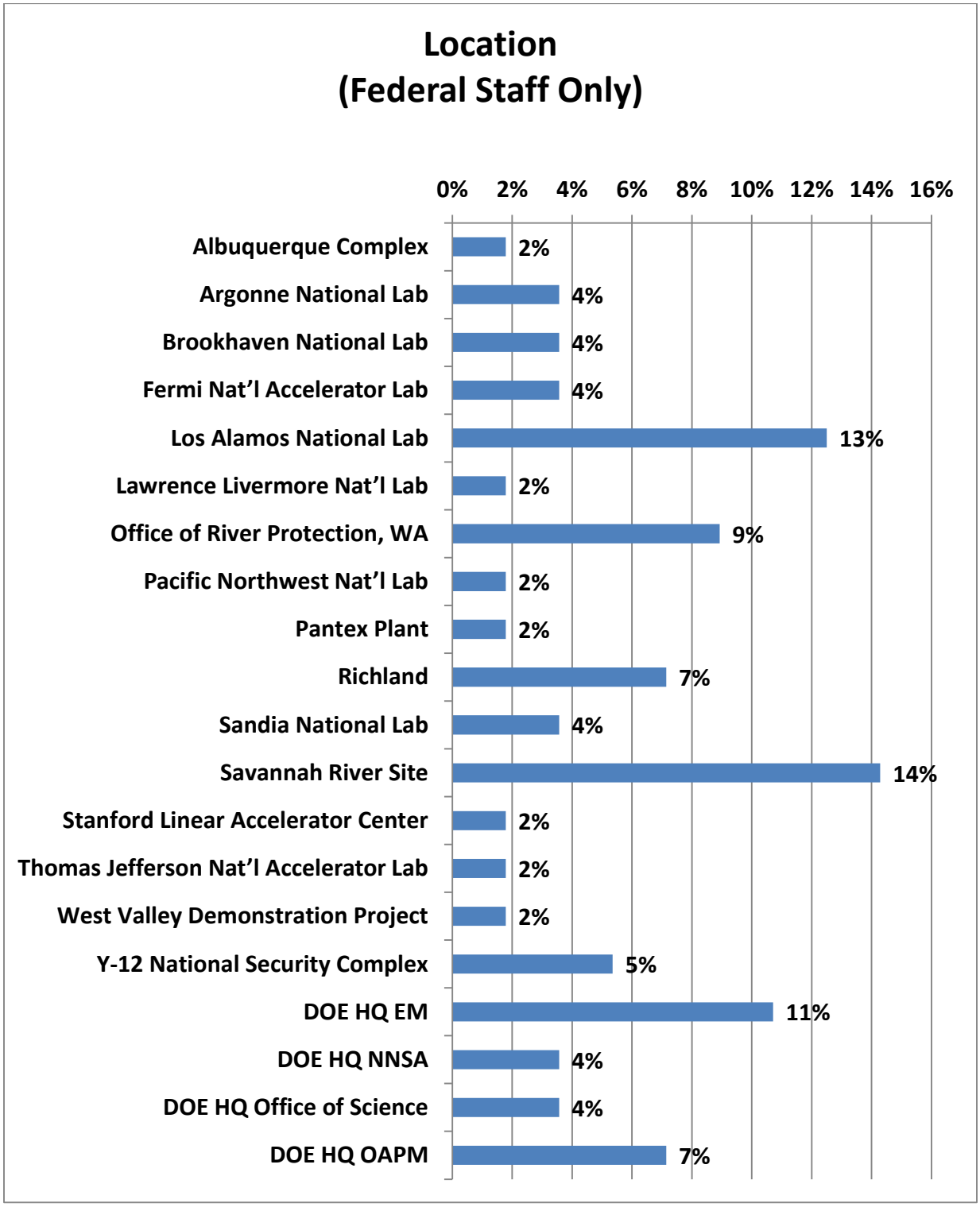
The next question was asked only of Federal Staff. They were asked to identify their Organizational Department. The majority, at 51%, represented the Site Offices. The Project Management Support Office (PMSO) was the second largest category at 33% of which, the breakout shows 47% from Environmental Management (EM), 40% from National Nuclear Security Administration (NNSA), and 13% from Office of Science (SC). Eleven percent of the responders were from OAPM and 5% were from Business Center.



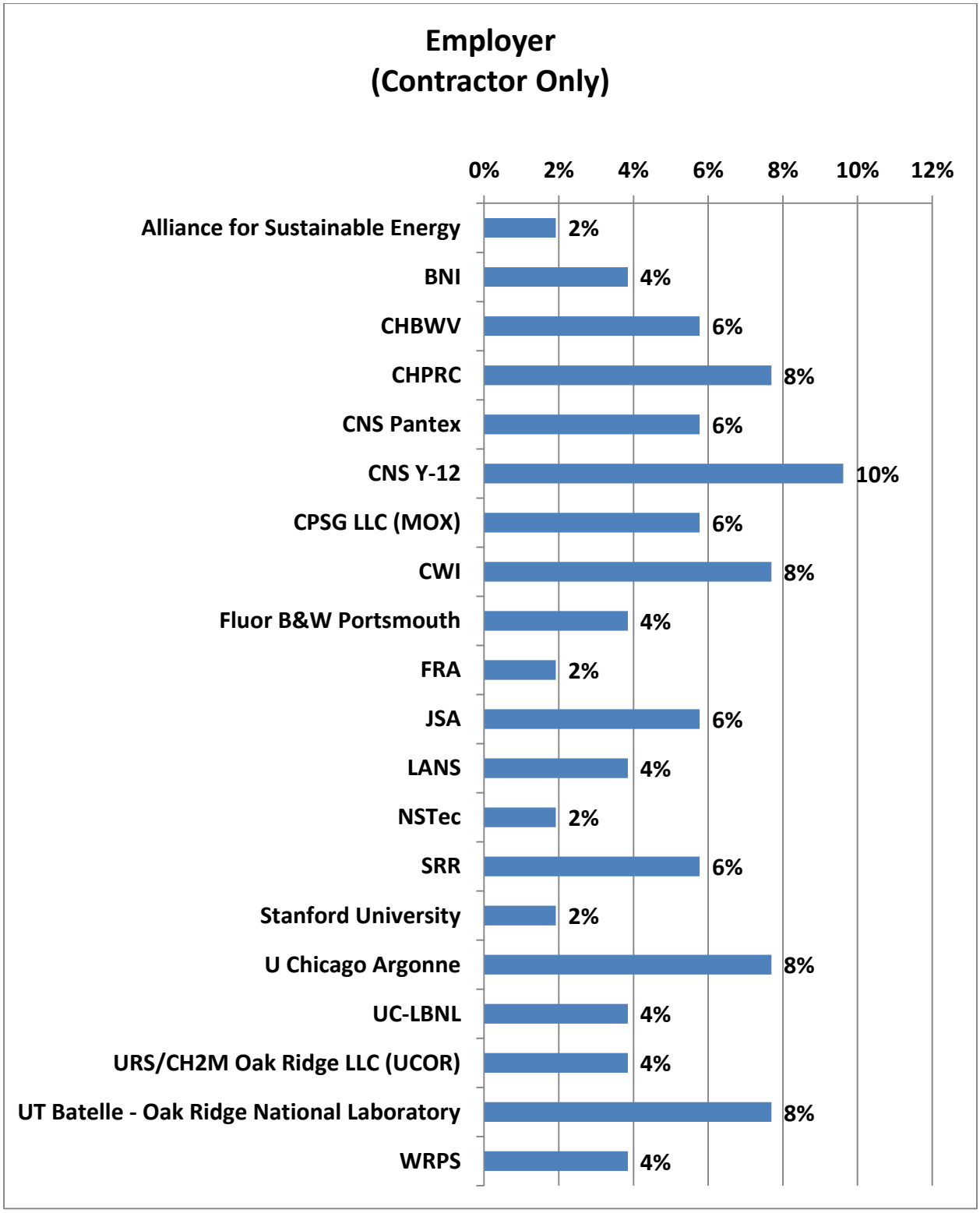
CAP Contractors were also asked to identify their Organizational Department. The majority, at 43%, were from Project Controls. Twenty percent selected Project Management, 16% Scheduling, 7% Management, 4% Other, 3% Engineering, 3% Contract Administration, and 1% each from Accounting, Finance and Subcontract Management. The "Other" category consists of Consultant, Project Integration, and Information Technology. Some CAP Contractor responders selected more than one Organizational Department based on responsibilities.



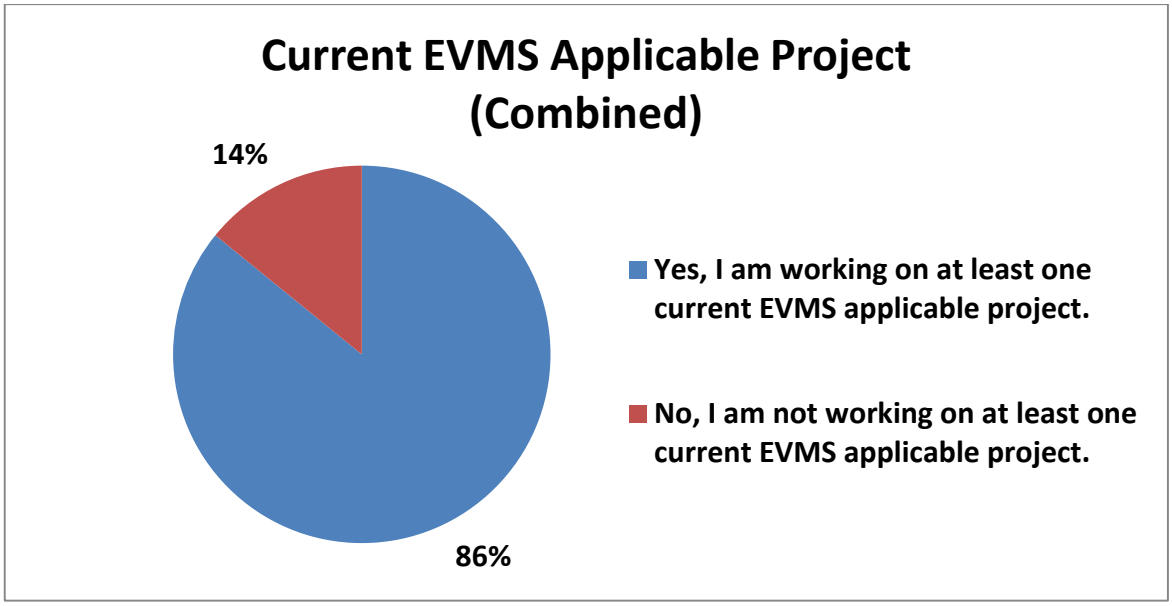
Federal Staff were asked to identify their office location. It should be noted that some responders did not answer this question and some chose more than one location based on job responsibilities.



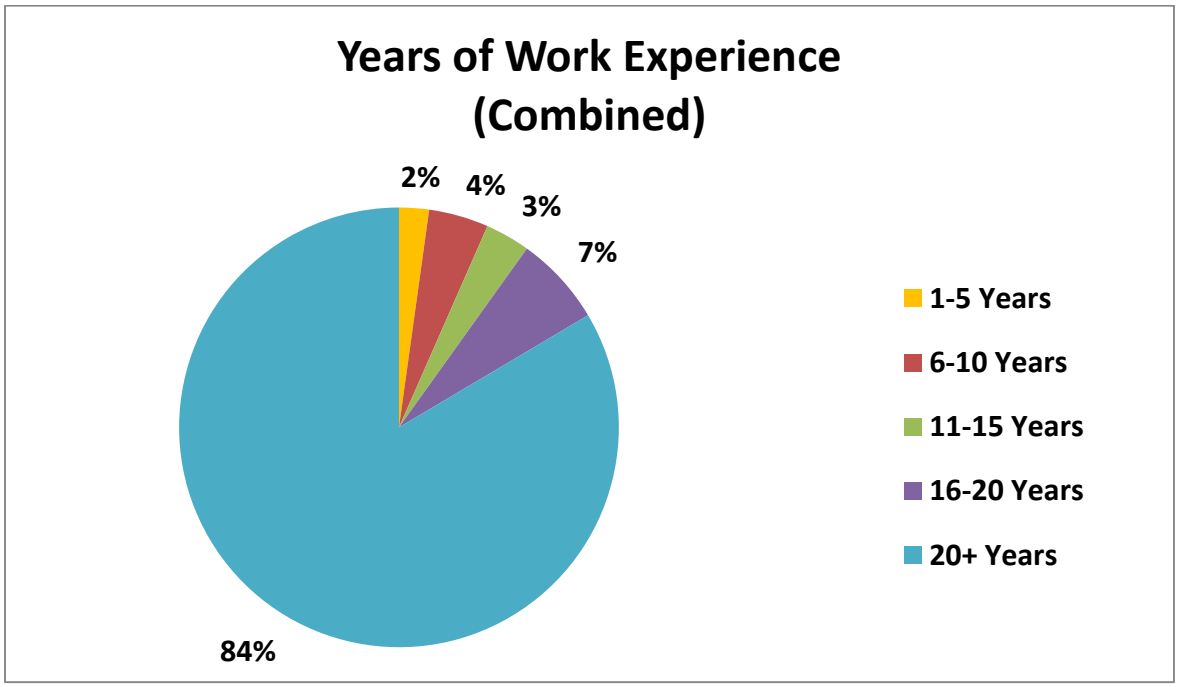
CAP Contractor survey responders were asked to identify their employer. Results are shown in the chart below.

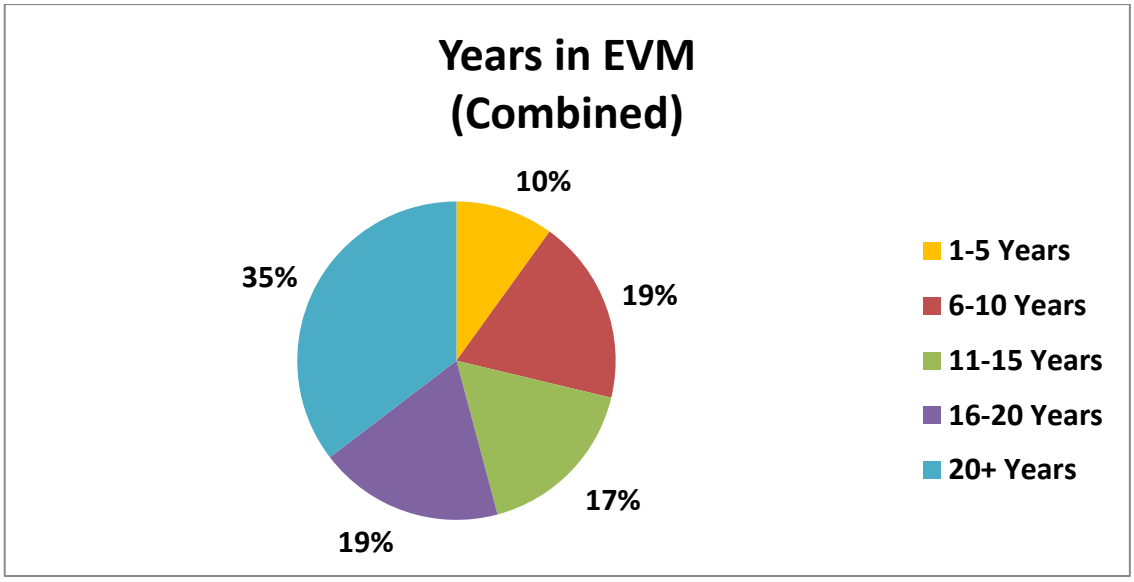


At the time of the survey 86% of responders stated they were working on an active EVMS project. The 14% who were not working on an active EVMS project had previously worked on an applicable project at some point between the years of 2007 to 2014.

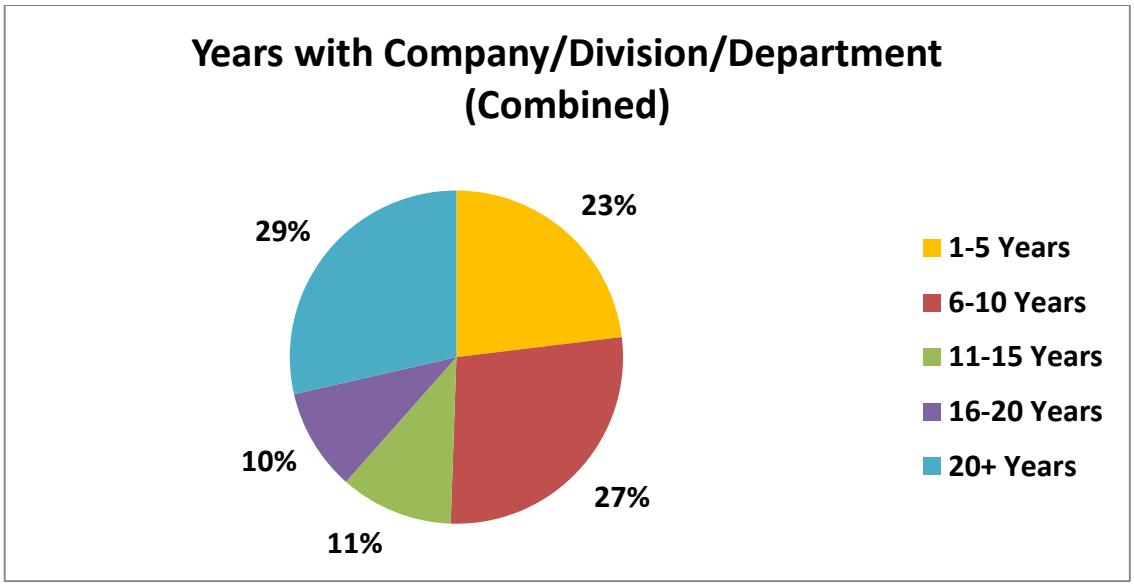


As shown on the next two charts, the amount of experience of the responders was very high, with 84% of the responders having over 20 years of overall work experience, and 35% had over 20 years of EVM experience.

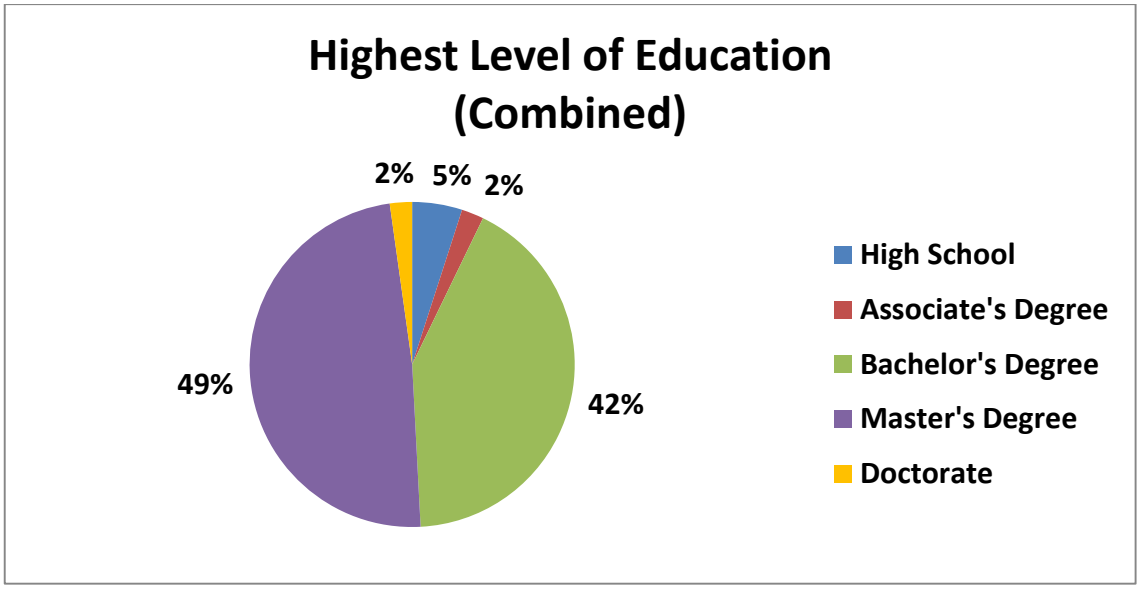




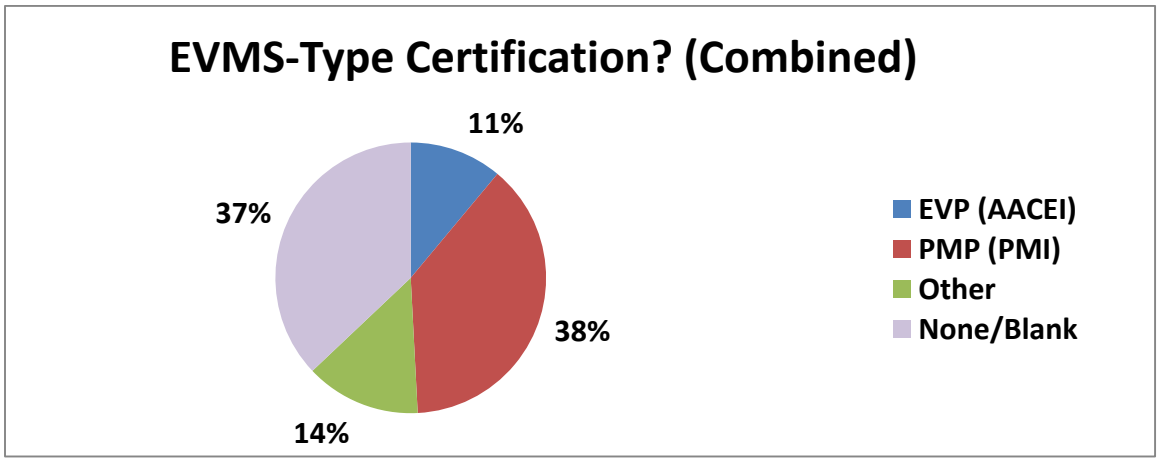
Twenty-nine percent of responders had over 20 years of experience with their company or Government department.



The survey responders were asked their education levels. Two percent of responder achieved a Doctorate, 49% a Master's Degree, and 42% a Bachelor's Degree.



Additionally, 63% of the survey responders stated they had some type of EVMS Certification. Thirty eight percent of the responders had a Project Management Institute (PMI) Project Management Professional (PMP) certification, and 11% had the Association for the Advancement of Cost Engineering International (AACEI)'s Earned Value Professional (EVP) certification. Fourteen percent held other certifications, including the American Institute of Certified Planner (AICP), AACEI's Certified Cost Engineer (CCE) certification, International Cost Estimating and Analysis Association (ICEAA) Certified Cost Estimator/Analyst (CCEA), the College of Performance Management (CPM) Integrated Program Performance Management (IPPM), a Certified Six Sigma Black Belt, and a Certified Public Accountant (CPA) Certification. Some of the responders held more than one type of certification. Although specifically asked, no responders stated they held AACEI's Planning and Scheduling Profession (PSP) certification.



Survey Results by Topic

The remainder of the report focuses on the six topics from which further gap analysis studies can be conducted. These include:

Topic 1 – DOE Policies and Procedures

Topic 2 – Training

Topic 3 – DOE Skilled Labor Resources

Topic 4 – Tools

Topic 5 – Use of EVMS Data

Topic 6 – Improving Communication

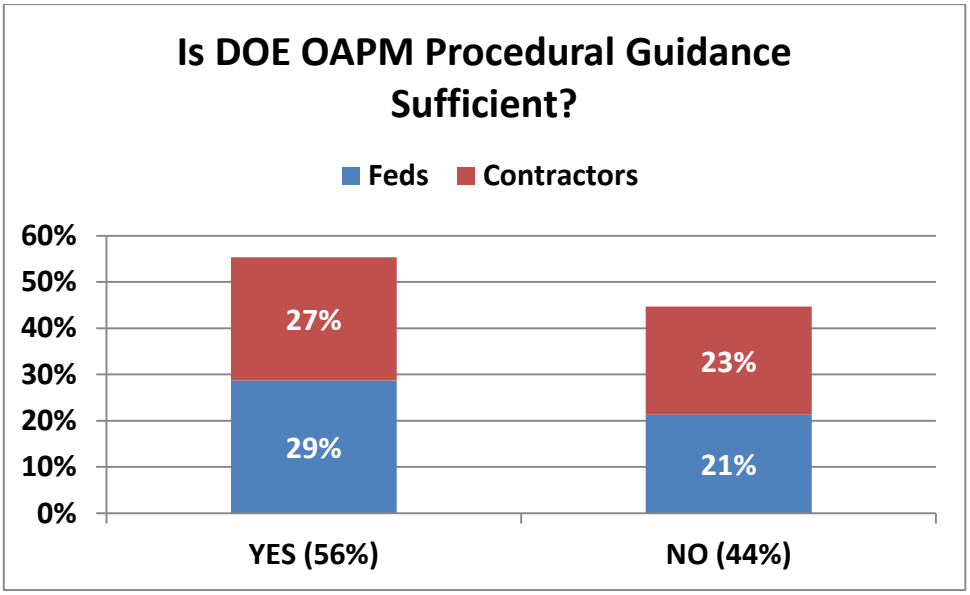
Topic 1 – DOE Policies and Procedures

Topic 1 focuses on DOE EVMS-related Policies and Procedures. The 'what' and the 'how' of DOE policies, guides, handbooks, and OAPM Standard Operating Procedures (SOPs) is essential to understanding and consistency in application. The questions related to the adequacy of existing documents and recommendations for improvements to provide clear and concise direction.

Topic 1 Questions were identical on both the DOE Federal Staff and the DOE CAP Contractor versions of the survey.

Question 1.1 - Is sufficient DOE OAPM procedural guidance available to assist you in successfully maintaining your EIA-748 compliant EVMS?

In total, 56% of responders selected 'yes', sufficient procedural guidance exists. Of that 56%, 27% were CAP Contractors and 29% were Federal Staff. Forty-four percent responded 'no', insufficient procedural guidance exists. Of that 44%, 23% were CAP Contractors and 21% were Federal Staff.



Question 1.1.1 - If NO, what additional topics would be helpful?

Those who did not believe DOE OAPM Procedural Guidance is sufficient had the opportunity to provide additional topics they felt would be beneficial. The following list is lengthy to provide comprehensive feedback for OAPM. Responses have been grouped by categories, summarized, and are in no particular order.

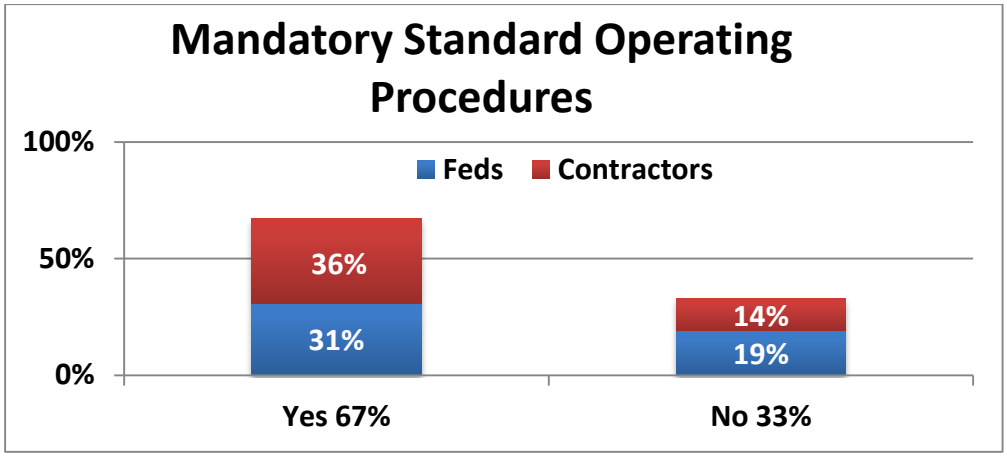
- Guidance
  - [Several comments from both (C) (F)]: Publish a comprehensive guide for interpreting the 32 EVMS Guidelines that is more specific than the National Defense Industrial Association (NDIA) Intent Guide
  - (C) New review process documentation
  - (F) Integrated Baseline Review (IBR) Guidance
  - (C) Big data call requirements
  - (F) Guidance for projects that are outside of the norm
  - (C) Formally send procedural change notices from the local DOE offices
  - (F) Make DOE policies more directive and mandatory in nature, such as mandatory WBS structures/elements/descriptions
  - (C) Create an addendum tailored for Administrative Contracting Officer (ACO) use
  - (F) Specific guidance on how to report EVM on Operations Fiscal Year Work Plans and monthly reports
  - (C) Guidance on Control Account Manager (CAM) notebooks
  - [Both (C) and (F)] Use guides to provide clarity on expectations, situational variations

    - (C) Be very clear on the requirements, leave as little room as possible for interpretation
- Training
    - (F) Training to consistently apply the standardized practices across all DOE projects
    - (F) Add a common training platform for HQ field and contractor Systems
    - (F) Continue development of the Environmental Management Enterprise Requirement System (EMERS) system and use that instead of having two systems; one for OAPM and one for Environmental Management (EM)
- OAPM Website
    - (F) Maintain the Lines of Inquiry (LOI) and/or Criteria and Review Approach Documents to be used in EV certification reviews and surveillances in a central library that is accessible to the field
    - (C) Create a process that allows questions to be submitted to an OAPM Subject Matter Expert (SME) regarding 'vague ideas' and ensure consistency by documenting the questions and answers
    - (F) Update OAPM website to include latest version of the OMB Circular A-11 Capital and add placeholders and status for documents under construction
- Planning Guide-- WBS Structure Guidance
    - (F) Develop and provide a WBS structure down to level three and make it a contract requirement for reporting progress and earned value on major system acquisitions
- Quality and Consistency
    - [Both (C) and (F)] Improve the quality and consistency of the material that exists
    - (C) Improve consistency of the guidance; reduce personal interpretations of requirements between the PMSO and OAPM review teams
    - [Both (C) and (F)] Ensure published guidance matches the actual practice or that the actual practice follows the OAPM standard operating procedures
- Contractor EVMS Certification Requirements
    - (C) Specific criteria used to analyze data to address issues well in advance of a certification review
    - (C) Provide additional attributes measured in the analytical approach, and a rubric for pass/fail score
    - (C) Define the minimum per EIA-748 criteria that will satisfy DOE OAPM in achieving and maintaining a compliant EVMS
    - (C) Specify rules for handling errors, mistakes or corrections discovered during self-assessments, reviews, and audits
- Planning
    - (C) Create guidance relative to Element of Cost (EOC) co-mingling, In Accordance With (IAW) subcontractor plans, $0 budget WPs, and PP rolling wave
    - (C) Specify rules for establishing baselines during CD-1 and CD-2

    - (C) Identify guidance for Control Account length and alignment to funding
    - (C) Establish quantifiable backup expectations for claiming work performed
- Work Authorizations – (C) Clearer guidance regarding the process for updating
- Schedule
    - (C) List schedule traceability expectations
    - (C) Provide guidance for properly resource loading a schedule
    - (C) Identify schedule health expectations and dispositions allowed
    - (C) Provide guidance regarding Critical path/Driving path for completing contracts
- Change Control - (C) Provide Freeze Period definition
- MR & Contingency Usage – [Both (C) and (F)] Differences in use relative to scope changes
- EACs – (C) Clearer guidance on the process of updating
- Analysis
    - (C) Provide examples of good and bad variance analysis, root cause analysis, and corrective actions
    - (C) Define VARs (components, SPI/CPI/TCPI tolerance thresholds)
- General
    - (C) Specific expectations regarding non-capital asset, expense funded tasks
    - (C) How to address delays due to funding in the EVMS tools
    - (C) How to address LOE that extends past the supported discrete effort that is delayed

Question 1.2 – DOE Order 413.3B is mandatory (unless exemption granted) and provides the 'what'. DOE uses guides (DOE G 413.3-XX series) and handbooks (WBS for example) to provide the 'how' which are not currently mandatory. OAPM uses SOPs (detailed procedures) which are mandatory within OAPM. In terms of EVMS, would mandatory 'how to' procedures that provide instruction for 'how' to conduct compliance reviews, guideline interpretation, scheduling, etc. assist in ensuring consistency among DOE review teams and for the contractor to know what to expect?

A majority of 67% of responders selected 'yes', mandatory SOP would be helpful, while 33% stated 'no'. Of the majority, 36% were CAP Contractors and 31% were Federal Staff. Of that 33%, 14% were CAP Contractors and 19% were Federal Staff.



Question 1.2.1 – If NO, what are your concerns with this approach?

This question regarding mandatory Standard Operating Procedures elicited many comments and concerns, even from the people who answered "yes" to the question. There was quite a dichotomy of opinions, even from the same people. There is a perception that EVMS must be flexible and tailored in order to be effective because of the different types of DOE projects. Yet those same responders wanted consistency of interpretation of requirements from review teams with procedures to communicate those requirements without being too prescriptive. Categorized synopses of comments follow.

Concern: Mandatory SOPs would be too restrictive and would not allow for flexibility and tailoring

- (C) The problem with making guidance mandatory is that invites too prescriptive of oversight. The wide diversity of situations that exists within the DOE project portfolio is simply too broad to anticipate the 'best' solution for all projects. Mandatory guidance would simply create too restrictive a set and removes possibility of adapting to the specific needs of a project.
- (F) Though people want EVMS to be black and white – it isn't – there is a lot of gray. By instituting mandatory "how to" procedures, you will significantly reduce the flexibility to tailor EVMS to the given situation and, sorry for the brutal honesty, but the mandatory procedures would always be changing and besides, some of the program offices wouldn't follow them anyway.

- (F) Mandatory requirements and various staff member's interpretations cause dissension. If an FPD is using EVMS appropriately they should not have 'forced requirements' rather they should be able to be flexible and somewhat creative.
- (F) Yes and no - Mandatory exit criteria from the review would set a basis for understanding that at a minimum this is the expectation of the review. I think especially given that I am NNSA and we have a different type of contracting mechanism, mandatory and all-encompassing is too much to ask. Necessary and sufficient to pass review is more the type of guidance I would suggest.

Concern: Need for consistency in reviews and interpretations of requirements by surveillance teams

- (F) Detailed "how to" documents would help to minimize variations in EVMS reviews due to differing interpretations and subjectivity.
- (F) Currently OAPM and the different Project Management Support Offices (PMSOs) have different approaches to EVM certification and surveillance review, which adds an additional level of variation in Departmental reviews of contractor EVM systems.
- (C) People have interpreted these guides differently and will continue to do so in the future. If we get to a point of having to write down a path forward for every scenario, we could be overcome by rules versus common sense.
- (C) There would be much less interpretation by review contractors if there was a set of specific procedures of how to implement an EVMS.

Concern: Need to improve communication of the requirements

- (C) Another concern is when requirements change. Often these changes are passed along by word of mouth (Grapevine) or through Energy Facility Contractor's Group (EFCOG) and not through proper contract channels.
- (C) DOE must publish the criteria used to score contractors (metrics attributes, etc.) and the rationale to support these criteria. Instituting changes to reviews and interpretation and rigor by 'audit' without first communicating differences and expectations is not proper protocol, nor is it good use of resources.

- (C) Rules and concepts change often and notification down to the Contractor does not happen quickly. Often times we learn of an interpretation change during a review and then end up with a CAR to correct. It would be better served for the Contractor to be informed in advance of the implementation date of the change.

Concern: Mandatory or Non-mandatory

- (F) It is always helpful to know the "mandatory" requirements to ensure consistency where intended, but that doesn't mean everything should be mandatory since all projects are not the same. Additionally, compliance reviews shouldn't consider the guidance areas as "mandatory" but rather ensure that applicable requirements are being met.
- (F) The OAPM SOPs have not gone through the DOE Directives Process (RevCom). Making the OAPM SOPs mandatory "how to" procedures bypasses the directives process, essential creating "rogue" directives. The OAPM SOPs should go through RevCom and become formal DOE directives. Then we should make these directives mandatory for our contractors by including them in the List B of our contracts.
- (F) A non-mandatory guide is useless.
- (C) A standardized interpretation / expectation from DOE-HQ of the EVMS guidelines and 413.3B guides would be very helpful to all contractors as well as DOE.
- (C) Yes, with a caveat that OAPM procedures and "how to" instructions are mandatory for contractors only if they are included in the contractor's contract with DOE. OAPM appears to not recognize their reviews should be constrained to contract requirements. If they disagree with the requirements in a contractor's contract and/or the DOE local site offices expectation for EVM implementation, they need to resolve it with the DOE site office, not take it out on the contractor.

Topic 1 Findings Summary: A comprehensive Interpretive Guide within DOE would enable EVMS review teams and the contractors being reviewed to jointly understand the meaning of

the guidelines and how compliance is evaluated. [H&A Note: At the time of survey release, OAPM had not yet announced plans to develop an EVMS guidelines interpretation document. The official announcement was made via Webinar on April 1, 2015.] However, opposing views feel that additional procedural guidance and mandatory standard operating procedures could be too prescriptive and inflexible.

Review methodology was identified as a topic that should be more well-defined. Specifically, the topic of consistency of EVMS reviews was identified as an issue. There were many responder comments regarding the desire for consistency in Federal reviews, both between PMSO-led and OAPM-led, and between Review Directors within each group. For example, the comments included "Consistency in the reviews would be helpful so that everyone could best prepare and be reviewed equally", and 'the review process has become extremely difficult and non-value added…some major concerns are the lack of consistency on expectations at the various levels within DOE". Reconsidering and redefining a review approach that is streamlined to focus on specific EIA-748 guidelines and/or common problems could enhance the current EVMS audit approach.

Survey responders who noted disadvantages to additional procedural guidance and standard operating procedures pointed out the wide diversity of situations that exists within the DOE project portfolio and highlighted the fact that there is not one ideal solution for all projects. Specifically, Environmental Restoration, Research and Development Information Technology (R&D IT), and Deactivation and Decommissioning (D&D) projects were mentioned.

Other recommendations given for Topic 1 include more EVM Subject Matter Experts who are well-trained and have practical experience, and developing a partnering environment by addressing working relationships between APM personnel and program office personnel. Additionally, some survey responders noted that because changes are not received formally from the local DOE office, it is challenging to keep up with the latest policies and procedures.

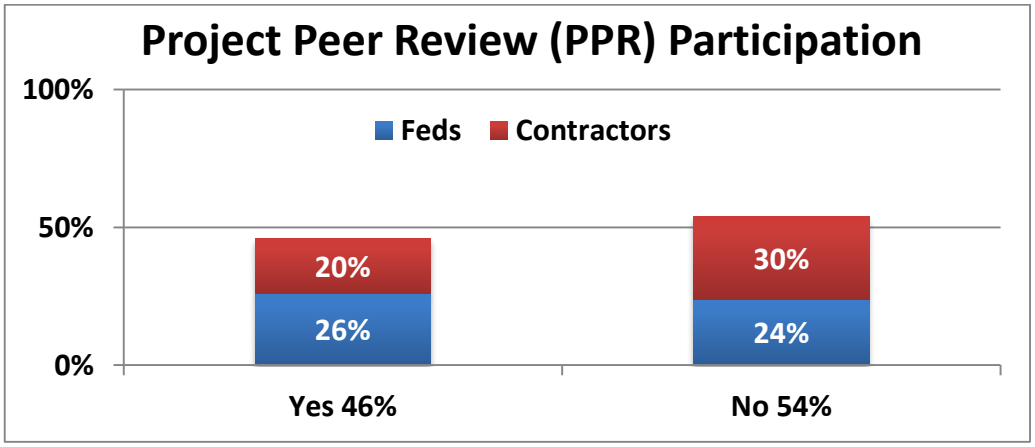
Topic 2 – Training

The survey stated "Trained resources are a key to success. DOE is interested in comments relative to the sufficiency of existing training and options for improving the knowledge base to provide consistency and depth."

There was a robust training section on both the Federal Staff and CAP Contractor questionnaires. Some of the training questions were different for the Federal Staff and the CAP Contractors. When both surveys included the same question, both question numbers will be listed, with the CAP Contractor survey question number listed first, followed by the Federal Staff survey question number.

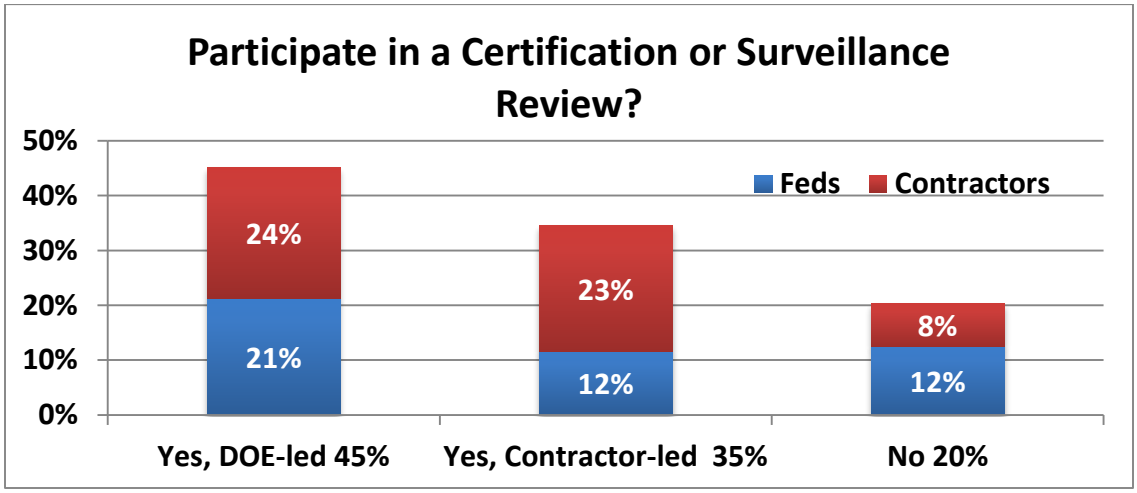
Question 2.1 / 2.5 - Have you participated in a DOE Project Peer Review (PPR) with respect to EVMS?

In total, 46% of responders selected 'yes', they have participated in a Project Peer Review (PPR) with respect to EVMS. Of that 46%, 20% were CAP Contractors and 26% were Federal Staff. Fifty-three percent responded 'no', they have not participated in a PPR. Of that 54%, 30% were CAP Contractors and 23% were Federal Staff.



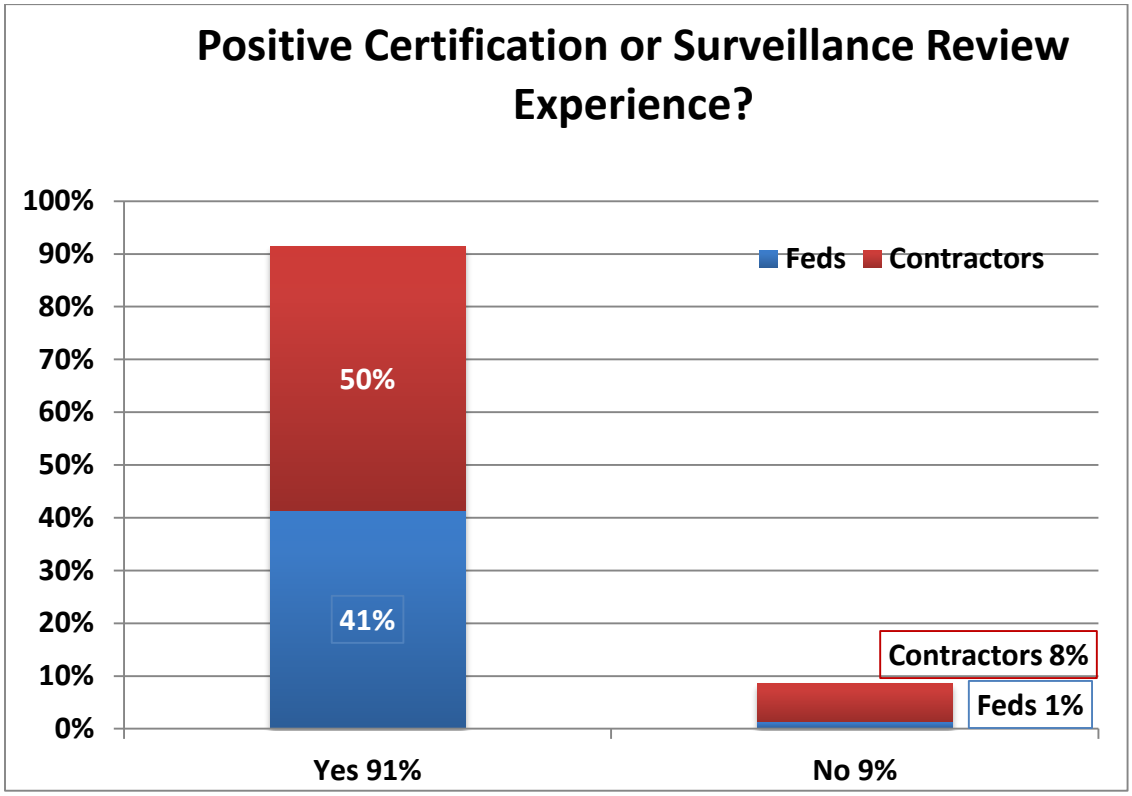
Question 2.1 / 2.6 - Have you participated in a Certification or Surveillance Review?

In total, 45% of responders selected 'yes', they have participated in a DOE-led Review, 24% were CAP Contractors and 21% were Federal Staff. In total, 35% selected 'yes', they have participated in a Contractor-led Review; 23% were CAP Contractors and 12% were Federal Staff. Twenty percent responded 'no', they have not participated in a review. Some survey responders have participated in both DOE-led Reviews and Contractor-led Reviews.



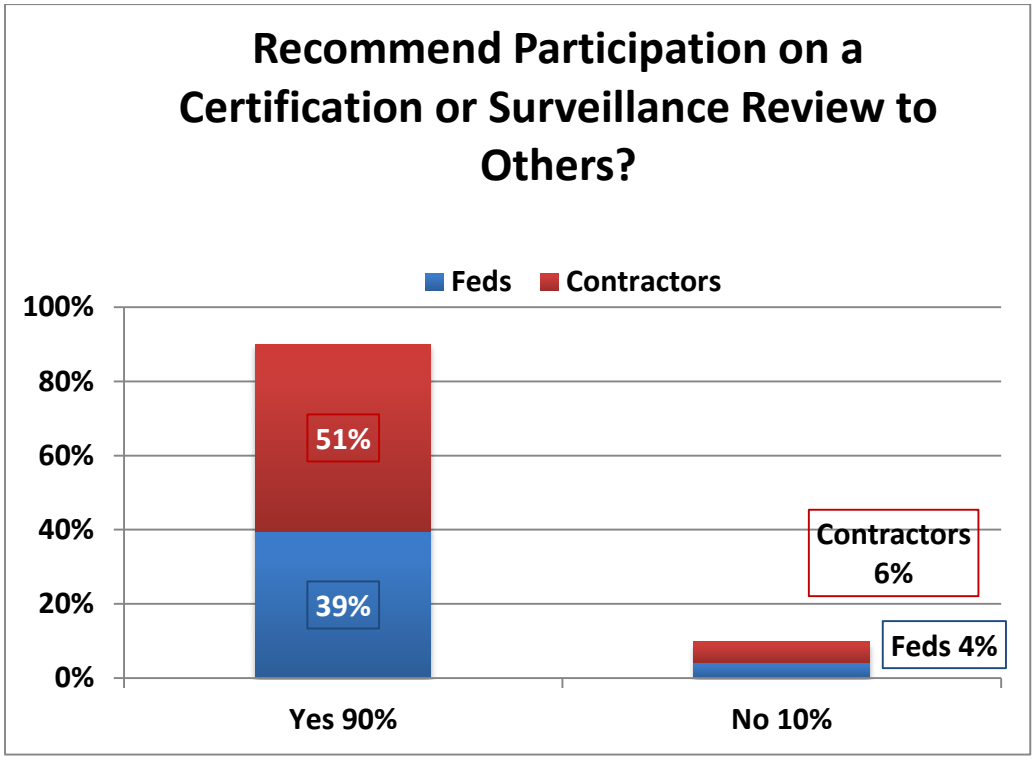
Question 2.1.1 / 2.61- If YES, was the experience worthwhile and increased your knowledge and effectiveness?

In total, 91% of responders who have participated in a Certification or Surveillance review selected 'yes', they thought the review experience was worthwhile. Of that 91%, 50% were CAP Contractors and 41% were Federal Staff. Nine percent responded 'no', the review experience was not worthwhile. Of that 9%, 8% were CAP Contractors and 1% was Federal Staff.



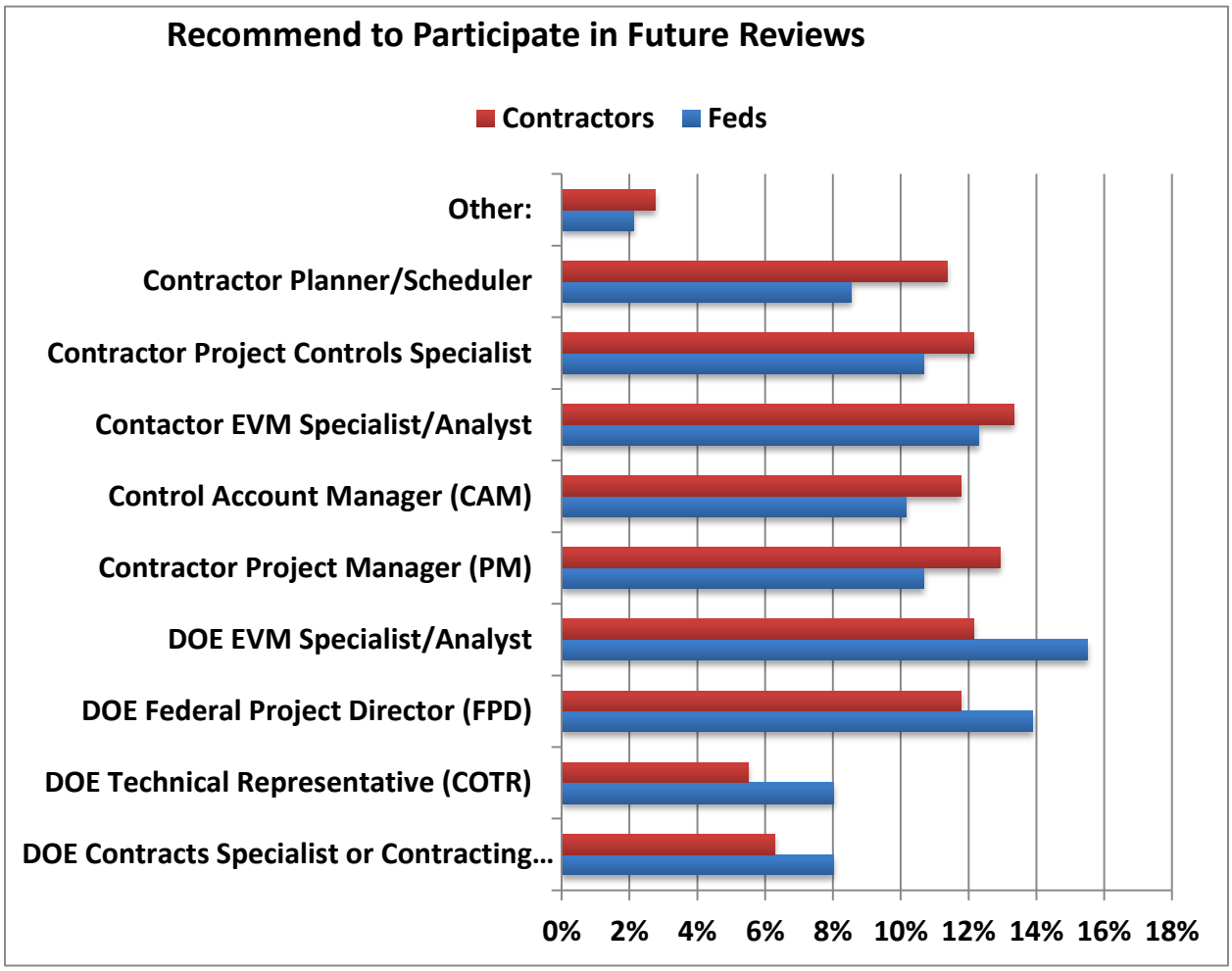
Question 2.2.2 / 2.6.2 - If YES, would you recommend that experience to others?

In total, 90% of responders who have participated in a Certification or Surveillance review selected 'yes', they would recommend the experience to others. Of that 90%, 51% were CAP Contractors and 39% were Federal Staff. Ten percent responded 'no', they would recommend the experience to others. Of that 10%, 6% were CAP Contractors and 4% were Federal Staff.



Question 2.2.3 / 2.6.3 - If YES, who would you recommend participate in future reviews?

This question focused on exactly who in their organizations (by titles) they would recommend participating in future certification or surveillance reviews. A broad selection was identified by survey responders as shown on the chart below. The 'Other' category allowed for a write-in recommendation and consisted of the following: Accounting Lead, All DOE decision makers above the DOE FPD, Project Team, Contractor Project Controls Managers, Accounting/Procurement, Business Services, and Senior Lab Managers directly responsible for projects.



Question 2.2.4 / 2.6.4 - If No, why not?

For those who did not consider the participation a worthwhile experience, the opinions centered around lack of a formal review process, lack of consistent direction, the team was unprepared, and lastly, the feeling that a review team should not include observers but only fully qualified people who can contribute to the mission.

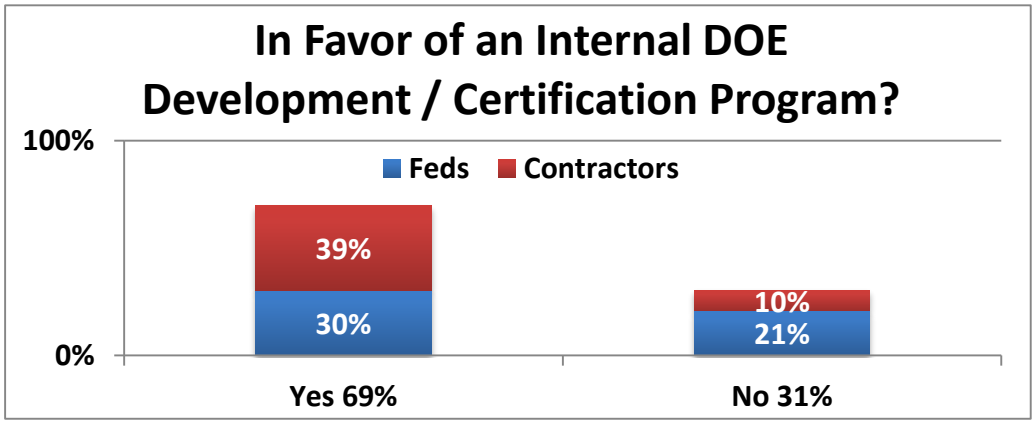
The next two survey questions concentrated on the development of an internal EVMS Development / Certification Program, presented as an option being considered for DOE employees. It could apply to those Federal Staff who have EVM oversight, analysis, and assessment responsibilities.

Question 2.3 / 2.9 –

Would you favor an internal DOE EVMS Development / Certification Program?

In total, 69% of responders selected 'yes', they would favor an internal DOE EVMS Development / Certification Program available or required for Federal staff only. Of that 69%, 39% were CAP Contractors and 30% were Federal Staff. Thirty-one percent responded 'no', they would not favor an internal DOE EVMS Development / Certification Program. Of that 31%, 10% were CAP Contractors and 21% were Federal Staff.

While the majority of the responders favored an internal DOE EVMS Development / Certification program, some commented about the specific aspects offered. For example, in terms of certification, some stated that they would favor an internal certification OR an equivalent certification from an outside vendor. Their concern was creating another DOE-specific credential that doesn't transfer to or is recognized by other Federal or commercial sector entities. Another comment was regarding the requirements of achieving the certification: "I have worked with individuals with EV Certifications. That alone does not make them effective." Some responders felt that the certification was appropriate for those new to EVMS but not the experienced people.

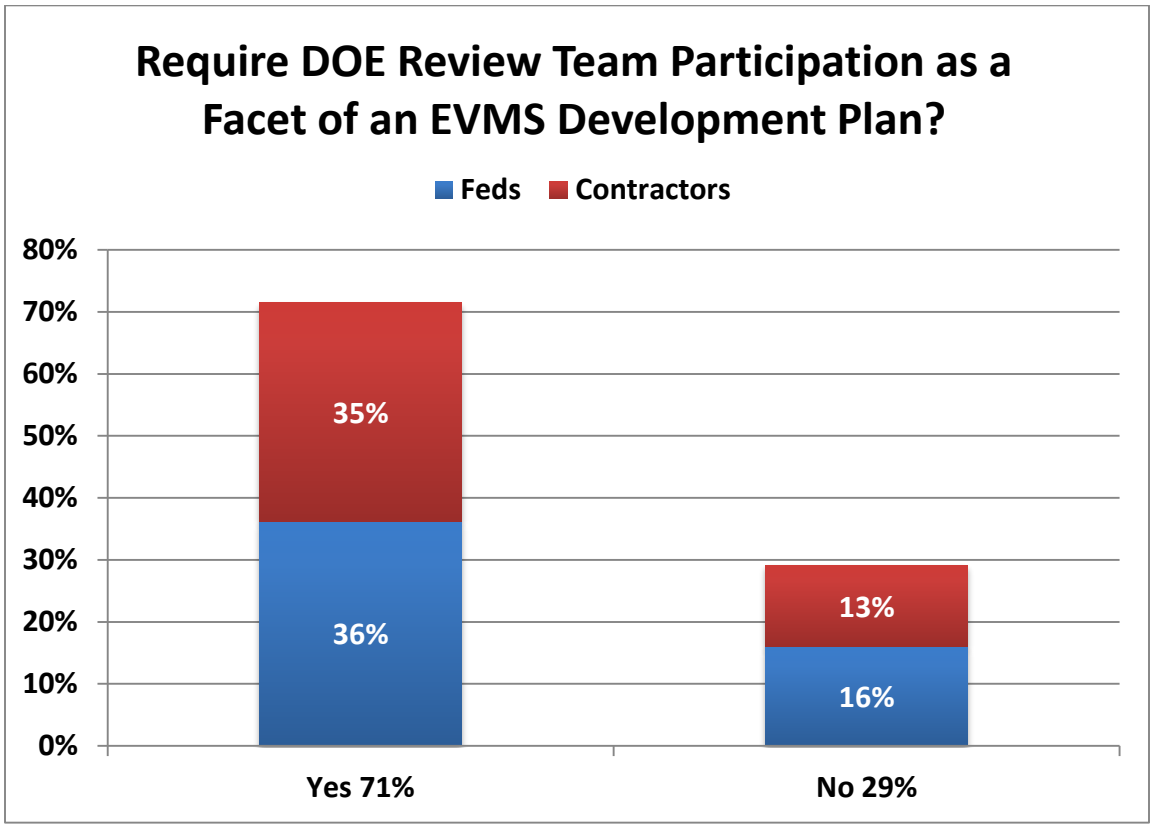


Question 2.4 / 2.10 -

Do you believe participation in a DOE review team should be a requirement as part of an EVMS development program?

In total, 71% of responders selected 'yes', participation in a DOE review team should be a requirement as part of an EVMS development program. Of that 71%, 35% were CAP

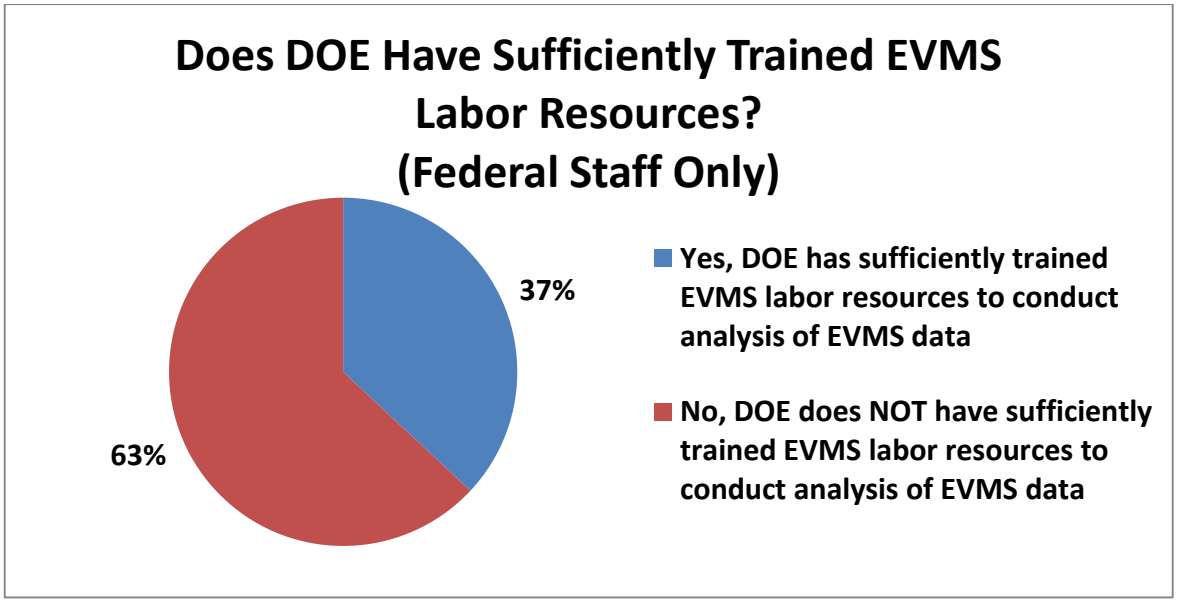
Contractors and 36% were Federal Staff. Twenty-seven percent were opposed. Of that 29%, 13% were CAP Contractors and 16% were Federal Staff.



Additional Topic 2 questions were asked only on the Federal Staff survey regarding EV Labor Resources, Training Guidance, and DOE's Project Management Career Development Program (PMCDP) Program.

Question 2.1 – Do you believe DOE has sufficiently trained EVMS labor resources to conduct analysis of EVMS data?

Sixty-three percent of the Federal Staff responders said 'no', they felt that DOE does not have sufficiently trained EVMS labor resources to conduct analysis of EVMS data and 37% said 'yes', DOE has sufficiently trained labor resources.



Question 2.1.1 - If NO, why do you think that is?

The main reasons survey responders did not think DOE has sufficiently trained EVMS labor resources to conduct analysis included: PMSO and OAPM generally lack DOE field experience which contributing to the lack of EVMS knowledge; an inconsistent training program within DOE; lack of tailored training; lack of training budgets; and EVMS not viewed as important by FPDs.

Examples of the Federal responder comments received on this topic are listed below and many reach further into the topic of DOE available training:

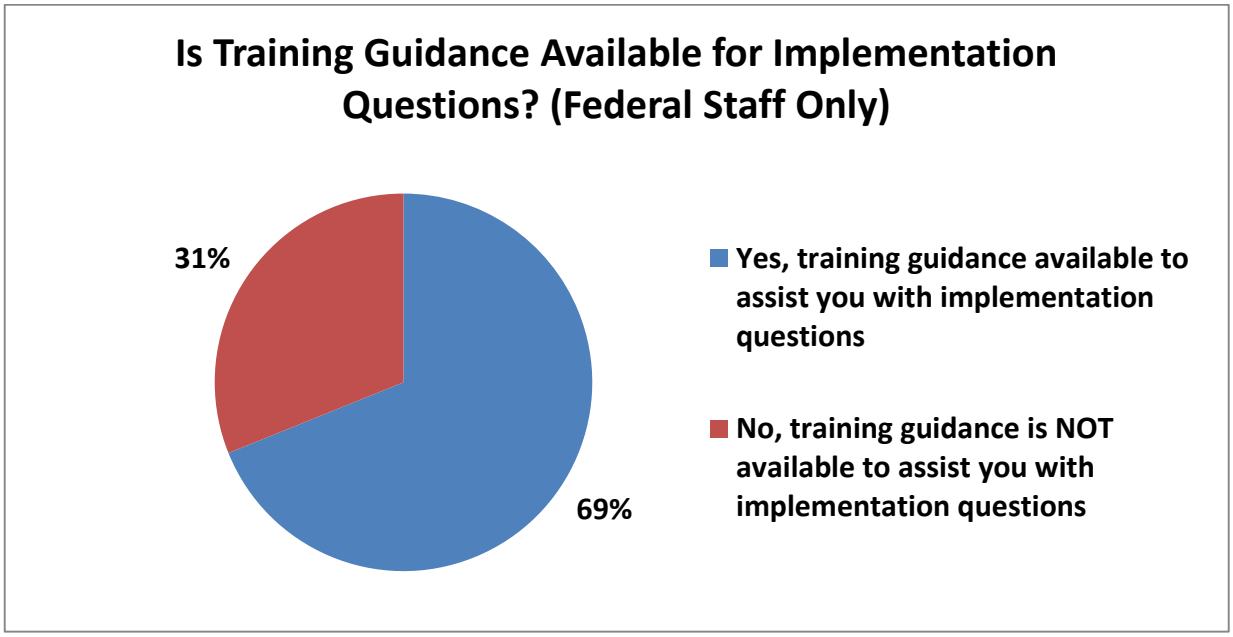
- Multiple responders noted that while the basics of EVMS are simple, it is the complexities at each individual site that make it more difficult. Requests for tailored training for specific sites and types of programs were made.
- Many responders identified lack of a consistent training program within DOE. Different levels of the organization sometimes contract for their own EVM training without using the courses available through the PMCDP. This leads to misunderstandings as the courses outside the PMCDP may not be conducted by instructors familiar with DOE while the PMCDP courses are endorsed by OAPM and tailored to incorporate DOE EVM processes.

- There were also responder comments regarding the lack of consistency of all parties (HQ/Field/Contractor) and it was noted that until all parties accept and adapt common platforms appropriate to the scale of projects, there will be discord, fear, and mistrust in process.
- Attending PMCDP courses is problematic because they are not readily available and travel / training budgets are tight. Also, because of the lack of confidence in the review teams, FPDs do not see EVMS as a valuable tool.
- Project Management, Project Controls or EVMS specialists, much less trained EVMS specialists. The FPD's get minimal training and don't use the data once back in the field. The OPM does not have a project controls, scheduler, planner etc. job descriptions.
- Contracting officers and FPDs are not trained well enough in EVMS, even though in a compliant system it is a contractual requirement. For example, "senior leadership has not found it important to ensure their analysts/FPDs are sufficiently trained to perform their jobs at a high level of proficiency. Far too many FPDs do not understand how to interpret EVMS data and do not use it to assess performance."
- One responder noted that 'Training opportunities for Federal personnel in this area need to be increased. If you consider the current DOE training schedule (2015), EVMS Advanced (CHRIS Code – 002689) is currently the only offering on this topic during 2015. Training in this area (Basic & Advanced), in addition to a course that offers practical applications for FPDs/IPTs should be expanded." Note: This response indicates a lack of knowledge in the field that there is a Basic EVMS 24/7 course that is offered online.
- One responder stated that the current means of training is inadequate and suggested that it is most helpful to initiate EVM training at the start of each contract, to include all field contract personnel (DOE & Contractor) and HQ Project Liaison Staff. The responder felt that would facilitate a cooperative environment and stated "Trust will grow and learning can be enforced with role accountability."
- Many positive responder comments were made regarding the OAPM Road Shows. This training was well-received and similar training in the future would be

beneficial. Other positive comments were received regarding the survey suggestion for on-the-job training and rotational assignments to increase experience.

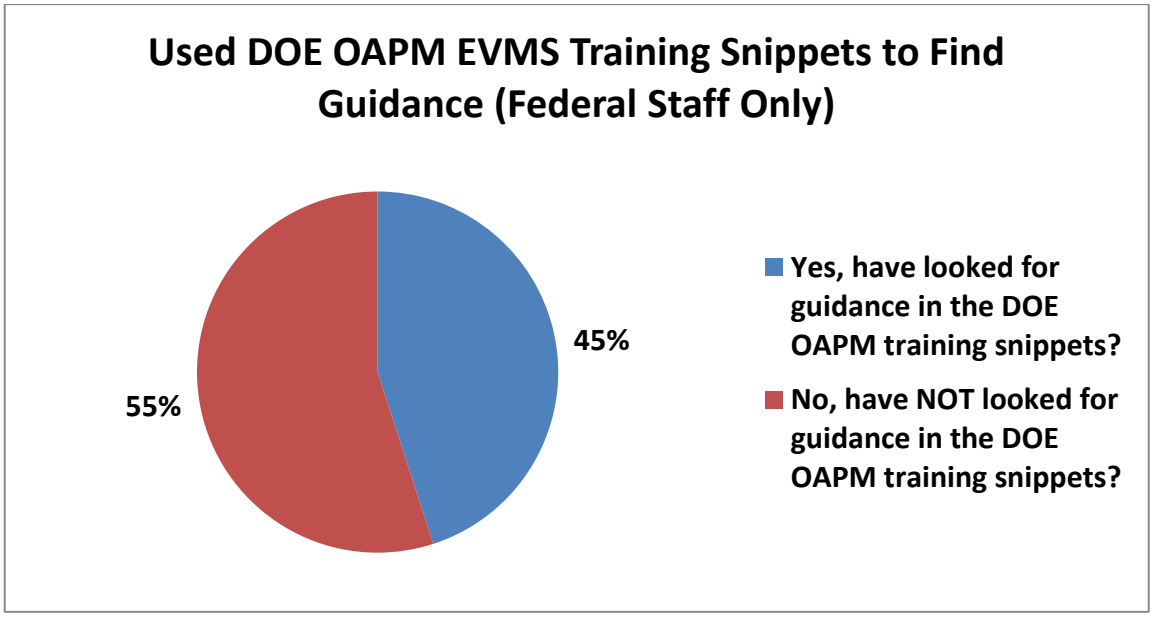
Question 2.2 - Is training guidance available to assist you with implementation questions?

This question was asked to Federal Staff only. Sixty-nine percent of the responders said 'yes', training guidance is available to assist with implementation questions while 31% said 'no', training guidance is not available to assist with implementation questions.



Question 2.2.1 - If NO, have you looked for guidance in the DOE OAPM Training Snippets?

Over half of the Federal Staff responders said 'no', they have not looked for guidance in the DOE OAPM Training Snippets while 45% said 'yes'.



Question 2.2.2 - If YES, what additional topics would be helpful?

These two survey responses indicate that people want more detailed information, but seem unaware of the Snippet resource created for that purpose.

Some Federal responders recommended additional Snippet topics, including:

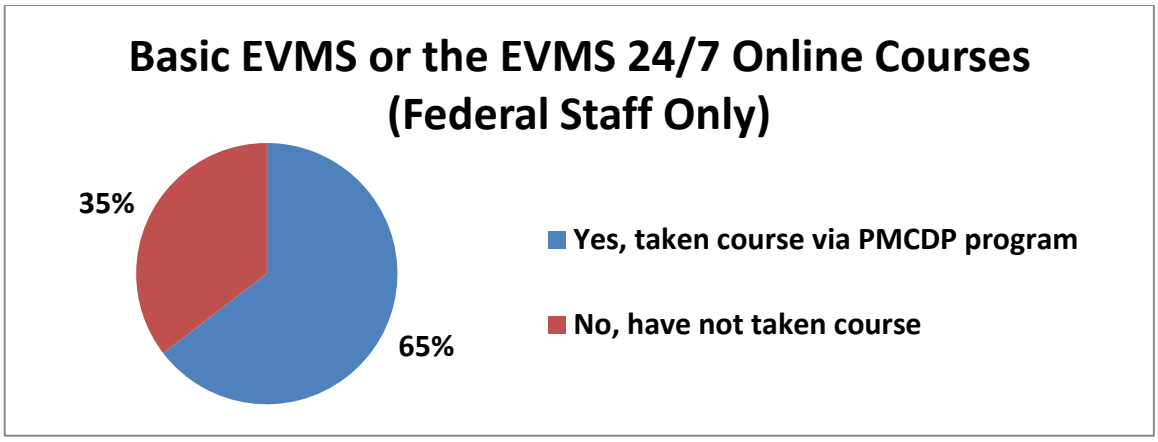
- EVMS project pitfalls
- Awareness of bad practices that cause EVMS performance data to appear better than it really is:
  - "Call the pocket" method of ensuring SPI/CPI indices remain at or near 1.0
  - Front loading the baseline
  - Overly aggressive baseline changes
  - Inappropriate uses of MR
  - Poor scheduling practices
- Contractor PMs, CAMs, and FMs Roles and Responsibilities
- Contracting practices
- Conducting an EVMS CAM Interview

It was also noted by one responder that while DOE OAPM Training Snippets are a helpful resource, they cannot replace practical experience and formal training.

Question 2.3 - Have you taken the following courses via DOE's PMCDP Program?

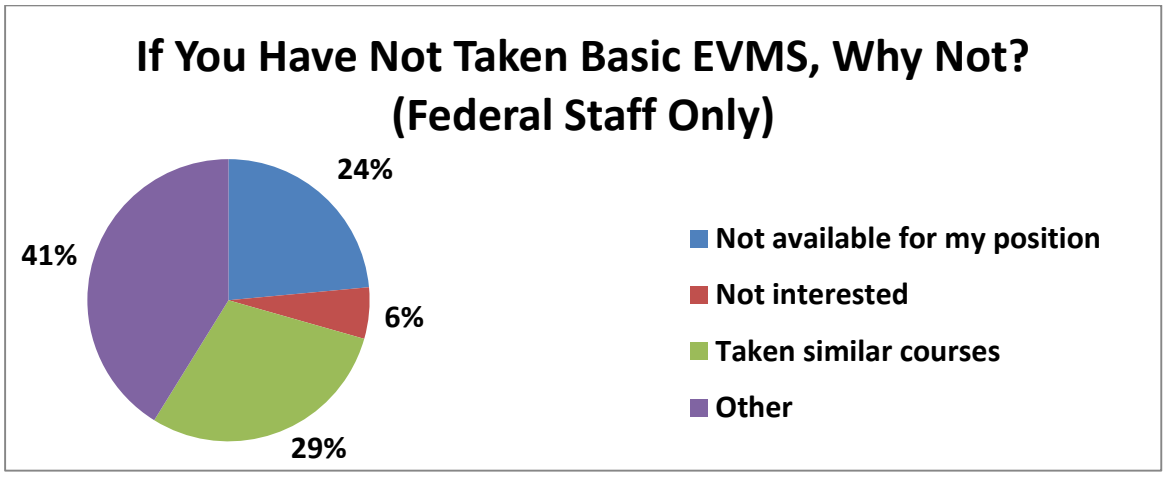
Question 2.3.1 - Basic EVMS or EVMS 24/7 Online Course

Sixty-five percent of Federal Staff responders have taken the Basic EVMS or EVMS 24/7 Online Course while 35% have not.



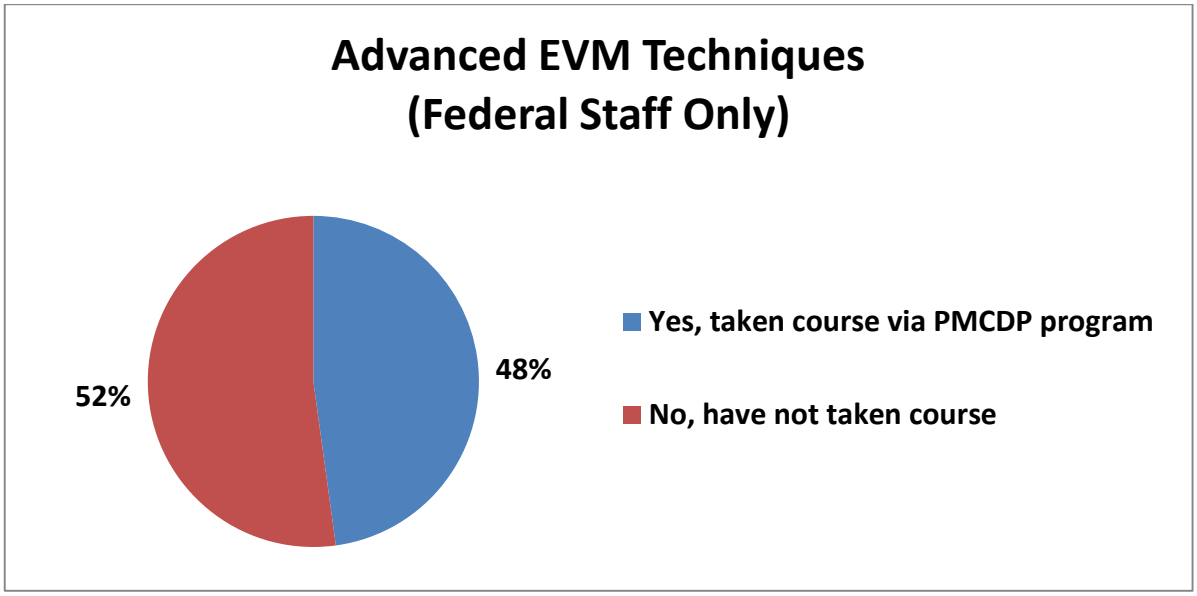
Question 2.3.1.1 - If no, why not?

Of the Federal Staff who have not taken Basic EVMS, 29% have taken similar courses, 24% stated the course was not available for their position, and 6% were not interested. Forty-one percent gave other reasons such as: no time; not essential to my current job; DOE not offering this FY; low priority; and didn't know about it.



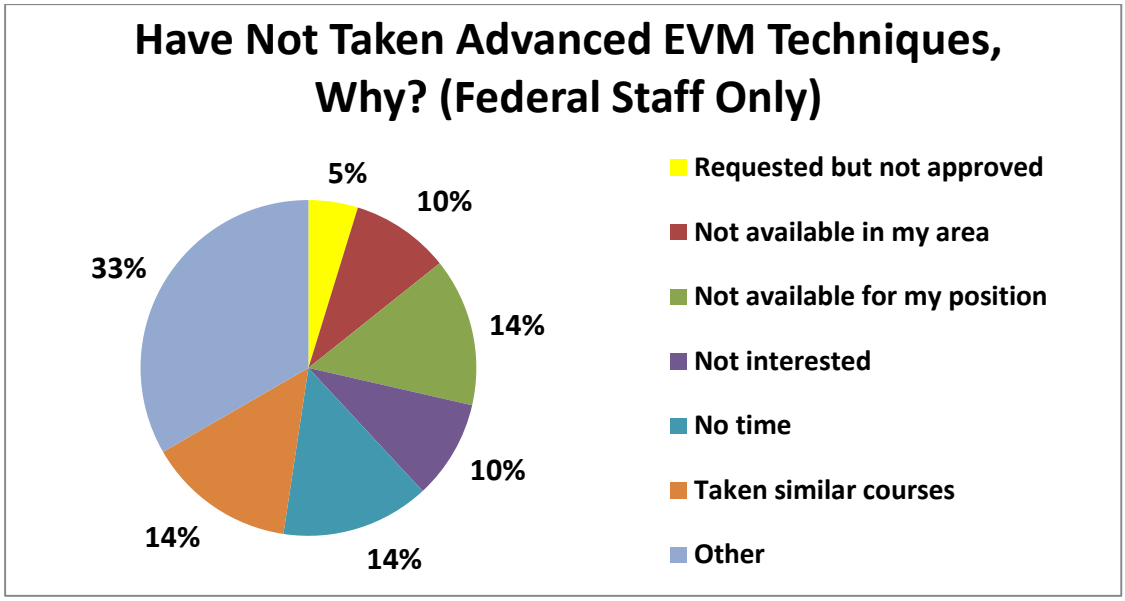
Question 2.3.2 - Advanced EVM Techniques

Forty-eight percent of Federal Staff responders have taken the Advanced EVM Techniques course while 52% have not.



Question 2.3.2.1 – If no, why not?

Of the Federal Staff who have not taken Advanced EVMS, 14% stated they did not have enough time, 14% said they have taken similar courses, 14% said the course was not available for their position, 10% were not interested, 10% said it was not available in their area, 5% said they had requested it but it was not approved, and 33% gave other reasons. Other reasons were very similar to the Basic EVM 'other reasons' and consisted of: no time; not essential to my current job; DOE not offering this FY; have taken similar EV training; low priority; not required for my position; planning to take soon; and scheduling/timing issues.



Question 2.4 - What other courses have you taken that you found beneficial?

Federal Staff Responders have taken the following courses and found them beneficial:

- Humphreys & Associates public EVMS seminar
- Tailored EVMS Class in the Air Force
- The Road Show
- UCLA courses in Accounting, Engineering Management
- Earned Value Management (Online) by Humphreys & Associates
- Project Management Simulation
- Scheduling (Humphreys & Associates) offered to OAPM
- PMP Boot Camp (via PMI)
- EVMS Courses sponsored by the Defense Acquisition University
- PMI Certification course and exam
- Federal Budget Process
- PM Systems and Practices
- Planning for Capital Asset Projects
- Fundamentals of work planning and controls
- DCMA on-line EVMS courses
- AACE International professional societies annual meetings
- SRNS EVMS Overview

- Graduate courses from Washington State University
- Standard courses on scheduling techniques
- Advanced Risk Management

Some of the Fed Staff Responders said that the best training has been on-the-job training and experience. Responders commented that EVMS knowledge is gained through reading and experience. Additionally, one responder stated that there are not many classes available within DOE/NNSA regarding EVMS and its implementation and use.

Topic 2 Findings Summary:

Less than half of all the survey responders have participated in a DOE Project Peer Review (PPR) with respect to EVMS. The majority of the survey responders has participated in a Certification or Surveillance Review, and would recommend the experience to others. Additionally, the majority of the responders favored an internal DOE EVMS Development / Certification program. The majority of responders has taken the Basic EVMS course but has not taken the Advanced EVMS Techniques course. However, many responders have taken other similar courses and other courses that were beneficial.

Responders said DOE EVMS review participants should have initially completed EVMS-related training and successfully passed a certification exam. Responders suggested that Program Managers and the Feds on site are key players that should be trained and certified, but it was also noted that the training needs to be not only in the classroom, but also include on-the-job experience. Hands on experience, actual implementation experience, and experience with tools and procedures were cited as very important by many responders.

One Federal responder suggested that there should also be an EVMS 'Community of Practice': "It should be mandatory for anyone certified to lead an EVMS review that they participate in this process (sharing of lessons learned, opportunities for improvement, notable practices). In addition, teams should be comprised of personnel across the complex and mission, so DOE has common expectations across offices." Other responders suggested similar cross-site sharing of information.

While there were numerous comments from Federal responders suggesting additional training and certification, particularly for management, there were also responders that felt

too much time and money is spent on certification when employees already have experience and were deemed qualified to do the job. Additionally, responders noted that there are already standardized certification programs like PMI, AACE that could be used and then possibly supplemented with DOE-specific training rather than 're-inventing the wheel'. One responder pointed out that mandatory certification could greatly reduce the number of people available to participate in reviews while everyone is getting "certified". Others recommended a 'test out' option to achieve any new DOE certification based on experience.

Another stated "I just wanted to reiterate my strong opposition to an internal EVMS Certification Program. EVMS concepts are the same in any industry and it is more credible for our staff (federal or contractor) to have professional certifications that mean something beyond DOE, and even for federal contractors to have the same certifications. It is embarrassing that our contractors and world class companies encourage Project Managers to further their skills and qualifications through PMI, and yet that is not 'good enough' for DOE, yet people with 15+ years managing projects cannot get certified due to administrative reasons that have nothing to do with their ability to manage a project. Please don't do this to our EV and project controls staff too!"

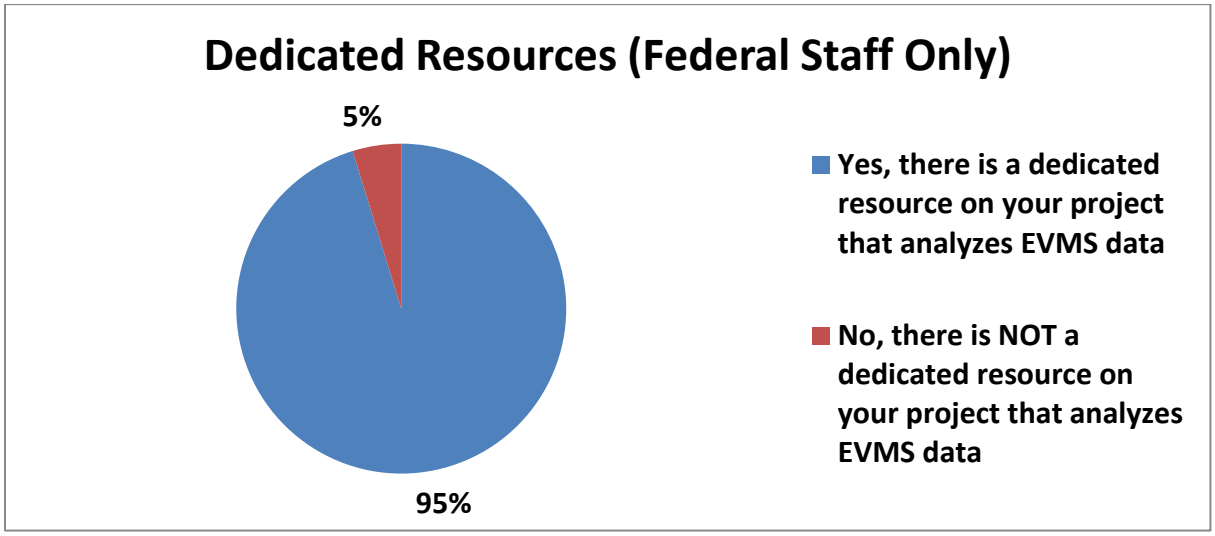
Topic 3 – DOE Skilled Labor Resources

The survey stated "To ensure consistency in interpretation and guidance to the contractors, DOE needs to identify the EVMS related functional resources. This series of questions relates to identifying adequacy of existing resources."

Topic 3 Questions were only asked on the Federal Employees and Staff Support version of the survey.

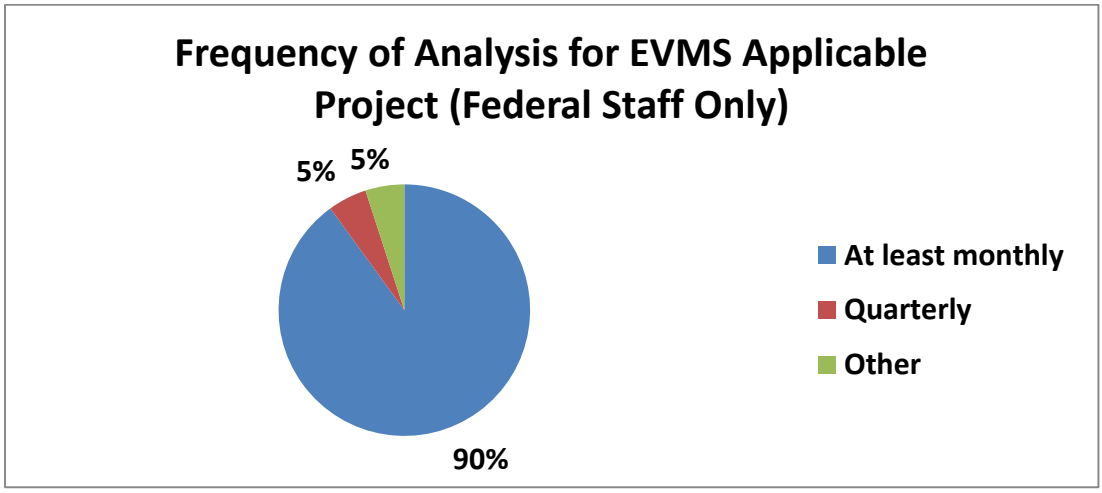
Question 3.1 - Is there a dedicated resource on your project that analyzes EVMS data?

Ninety-five percent of Federal Staff responders with active EVMS projects stated that 'yes', there are dedicated resources to analyze EVMS data. Five percent stated they did not have dedicated resources to analyze EVMS data.



Question 3.1.1 - If YES, what is the frequency of analysis for each EVMS applicable project assigned?

Ninety percent of the Federal Staff responders said that the frequency of the analysis is at least monthly. Five percent said the frequency of analysis is quarterly another 5% said 'Other' but did not clarify.

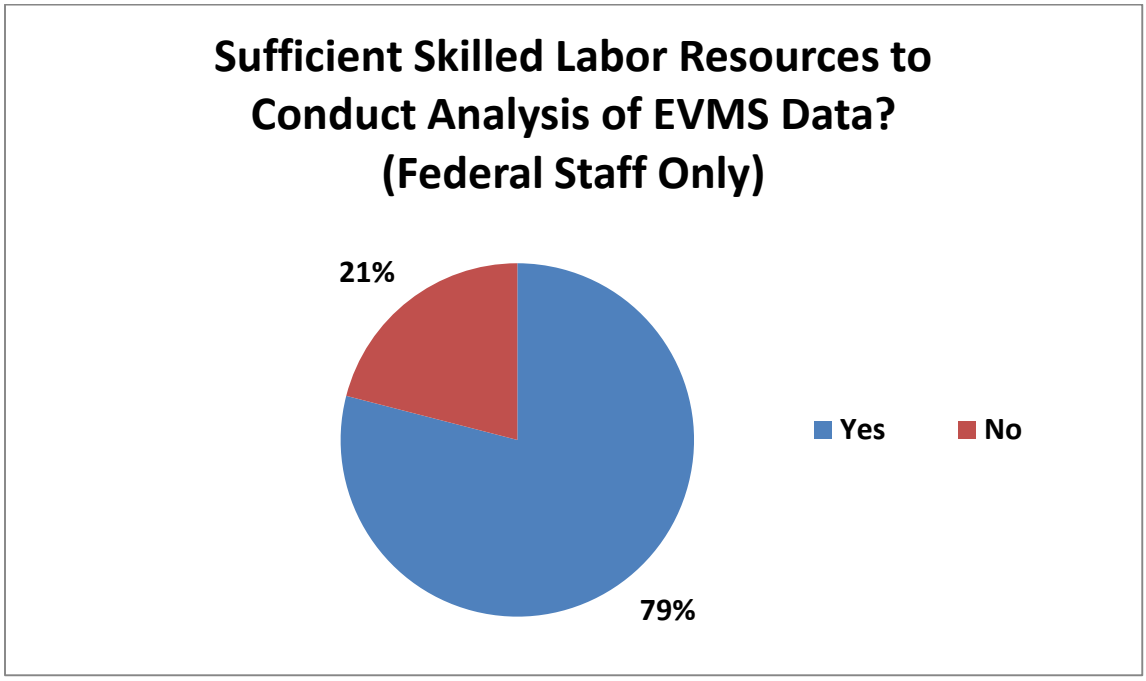


Question 3.1.2 - If NO, why not?

Of the five percent of Federal Staff responders who answered 'no', there was not a dedicated EVM resource on their projects; they all stated that this was because of lack of training.

Question 3.2 - Does your site have sufficient skill labor resources to conduct analysis of EVMS data for each EVMS-applicable project?

When asked the question in another way, seventy-seven percent said yes, they have sufficient skill labor resources to conduct analysis of EVMS data. However, this time twenty-one percent said no, they did not have sufficient skill labor resources to conduct analysis.

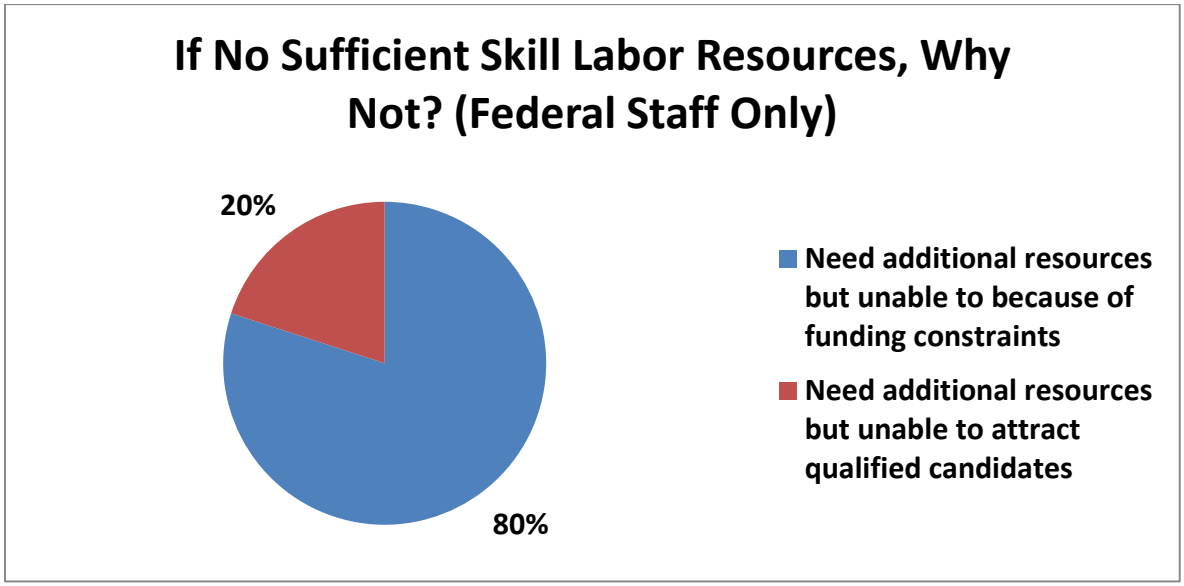


Question 3.2.1 - If YES, what is the frequency of analysis for each EVMS applicable project assigned?

All of the Federal Staff who answered this question stated that the frequency of analysis for their EVMS applicable project is at least monthly.

Question 3.2.2 - If NO, why not?

Eighty percent of the Federal Staff responders who said they did not have sufficient skill labor resources to conduct analysis stated that they are unable to staff up because of funding constraints. Twenty percent said it was because they are unable to attract qualified candidates.



Topic 3 Findings Summary:

The majority (83%) of Federal Staff responders said they had a dedicated resource who conducts the data monthly. Those who did not said it was because of lack of training.

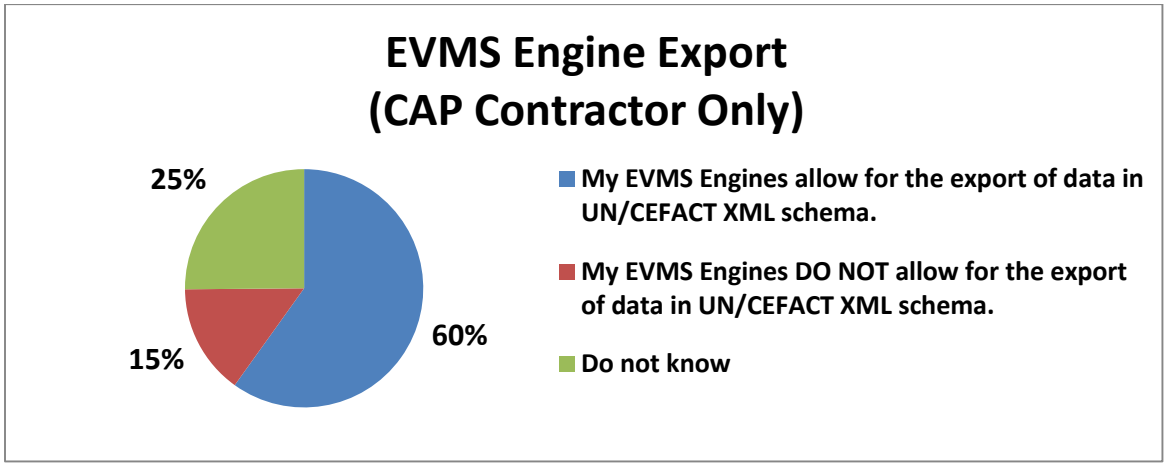
Of the 20% of Federal Staff responders who said they did not have sufficient skill labor resources to conduct analysis cited two reasons: Funding constraints for hiring; Inability to attract qualified candidates.

Topic 4 – Tools

This portion of the survey focused on determining what tools are being used. CAP Contractors were asked about EVMS cost, schedule, and reporting tools, while Federal Staff was asked about analysis tools.

Question 4.1 - Do your EVMS Engines (Cost/Schedule/Reporting) allow for the export of data in UN/CEFACT XML schema? (The UN/CEFACT XML schemas provide, among other things, a way for project management software applications to exchange schedule and cost data with each other.)

Sixty percent of the CAP Contractor responders said their EVMS cost and schedule tools allow for the export of data in UN/CEFACT XML schema, while 15% said they did not, and 25% did not know.

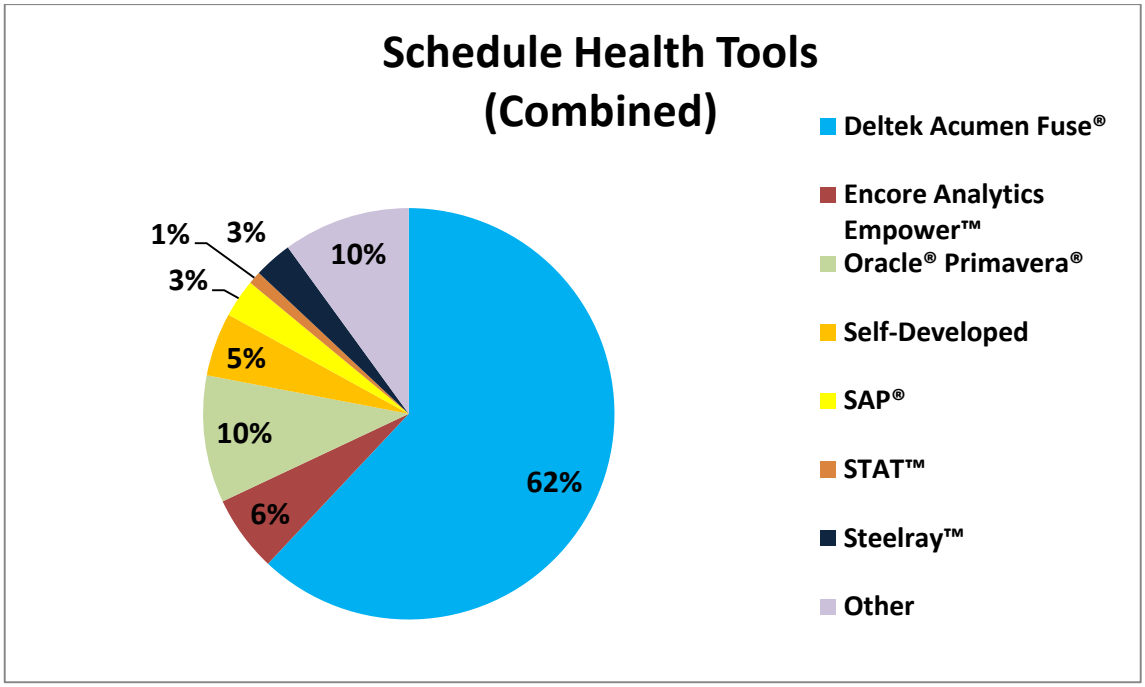


Question 4.2 - Identify what EVMS Data Analysis Tools are used where you work.

The next four charts summarize the software tools in use by survey responders. Both Federal Staff and CAP Contractors answered the questions relating to Schedule Health, EVMS Data Analysis, Risk Management, and PARSII tools. Some responders chose more than one tool in each of the software categories; other survey responders did not answer some or all of the tools questions.

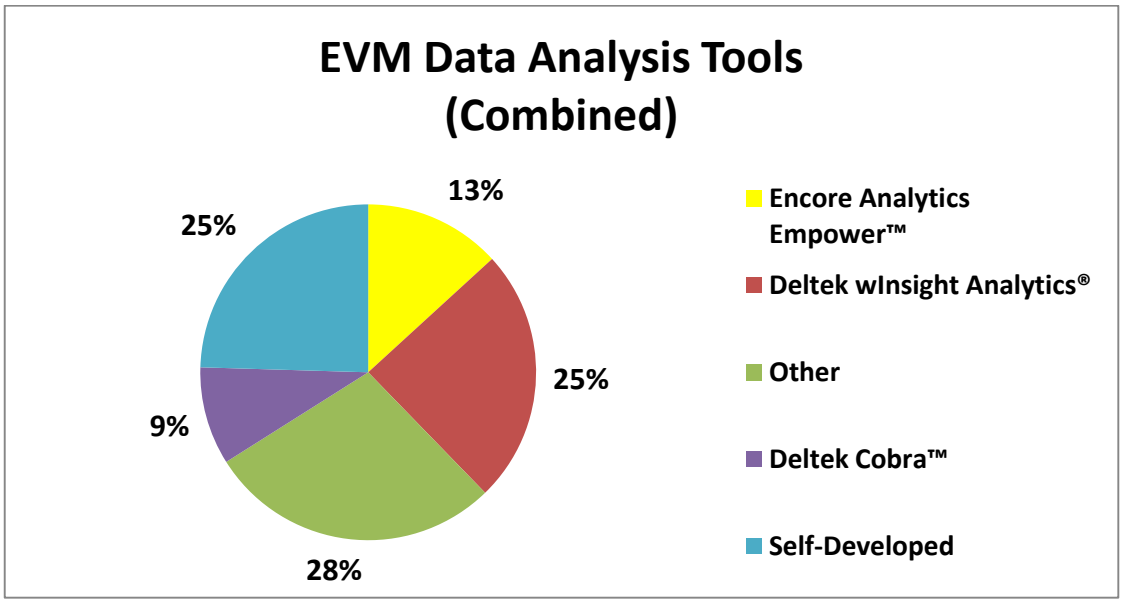
Schedule Health Tools

The most common tool being used was Deltek Acumen Fuse® at 62%. Ten percent chose Oracle® Primavera®. Ten percent chose 'Other' which included Pertmaster™, 14 point analysis, Technical Expertise, Clipper, and 'ad hoc'. Six percent use self-developed or 'homegrown' tools, 6% use Encore Analytics Empower™, 3% use SAP®, 3% use Steelray™, and 1% use STAT™.



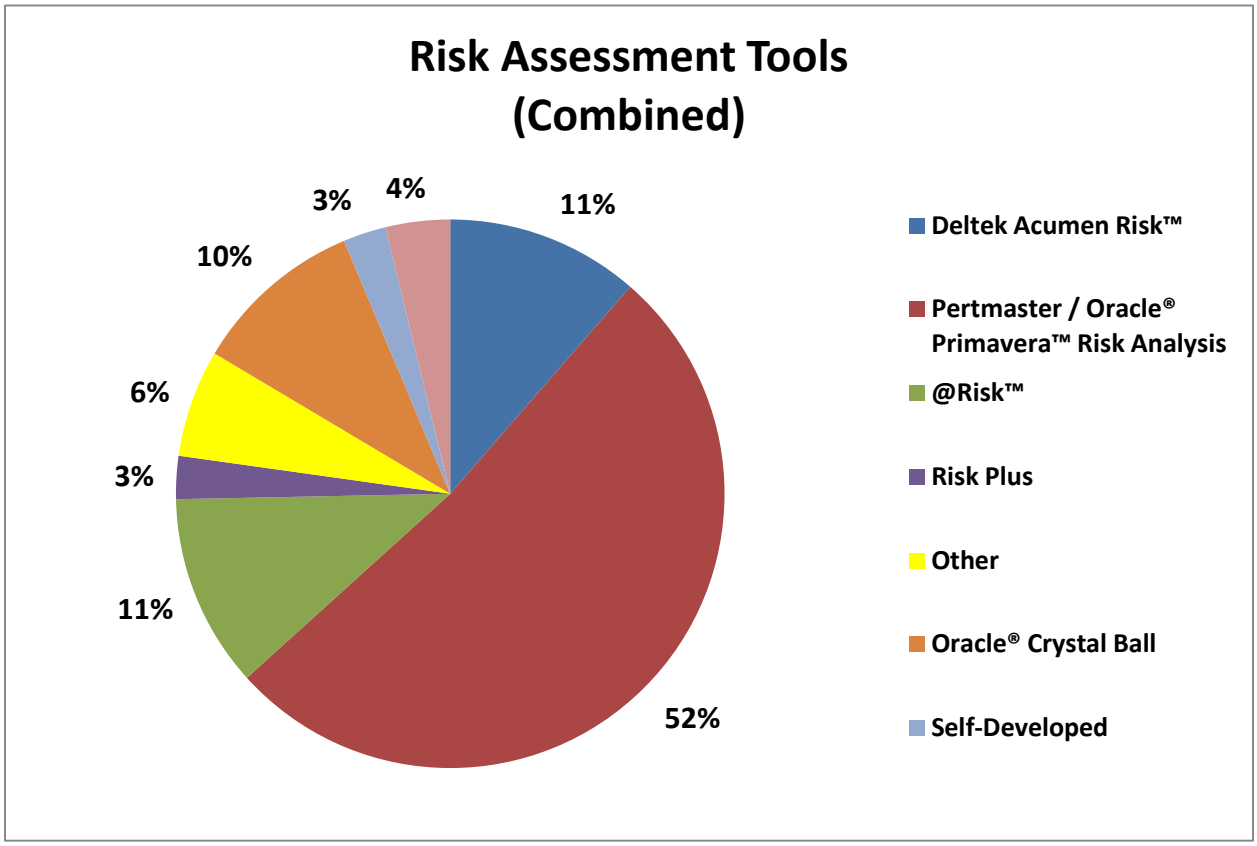
EVM Data Analysis Tools

Twenty-eight percent of the survey responders use Other Tools, such as HANDI, SAP®, Deltek-MPM™, PARSII, Cost Manager, and Technical Expertise. Twenty-five percent of the survey responders use Self-Developed tools including use of Microsoft Excel®, 25% use Deltek wInsight Analytics®, 13% use Encore Analytics Empower™, and 9% use Deltek Cobra™.



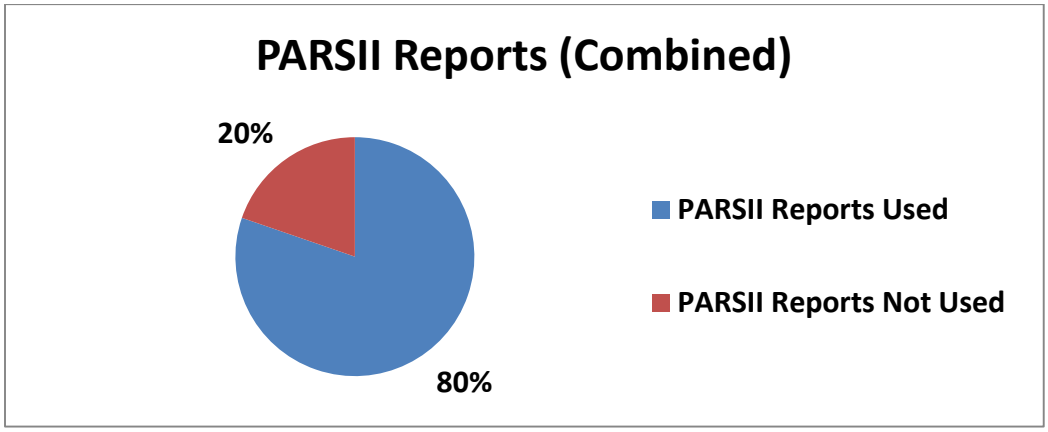
Risk Assessment Tools

The majority at 52% of survey responders chose Pertmaster / Oracle® Primavera™ Risk Analysis, 11% @Risk™, 11% Deltek Acumen Risk™, and 10% Oracle® Crystal Ball. Six percent chose 'Other', 4% chose P6 Risk Manager®, 3% chose Risk Plus, while 3% said they use self-developed tools for risk assessment.



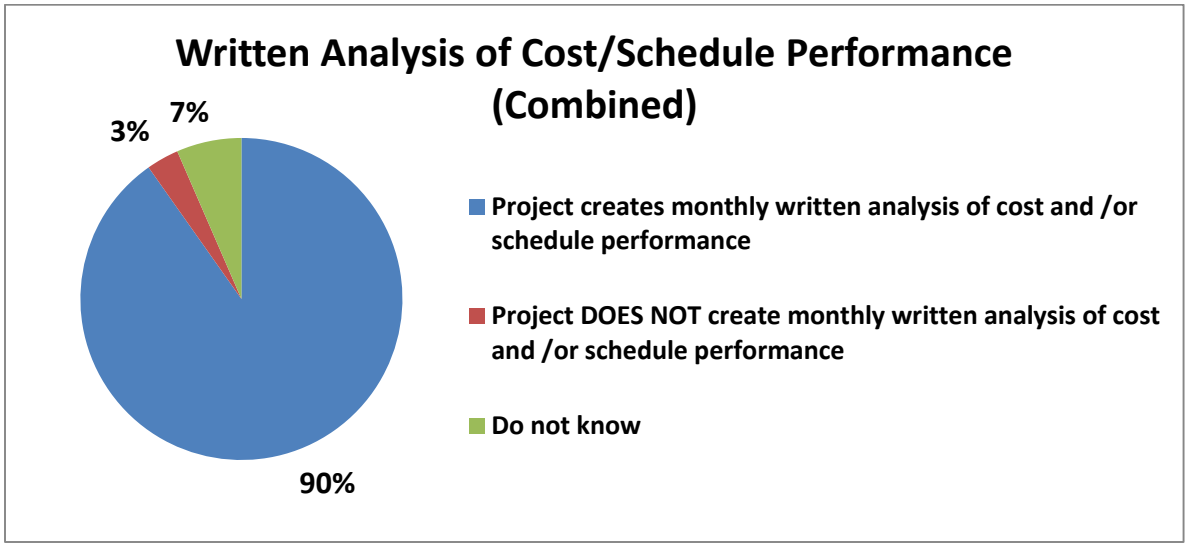
PARSII Reports

When asked if responders used PARSII as a data analysis tool, 80% stated they have used PARSII for that purpose while 20% have not.



Question 4.3 - Does your project create monthly written analysis of cost and/or schedule performance?

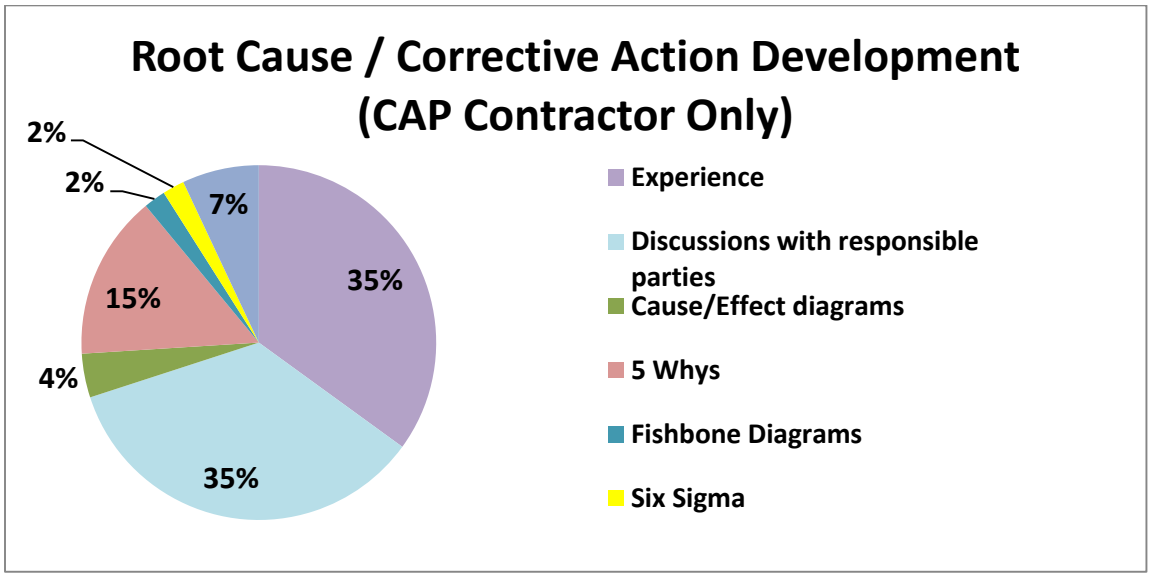
Ninety percent of survey responders said their project creates monthly written analysis of cost and/or schedule performance, while 3% said their project does not and 7% did not know.



Question 4.3.1 - If yes, how are root causes and corrective actions developed?

Some survey responders chose more than one answer for this question. Thirty-five percent of survey responders said they used discussions with responsible parties and another 35% said they relied upon experience. Fifteen present said they used the 5 Whys. Of the 7% who chose 'Other', they mentioned using schedule and CPRs, group fact finding, analysis of baseline data to progressed data, and company established corrective action management

processes. Four percent cited Cause/Effect diagrams, 2% Fishbone diagrams, and 2% Six Sigma.



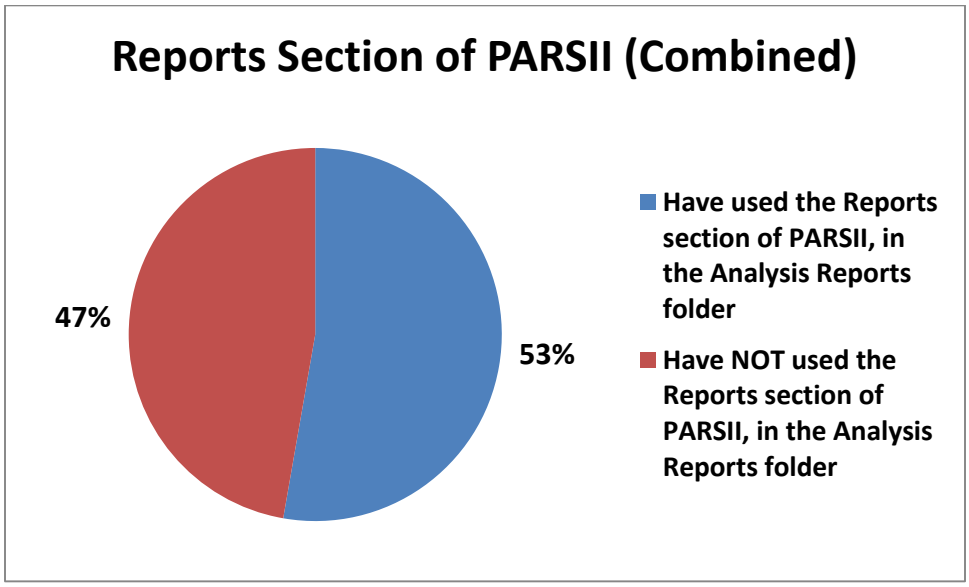
Question 4.3.2 - If no monthly written analysis is conducted, why?

Of the three percent of survey responders who answered 'no' to Question 4.3, they did not conduct monthly written analysis, the following reasons were given.

- (C) Root cause has typically not been performed in the EV arena
- (C) The best tool used in reporting and correcting variances is having an experienced CAM, functional manager in place that understands the issues and take immediate action to resolve the issue.
- (C) Writing monthly VARs and reports are to provide people, (senior company managers, local DOE, and HQs) the information needed for them to analyze the contractor's performance. The contractor uses working schedules, staffing performance reports, subcontractor's reports, and plan of the day meetings, etc. to address what is happening. If a CAM or front line managers waits for the monthly report to take action, they are too late. Monthly reporting is for outsiders to gain an understanding of where the project is.

Question 4.4 - Have you used the Reports section of PARSII, in the Analysis Reports folder?

While a slight majority answered 'yes' to this question, 47% stated they do not use the Reports section of PARSII in the Analysis Reports folder.



Question 4.4.1 – If no, why not?

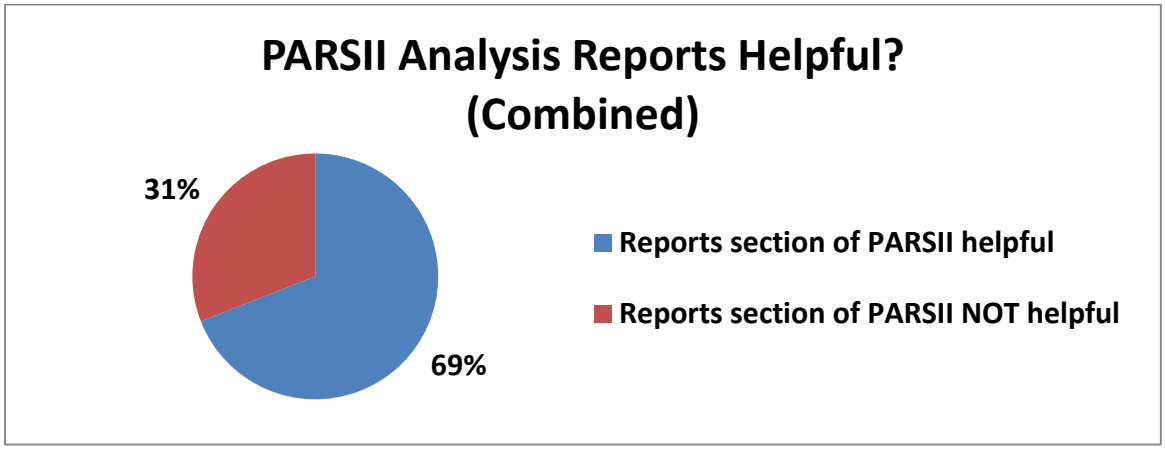
Those survey responders who do not use the Reports section of PARSII were asked why they did not use the reports. Some said they had access issues. Other responder comments included:

- From CAP Contractors:
  - As a contractor, for our analysis and decision-making, we use our COTS and internal systems. PARSII is not the source data system; it is merely a copy of the source.
  - No current Capital Asset Project past CD-2. Even if we did, we would use internal EVMS reporting for our needs as it is the "source data".
  - We have our own reports that perform what we need and are readily available.
  - The primary reason we cannot use PARS II reports to analyze data for our project is that PARS II data is typically lagging a month or a month behind our business month calendar. For example: April business data is typically not loaded until the end of May or beginning of June. The data is NOT timely.
- From Federal Staff:

- Not sure why not. It sounds like a good idea, at least to see what data is being made available to project integrators, as well as to DOE-OAPM and others at HQ for analysis.
- We have created our own reports.

Question 4.4.2 - If you have used the Reports section of PARSII, in the Analysis Reports folder, and if so, were they helpful?

Sixty-nine percent of the responders who used the PARSII Analysis Reports felt the reports are helpful, and 31% did not.



Question 4.4.2.1 - If reports used, which PARSII Analysis Reports used most?

The following PARSII Analysis Reports were used most often by survey responders (in no particular order)

- Data Validity Report (WBS Level)
- Retroactive Change Indicator
- Variance Analysis Report (WBS Level)
- Performance Trends (WBS Level), WBS IEAC Analysis
- EV Project Summary
- IEAC Analysis
- Performance Analysis
- Trended metrics (CPI, SPI, EAC, TCPI)
- Dashboards (performance, schedule, CPR)
- Quick View Report

- Baseline Volatility
- Schedule Health Assessment reports, and Schedule reports (mainly Schedule Slip Report)
- MR Balance v CV, VAC & EAC
- Performance Index Trends

Question 4.4.2.2 - If reports not helpful, what did you not like about PARSII Analysis reports?

The following are comments from survey responders regarding what was not liked about PARSII Analysis Reports:

- From CAP Contractors:
  - Access would be the main 'con' when compared to our system.
  - We have created some copies of certain PARSII reports that are easy to get to.
  - We are more comfortable with our system.
  - Data is 2 months old. More current contractor data is available.
- From Federal Staff:
  - It is arcane to fumble through the various reports trying to find one that gives a historical and current track of CPI, SPI, TPC and EAC for examples. Then the system crashes. If you move from your computer for a few minutes e.g. for coffee, you are locked out and have to start all over. If you miss select a place to click, you may be locked out or have to start over. The data is slow to load so you have to wait.
  - Analysis reports are only useful if the data entered by the project is good or data is available.
  - I need to become MUCH more familiar with the entire PARS-II process.
  - Difficult to use
  - Too high a level for field management and evaluation
  - In general, there were so many reports, with so many exceptions that I find the reports developed by the EV SME in our project office to be much more useful.

- For HQ level analysis the PARSII Analysis reports are fine. However, PARSII is not a useful tool for the field. It is not user-friendly or at a sufficient level of detail to support the field.

Question 4.4.3 - What suggestions do you have to improve PARSII Analysis Reports?

The following are suggestions from survey responders regarding how to improve PARSII Analysis Reports (in no particular order):

- (C) Better graphics; better drill down capabilities for more of the reports; better funding status reporting; more 6-month performance comparisons to see developing trends at the WBS level
- (C) Create customizable validation reports to ensure the data in PARSII matches source systems
- (F) Get a proper table of content for the reports. Get a proper searchable index for the items in the reports. Use smart links to other aspects of reports that are commonly used.
- (F) Roll over prior month's FPD narrative into current reporting period.
- (F) None – it is a reporting tool for HQ – it should not be structured to accommodate the specific analysis done at each site.
- (F) Retire PARS II and work with the field and industry experts to create a better and more useful system.
- (F) Consolidate or delete duplicate information (some of the reports have same data).
- (F) Include information on how to interpret the report and the calculations. Some of the reports have this but not all of them.
- (C) Schedule related metrics would be nice: Float metrics by proj/WBS/CA
- (C) Not all reports are available to contractors. Would suggest the Department open up the entire reporting section to contractors to view the oversight and assessment reports.
- (C) Enhanced upload tools and the ability to support more than 1 contractor per Project. Don't break a project into multiple contracts if your system doesn't allow multiple contractors.

- (C) It would be helpful if they could be more current. Most of the time PARS II data is 2 months out from reporting data.

Topic 4 Findings Summary:

The majority of the CAP Contractor responders said their EVMS cost, schedule, and analysis tools allow for the export of data in UN/CEFACT XML schema. Many different tools for schedule health analysis, EVM analysis, and risk analysis are used. The most used tools include Deltek Acumen Fuse®, Deltek wInsight Analytics®, Self-Developed Tools, Pertmaster / Oracle® Primavera™ Risk Analysis. Many surveys responders use PARSII Reports for analysis, but provided suggestions as to how to improve the report suite.

Written analysis is typically performed on the survey responder's projects. Root cause and corrective actions are primarily developed through experience and discussions with responsible parties. Federal staff primarily relies on the contractor's assessment of root cause and corrective actions.

Multiple responders pointed out issues with the HQ-provided Acumen Fuse® template (sometime prior to the issuance of this survey in February 2015). The template has numerous errors in the syntax causing the selection and trip-wire criteria in the template to not work, or return inaccurate results.

Several responders noted that 'big data call' approach from OAPM can be a challenge for legacy EVMS cost and schedule systems. If contractors do not continually update their systems to the latest version, they are not able to provide data in the format requested by OAPM.

Similarly, another CAP Contractor responder reported that P6™ is a DOE field office standard (per contract requirement) and DOE owns the licenses. The update cycles are also to DOE's discretion. Because version 8.3 is still in testing at this particular location, the Contractor must wait until DOE releases the new version. Once the new version is implemented, data will be easily retrievable and available for schedule detail. Until then, the local DOE controls the version of P6™ being used.

Many survey responders said they use self-developed or home-grown tools and reports. This ad-hoc reporting is a comprehensive suite of reports and tools have been developed by Contractors regarding analysis of Cost and Schedule performance and health. These ad-hoc reporting tools are used by the contractor CAMs and Project Controls Teams as well as Sr. Management. Many of these ad-hoc reports are also provided to the DOE-Field Office personnel.

Some responders recommended that DOE consider standardizing the EVMS cost and analysis tools to Cobra™ and Empower™, for example. Responders felt that standardization would gain exponential benefit for the Government and the Contractors, complex-wide, as improvements and innovation synergy could be shared, much like the benefits of using P6™ as the cornerstone application for scheduling. This idea supports other opinions about Peer Review and site wide communication.

Regarding PARSII, access to all reports including the Oversight & Assessment Reports as opposed to limiting access to the Analysis Reports folder is a request of multiple survey responders. Although PARSII is not the primary system used at low levels, contractors would like the ability to validate accuracy to the source.

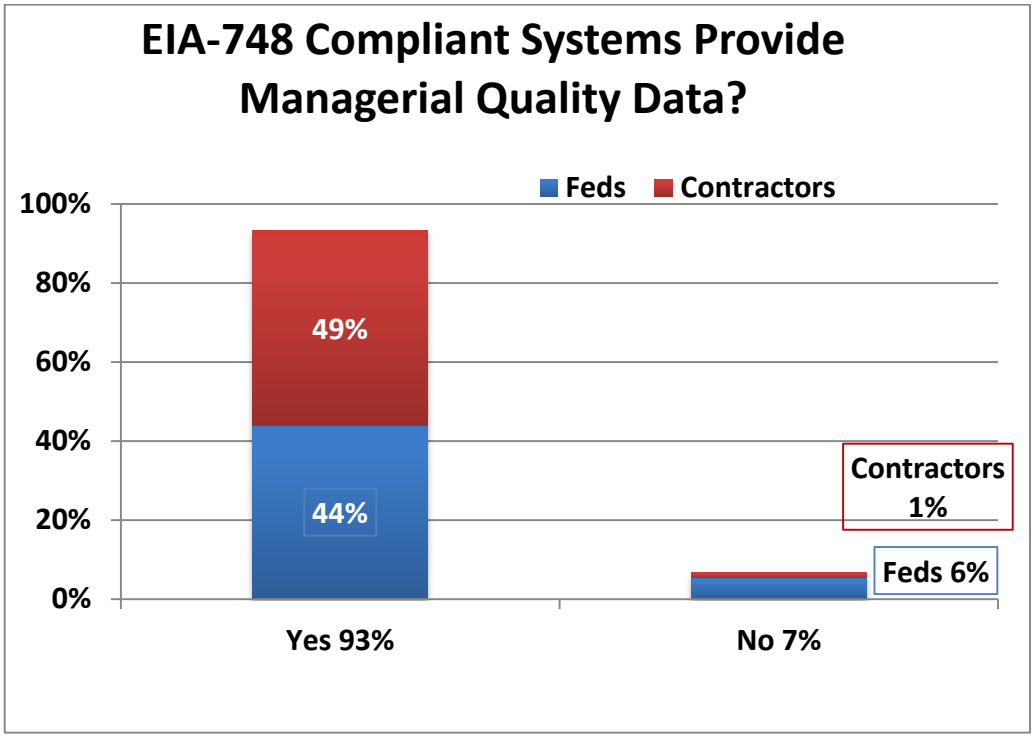
Pertaining to Root Cause and Corrective Action, many responders are realizing that their Project-level Corrective Action tracking and Management systems have been evolved to address operational issues, more than Business System (EVMS specifically). There is a shortcoming that exists here, as Contractors have not been performing variance analysis (root cause, impact and corrective action) at the required level, however, the DOE Field office personnel have not been requesting or requiring accountability of root cause or corrective action tracking either. This makes it harder for the Project Controls/EVMS teams to express the heightened level of importance and even the requirement for it.

Topic 5 – Use of EVMS Data

Topic 5 of the survey focused on how EVMS data is used. The survey stated "The goal of EVMS is to provide performance data that can be used to identify cost and schedule problems, mitigate risks, and predict future performance." Topic 5 Questions were the same on both the Capital Asset and Federal Employee versions of the survey.

Question 5.1 - Do you believe that EIA-748 compliant EVM Systems provide data from which to make management decisions and forecasts?

In total, 93% of responders selected 'yes', EIA-748 compliant EVM Systems provide data from which to make management decisions and forecasts. Of that 93%, 49% were CAP Contractors and 44% were Federal Staff. Seven percent responded 'no', EIA-748 compliant EVM Systems do not provide data from which to make management decisions and forecasts. Of that 7%, 1% was CAP Contractors and 6% were Federal Staff.



Question 5.1.1 –If no, why not?

A Federal responder noted that EIA-748 does not contain any of the implementation, reporting, or enforcement aspects of an Earned Value Management System. Additionally, many CAP Contractor and Federal responders mentioned that earned value data alone is insufficient to make decisions; the data can be misused particularly at the HQ level, and data can also be manipulated.

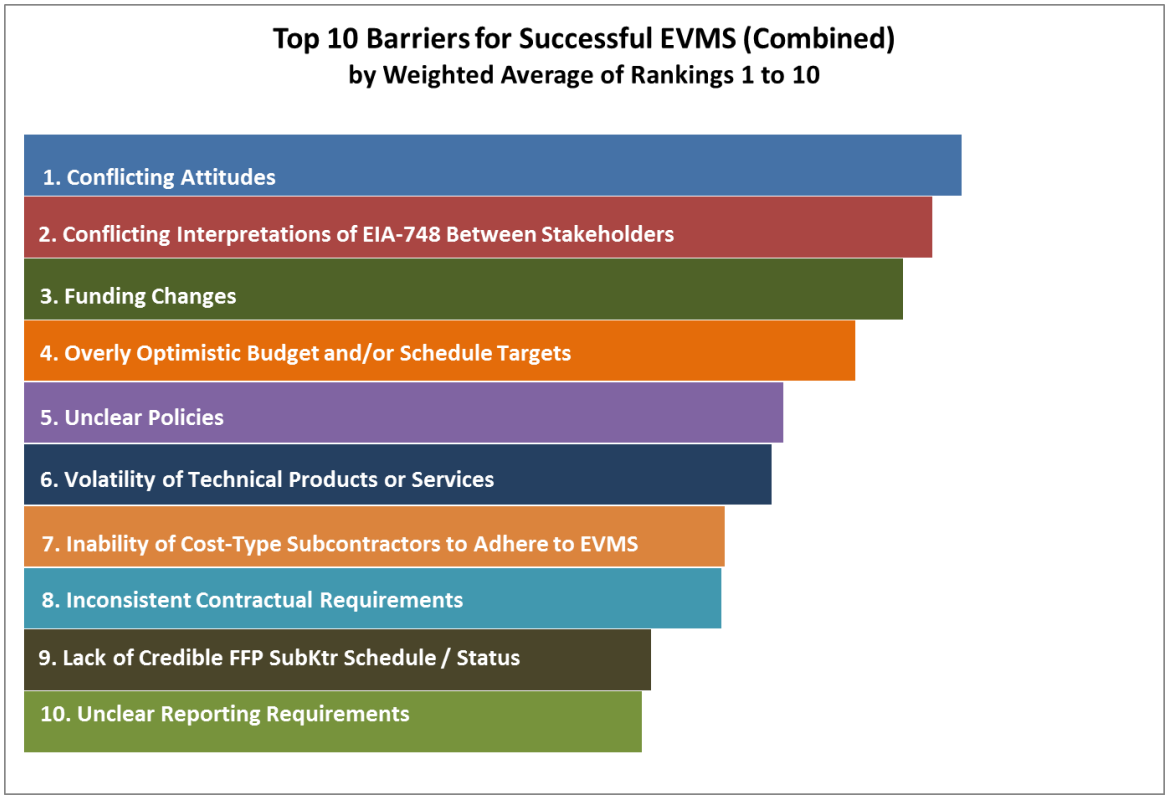
A Federal responder felt that DOE was over regulating EVMS beyond the EIA-748 which has caused significant behavioral modifications, e.g. masking variances, and that more regulations may not help this situation. The responder stated that FPDs, Project Controls, etc.

need to realize the value-added in using an EVMS, not the restrictions. Cost of implementation was also a concern, and it was noted that early forecasting alone does not mitigate risk unless strategies are put in place.

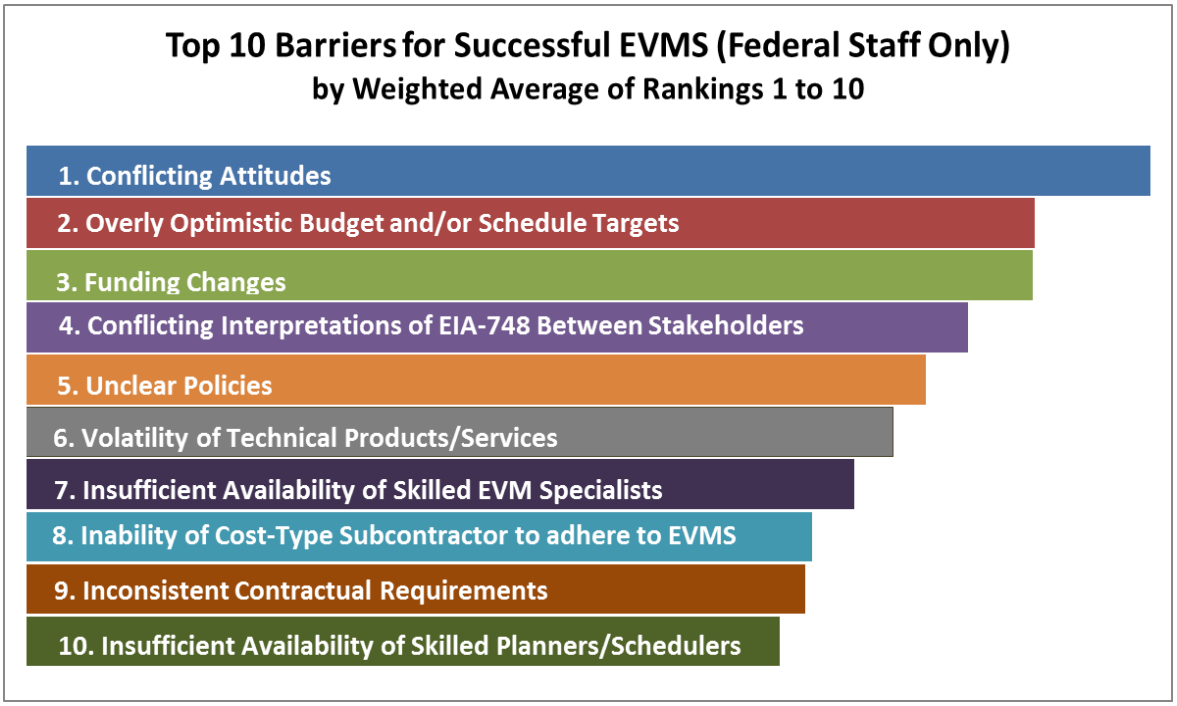
Question 5.2 - Based on your experience, what do you believe are the top 10 barriers, if any, for successful EVMS? Rank your responses by numbering your choices from 1 to 10, 1 being the leading barrier.

Response selection techniques varied on this question as some people ranked the top 10 as requested, some just selected their top 3, while a few responders just checked the choices from the list that they felt were barriers with an 'x'. Because of this, the chart methodology used for displaying the ranking was based on showing only selections that received the ten top highest rankings, based on the average weight of the rankings from 1 to 10. In those few cases where responders marked an 'x', each answer was treated equally in ranking and recorded as a 1 for each barrier checked. The length of each bar represents the frequency and relativity of the concerns expressed by the responders. Further, responders that chose 'Other' and wrote in a barrier were reviewed against the others to combine like answers.

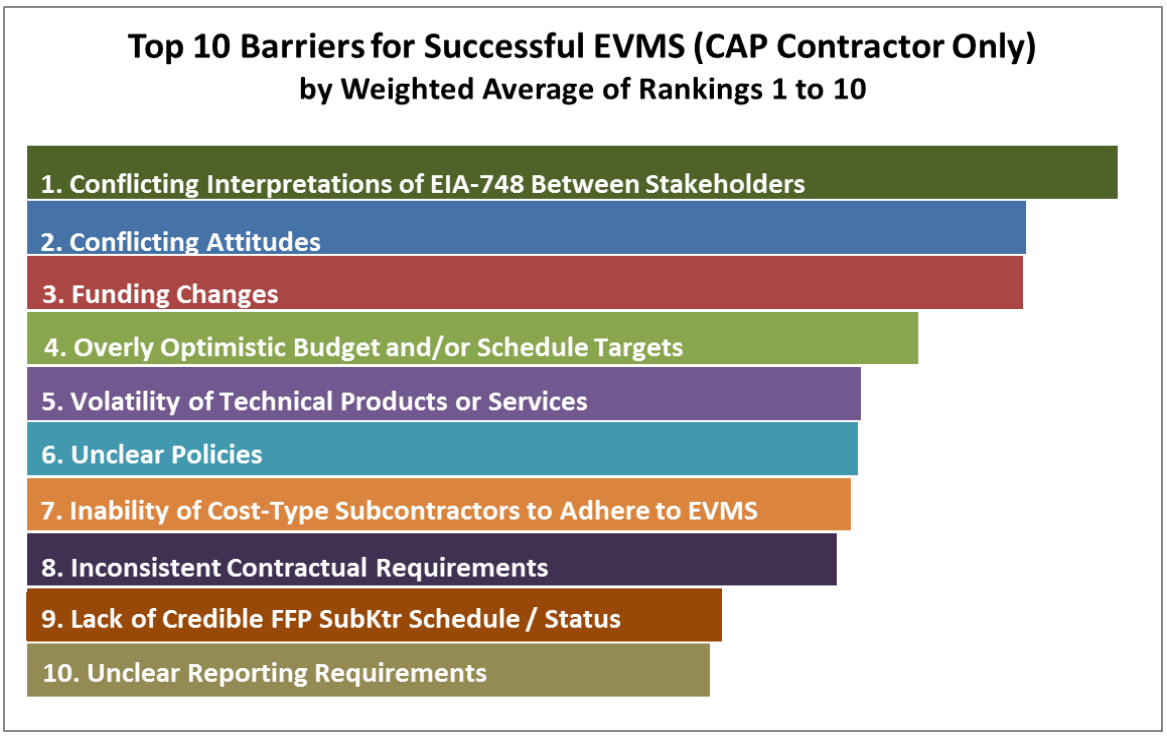
The overall results are shown in the bar chart below, and then the results are separated by Federal Staff and CAP Contractors.



The Top Ten Barriers for Successful EVMS from the Federal Staff surveys are identified on the chart below.



The Top Ten Barriers for Successful EVMS from the CAP Contractor surveys are identified on the chart below.



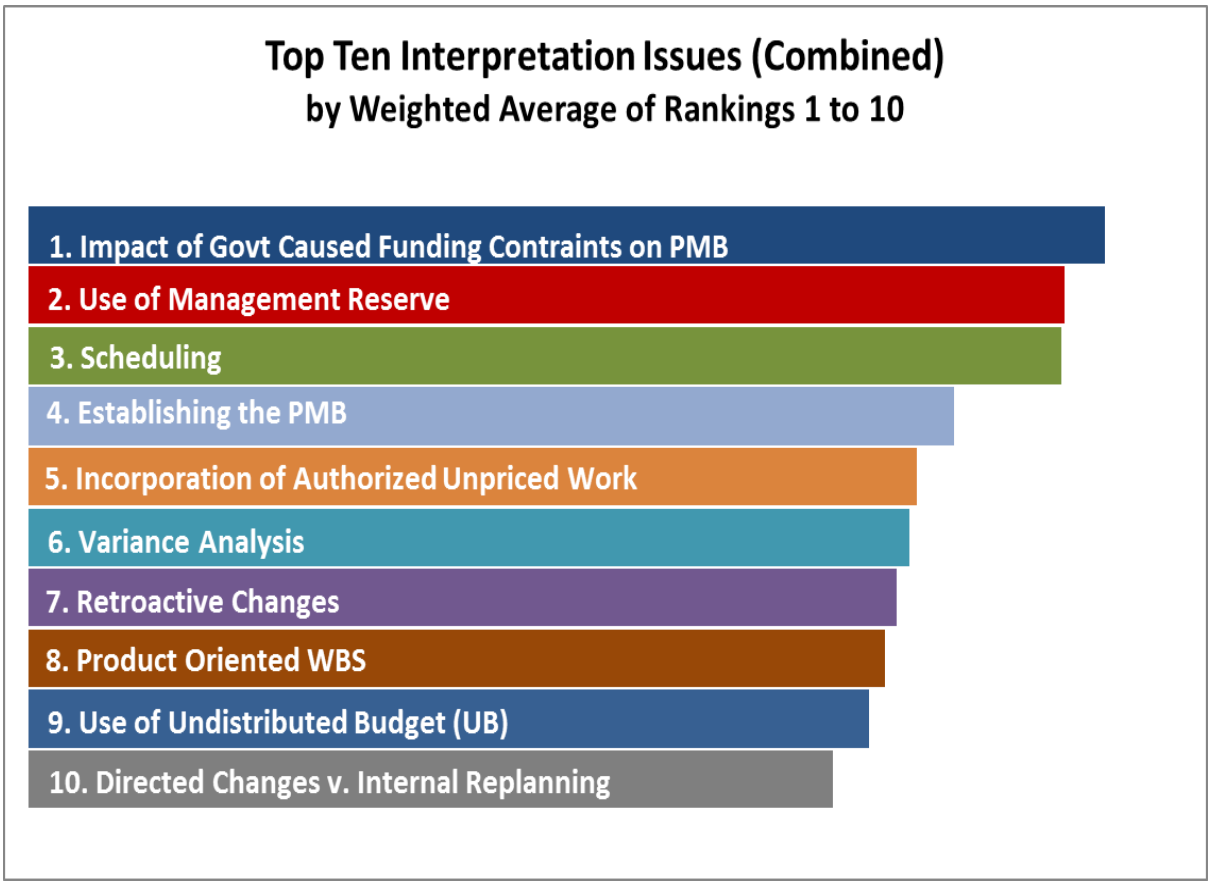
The Federal Staff and CAP Contractors Top Ten Barriers for Successful EVMS lists differed somewhat. Eight of the ten barriers made the top 10 in both groups: Conflicting Attitudes, Conflicting Interpretations of EIA-748 between Stakeholders, Funding Changes, Overly Optimistic Budget and/or Schedule Targets, Unclear Policies, Volatility of Technical Products or Services, Inability of Cost-Type Subcontractors to Adhere to EVMS, and Inconsistent Contractual Requirements. CAP Contractors also cited Lack of Credible FFP Subcontractor Schedule and/or Status, and Unclear Reporting Requirements. Federal Staff cited Insufficient Availability of Skilled EVMS Resources and Insufficient Availability of Skilled Planners/Schedulers in their top 10.

For more information on other barriers and concerns provided in the comments fields, please refer to Appendix A of this report.

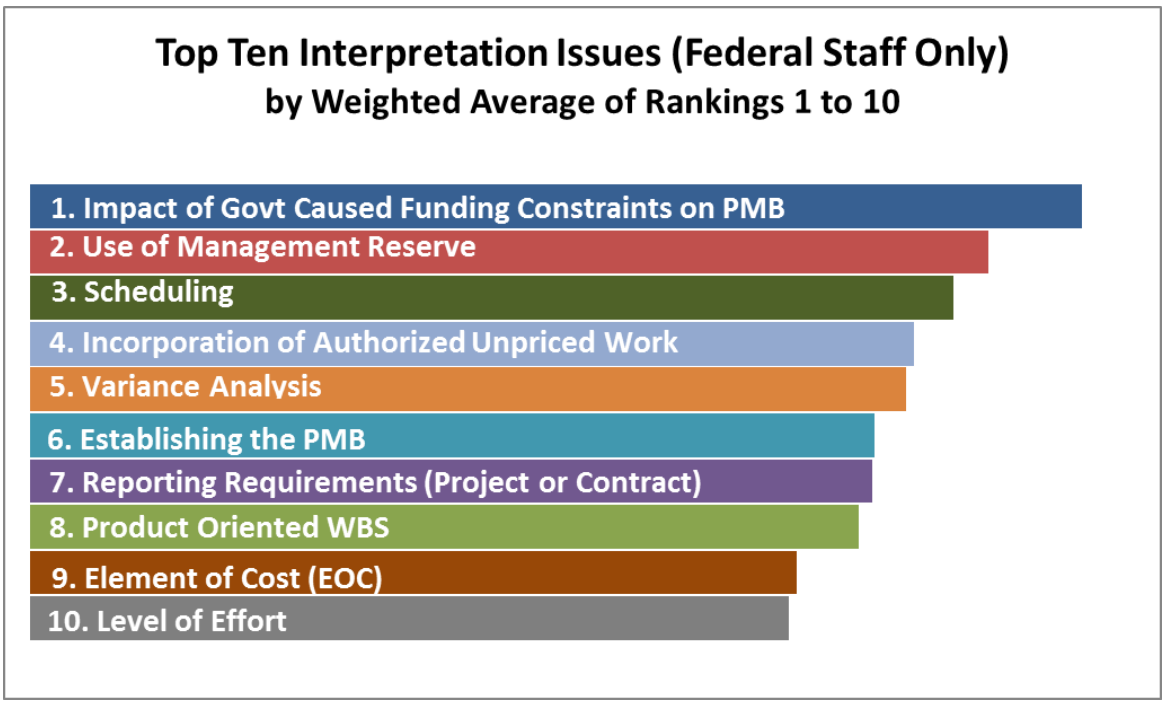
Question 5.3 - Based on your experience, what are the top 10 interpretation issues? Rank your responses by numbering your choices from 1 to 10, 1 being leading issue.

As in the preceding question 5.2, the overall results are shown in the bar chart below, and then the results are separated by Federal Staff and CAP Contractor. Response selection techniques varied on this question as some people ranked the top 10 as requested, some just selected their top 3, while a few responders just checked the choices from the list that

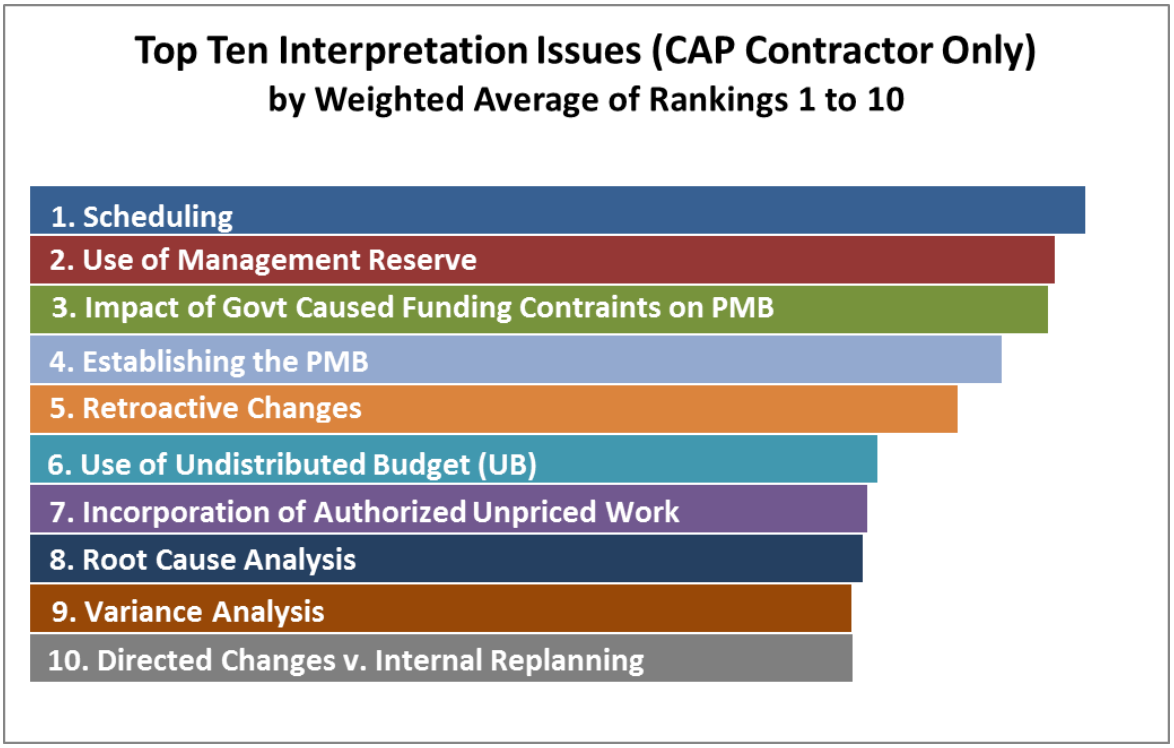
they felt were barriers with an 'x'. Because of this, the chart methodology used for displaying the ranking was based on showing only selections that received the ten top highest rankings, based on the average weight of the rankings from 1 to 10. In those few cases where responders marked an 'x', each answer was treated equally in ranking and recorded as a 1 for each barrier checked. The length of each bar represents the frequency and relativity of the concerns expressed by the responders. Further, responders that chose 'Other' and wrote in a barrier were reviewed against the others to combine like answers.



The Top Ten Interpretation Issues from the Federal Staff surveys are identified on the following chart.



The Top Ten Interpretation Issues from the CAP Contractor surveys are identified on the chart below.



The Federal Staff and CAP Contractors Top Ten Interpretation lists differed somewhat. Six of the ten issues were the same in both groups of survey responders; however four issues

were different. Both groups consider Impact of Government Caused Funding Constraints on the PMB, Use of Management Reserve, Scheduling, Establishing the PMB, Incorporation of Authorized Unpriced Work, and Variance Analysis to be in the Top Ten Interpretation Issues. Federal Staff included Reporting Requirements, Level of Effort, and Element of Cost in their Top Ten. CAP Contractors included Use of Undistributed Budget, Root Cause Analysis, and Directed Changes v. Internal Replanning on their Top Ten.

Referring back to the Top 10 Interpretation Issues (Combined) chart, the following responder comments were provided.

The number one issue was the impact of government caused funding constraints on the PMB. Responders feel it is difficult comply with EVM when they get conflicting interpretations on how to maintain their baseline when funding limitations cause almost annual re-planning exercises.

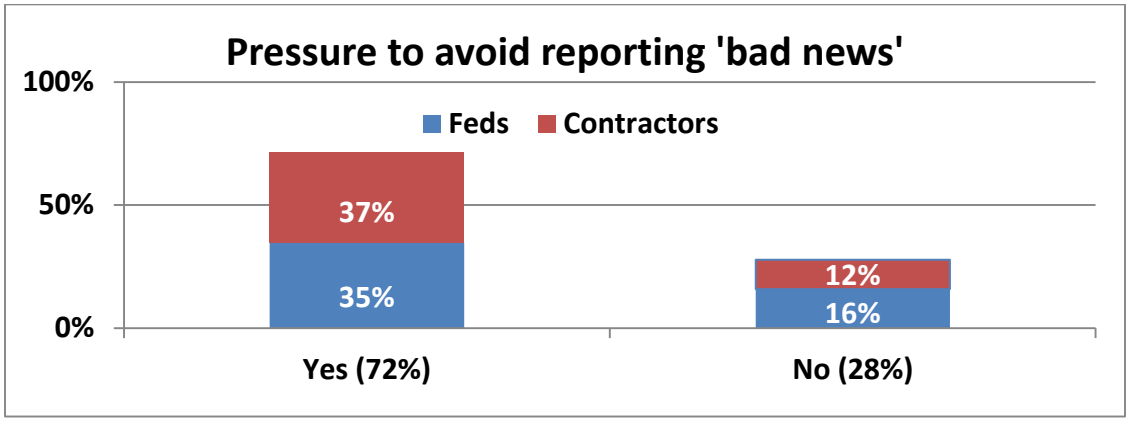
The number two issue was Management Reserve. CAP Contractors and FPDs seem to be among the most confused as to the interpretations from review teams on this issue. Some believe it is another way to manipulate the CPI and have admitted to using it that way. Others remain confused between CAP Contractor-owned MR and Government Contingency because of some DOE Site Offices withholding MR under their control, and other misuse contingency to replenish a contractor's MR when it runs out.

The remaining interpretations issues, in order from 3 to 10 (lowest) included Scheduling, Establishing the PMB, Incorporation of AUW, Variance Analysis, Retroactive Changes, Product Oriented WBS, Use of Undistributed Budget, and Directed Changes v. Internal Re-planning.

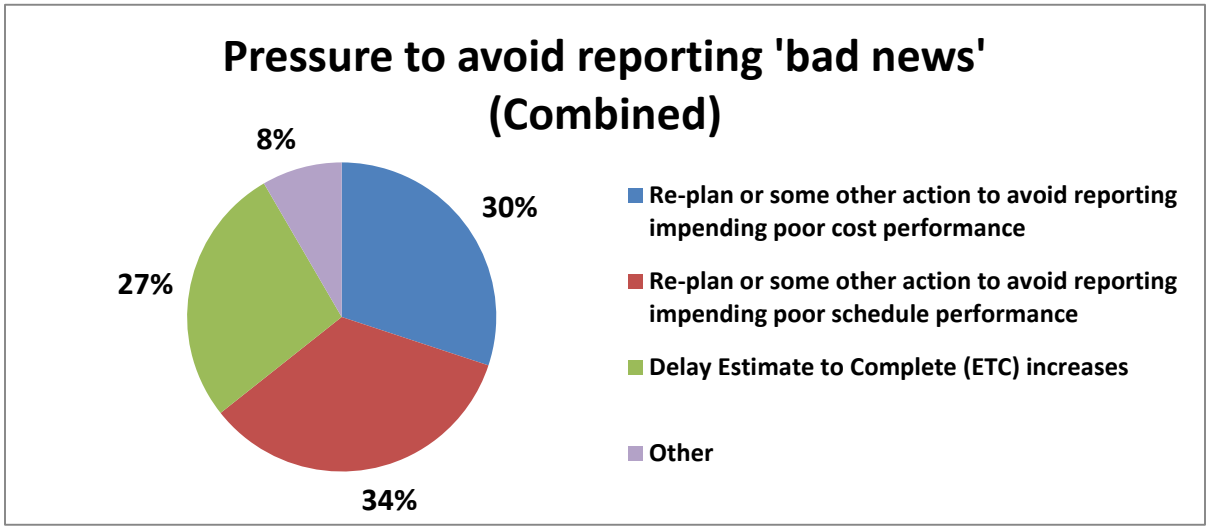
One comment worth noting as an entry in 'Other' was from a CAP Contractor who stated, "I do not believe any of these items are interpretation issues as there is now current guidance for each of these items through the "Snippets" and the OAPM Standard Operating Procedures."

Question 5.4 – Have you ever observed or are you aware of pressure to avoid reporting "bad news"?

Nearly two-thirds of the responders stated they had observed or were aware of pressure to avoid reporting 'bad news' in their EVM systems. The responses were fairly evenly disbursed between Federal Staff and CAP Contractors.



Of the 72% who replied 'Yes' to the question, 34% had observed or were aware of a re-plan or some other action to avoid reporting impending poor schedule performance and 30% had observed or were aware of a re-plan or some other action to avoid reporting impending poor cost performance. Twenty-seven percent observed or were aware of a delay in reporting Estimate to Completion (ETC) increases, and lastly, 8% observed or were aware of 'other' bad news.



Examples of 'other' pressure to avoid reporting bad news provided by survey responders include the following:

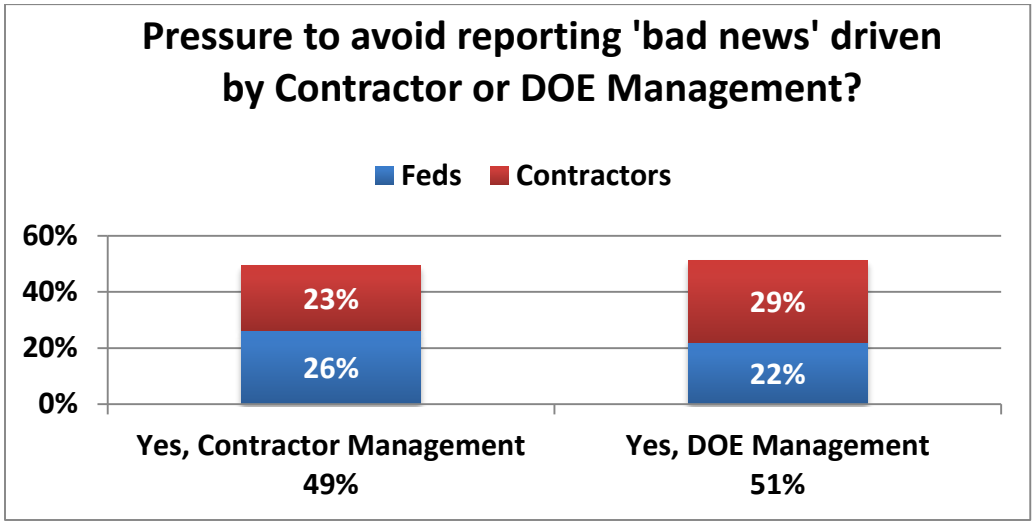
- (F) Contractor's corporate board interferes with "doing the right thing"

- (F) Delay communication of impending issue
- (F) Overly optimistic corrective actions
- (F) Contractor set baseline to late finish date and executes to something different to create positive SV/CV to avoid bad CPARS reporting
- (C) Fear of reporting negative performance data for fear of over-reaction and application of extensive attention and scrutiny with a lack of understanding and willingness to readily accept recovery plans
- (C) Pressure to front load baseline to stay green for one year to avoid tripping threshold, so Feds could earn their bonuses.
- (C) Pressure by local DOE to "BCP to Green". They did not want the project to go Red in PARSII
- (C) Use of UB to avoid poor performance of contractual delays

An additional responder comment on this topic included the CAP Contractor opinion that Federal Project Team Members should take the same ownership in the project as the contractor. "If the IBR process is implemented where both the contractor and the Federal project director must jointly take ownership of the project Scope, Cost and Schedule then the "bad news" may be elevated earlier."

Question 5.5 - If yes for 5.4, was it driven by: Contractor Management or DOE Management?

The answer shows almost an even split. In total, 49% of responders who answered 'yes' to the previous question said the pressure to avoid reporting bad news was driven by Contractor Management. Of that 49%, 23% were CAP Contractors and 26% were Federal Staff. Fifty-one said it was driven by DOE Management. Of that 51%, 29% were CAP Contractors and 22% were Federal Staff. Some responders said that avoidance of reporting bad news was driven both by Contractor Management and DOE management.



Topic 5 Findings Summary:

Topic 5 investigated the use of EVMS data. The questions for this topic were the same on both the Capital Asset and Federal Employee versions of the survey.

The majority of survey responders, at 93%, answered 'yes', they believe that EIA-748 compliant EVM Systems provide data from which to make management decisions and forecasts. However, there are barriers to successful implementation and interpretation issues.

Survey responders were asked to rank the top 10 barriers, if any, for successful EVMS based on their experience. The combined Federal Staff and Cap Contractor survey responders identified the following Top Ten Barriers with frequency indicated by the length of the respective bar chart:

1. Conflicting Attitudes
2. Conflicting Interpretation of EIA-748 Between Stakeholders
3. Funding Changes
4. Overly Optimistic Budget and/or Schedule Targets
5. Unclear Policies
6. Volatility of Technical Products or Services
7. Inability of Cost-Type Subcontractors to Adhere to EVMS
8. Inconsistent Contractual Requirements

9. Lack of Credible FFP Subcontractor Schedule / Status
10. Unclear Reporting Requirements

Federal Staff and CAP contractors identified similar Top Ten Barrier lists. Although the order of the Federal Staff Top Ten was slightly different, eight of the ten topics ranked as the Top Ten were the same in both groups of survey responders.

Next, survey responders were also asked to rank the top 10 interpretation issues based on their experience. The combined Federal Staff and Cap Contractor survey responders identified the following Top Ten Interpretation issues with frequency indicated by the length of the respective bar chart:

1. Impact of Government Caused Funding Constraints on PMB
2. Use of Management Reserve
3. Scheduling
4. Establishing the PMB
5. Incorporation of Authorized Unpriced Work
6. Variance Analysis
7. Retroactive Changes
8. Product Oriented WBS
9. Use of Undistributed Budget (UB)
10. Directed Changes v. Internal Replanning

The Federal Staff and CAP contractors Top Ten Interpretation lists differed somewhat. Six of the ten issues were the same in both groups of survey responders; however the remaining four issues were different. Both groups consider Scheduling, Use of Management Reserve, Establishing the PMB, Incorporation of Authorized Unpriced Work, Variance Analysis, and Impact of Government Caused Funding Constraints on the PMB to be in the Top Ten Interpretation Issues.

Survey responders were also asked if they have you ever observed or are aware of pressure to avoid reporting 'bad news' driven by either Contractor or DOE Management.

Seventy-two percent responded 'yes', with a nearly equal distribution of Federal Staff and CAP Contractors.

Overall responder opinions, recommendations, and comments regarding Topic 5 have been categorized and combined in Appendix A.

Topic 6 – Improving Communication

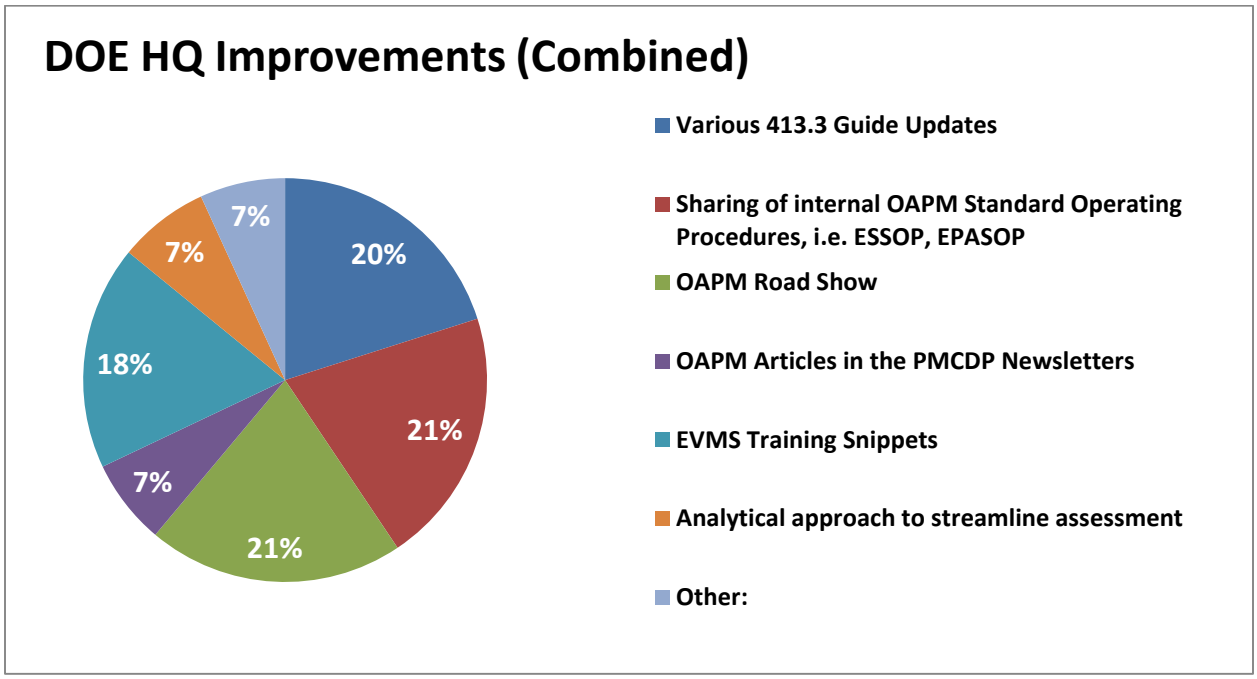
Topic 6 stated "Clear and transparent communication between all parties is essential to consistency of understanding and application. " Questions were then asked to solicit recommendations, ideas, and thoughts on ways to improve.

Question 6.1 - What improvements made by DOE HQ over recent years have you found beneficial?

The question provided a selection of choices that they felt were value-added and also allowed responders to write in other items. Twenty-one percent of the survey responders said that sharing of internal OAPM Standard Operating Procedures was beneficial. Twenty-one percent of survey responders appreciated the OAPM Road Show, and another 20% said various 413.3 Guide Updates were beneficial. Eighteen percent said the EVMS Training Snippets were beneficial, 7% cited the OAPM Articles in the PMCDP Newsletters, 7% cited the analytical approach to streamline assessment, and 7% cited other improvements.

The 'Other' improvements provided by CAP Contractors include OAPM EFCOG EVM subgroup interface and collaboration on EVM initiatives, participation in EFCOG Project Management Working Group, OAPM EV assistance visits, participation in Critical Decision Reviews at other Laboratories, and the Office of Science's Operations Improvement Committee (OIC) Conferences that allow brainstorming between individuals between different laboratories. Additionally, a CAP Contractor responder commented that publication of and adherence to a DOE HQ standard interpretation and allowance for actual contractual language/requirements of the EVMS guidelines and expectations rather than it being a continual guessing game based on who is in a given position or leading an EVMS audit/surveillance would be beneficial.

Another CAP Contractor responder noted that the relationship between the Office of Project Assessment (OPA) and Project Management Control Specialists (PMCS) at most of the Office of Science Labs has greatly improved. A very strong trusting relationship has been forged, which allows for transparency and open lines of communication.



Question 6.2 - Are there any of the improvements in the previous question that you feel are non-value added?

Examples of the survey responder's comments on the improvements are below:

- (F) None of the applicable Guides are current. Examples include 413.3, 413.5, 413.3B, 413.3-7A, 413.3-20, etc.
- (F) EVM training should be personal, scaled to project and involve all project participants from HQ, field (contractor & fed) - both contract and project team; initial training should occur following contract true-up.
- (F) The problem is not EVMS processes, procedure, policies, etc. The problem is projects not being honest about the information entered into PARS II.
- (C) All communication and information is of value if the information being communicated is correct; however, if it is not, there is nothing worse. Also so much

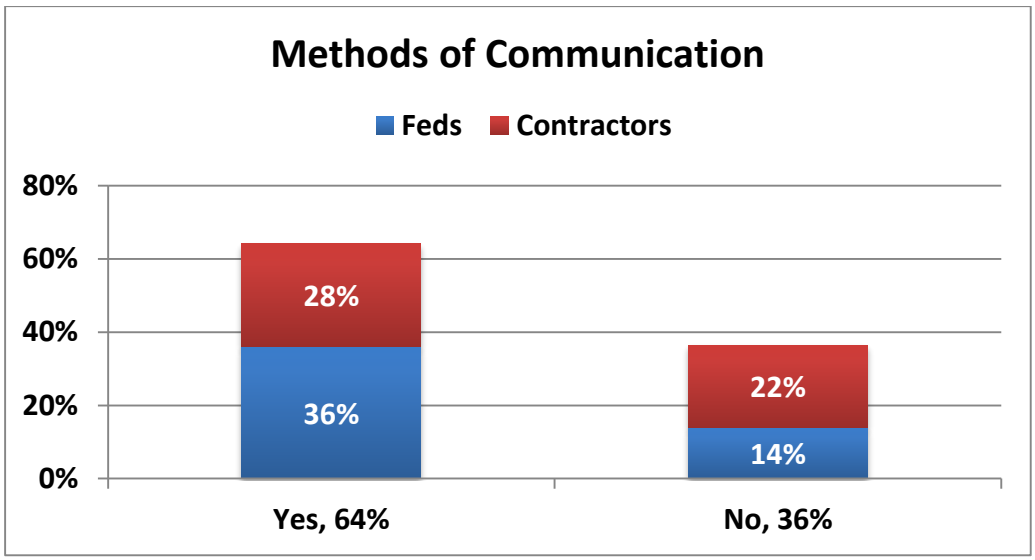
information will cause people to ignore it. There has to be a balance between quality and quantity.

- (F) I think that any guides, orders, and requirements that are trickled down to the projects need more explanation in how their application on projects will be (or should be) assessed for implementation effectiveness. Many of our projects are technically complicated and unique, and a cookie-cutter approach may not always be the best option.
- (F) Issues with the WBS, funding and establishing a PMB override any other improvements.
- (F) All value added but I find real world hands-on interactions work best. These interactions drive the production of guides and SOP's etc.
- (F) I was unaware of any of the improvements mentioned in question 6.1.
- (F) None are value added because they assume the field has lack of knowledge about how to implement EVMS and do not focus on ensuring that those in HQ actually understand it and adhere to the requirements. Most HQ initiatives regarding project management and EVMS come from folks who have never actually executed an EVMS system in the field. I truly believe that there are more people in HQ that don't understand it than in the field.
- (F) OAPM Road Show in the absence of clear written guidance has resulted in the new rules being represented by verbal discussions by the briefers that you cannot hold them accountable for.
- (C) A concern that the data driven approach will attempt to seek "one size fits all" thresholds or values that indicate a potential problem when in fact that may not be the case. Not all projects are easily measured with the same metrics (D&D, construction, first of a kind, environmental for example) are very different. Projects in very early or very late stages require "other" metrics to gauge progress/performance, IEACs, TCPI don't work well here.
- (C) The various publications mentioned above are all written in Gov'tese. Can't they be written for the layman (user)?

- (C) There is no good method of making sure we have all been informed by a new rule. Need a way to get the word out to the users without having to be told. Can we sign up for News Releases?
- (C) If those things listed above currently exist, we are not getting them or the associated communication from our DOE local office.
- (C) Newsletters and mass-emails can be an ineffective way to communicate; it's really only a one way conversation with those. I think what's needed it more two-way communication.
- (C) I have never been informed of most of the new communication tools. If the field office was aware, it was never passed on to the contractor. This has been the case for most HQ communication.
- (C) I am concerned about the data driven analytical approach. Data is only one component of EVMS. Discussions with the CAMs and PMs are the other part of that. Both components need to be coupled together. Looking at the data only without understanding the why will not eliminate issues.

Question 6.3 – Based on your experience, do you know what method(s) are used to communication project performance from contractor to FPD to PMSO to OAPM to the Deputy Secretary?

In total, 64% of responders said 'yes', they know what methods are used to communicate project performance up the chain. Of that 64%, 28% were CAP Contractors and 36% were Federal Staff. Thirty-six percent said 'no'; 22% were CAP Contractors and 14% were Federal Staff.



Question 6.3.1 - If yes, explain your understanding of the process.

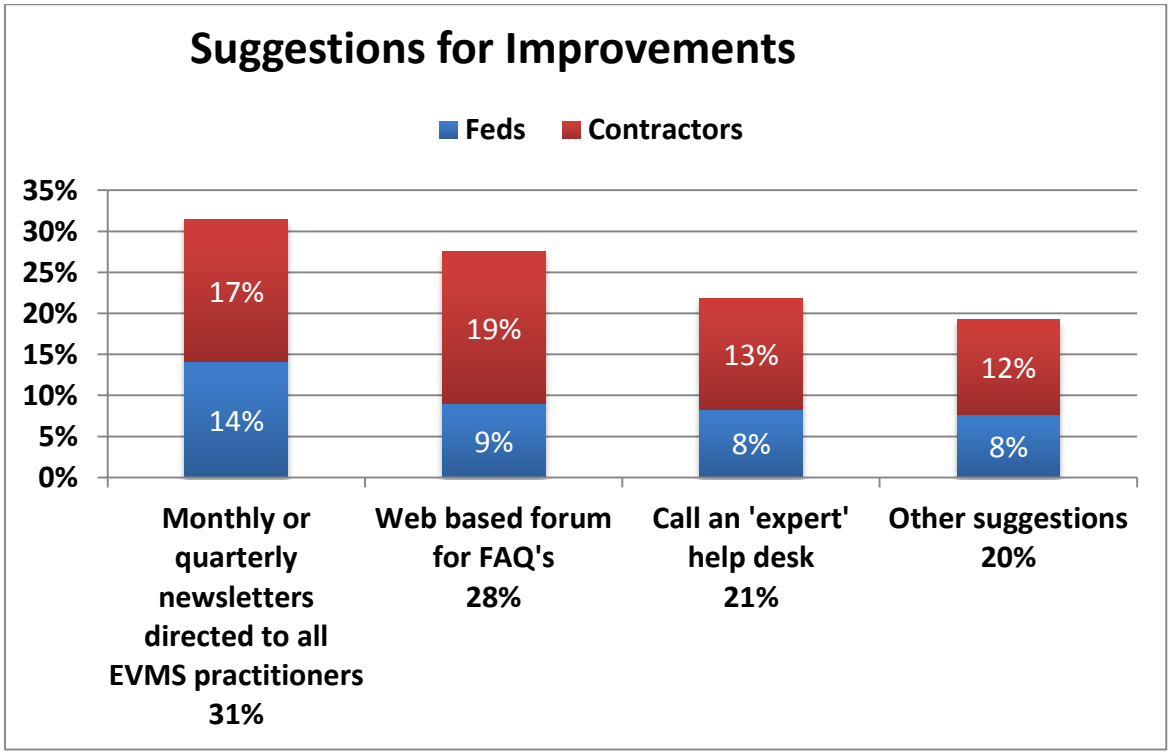
Fifty-three survey responders explained their undertanding of the project communication process. Answers varied greatly in detail. Some examples of the responses are listed below:

- (F) Contractor normally has low level data clerk enter costs into spreadsheet. A project controls specialist, but not the boss, prints the reports. The FPD assigns a project controls federal IPT person to review. After a cursory review with no analysis the PARS II input is made. The PMSO and OAPM can see it about the same time, but the PMSO is very limited in what data they can see. The PMSO report capability is limited also, and the analyst's ability to research is limited further.
- (F) FPD- IPT meetings, weekly and daily interfaces with contractor / PMSO Quarterly Project Reviews (QPRs), PEER reviews, monthly site calls, weekly calls, videos etc.
- (F) Contractor determines progress, replans as necessary, and sends monthly report(s) to the FPD and his/her team. Performance data is also uploaded to PARS-II monthly, and the FPD provides his/her assessment of the project's status via a narrative. PARSII is used by PMSO and OAPM for their analysis (exactly what they look at is not 100% clear to me). Quarterly Project Reviews (QPRs) are conducted with Deputy Secretary to communicate status.

- (F) I do feel that there are many pre-reviews and filters that are either intentionally or unintentionally added to the process at each of these steps that can have the effect of diluting the true message. The motivation / reward system for the information provider can and does influence how information is provided to the receiver of that information.

Question 6.4 - What suggestions do you have for improvements in EVMS-related communications from HQ to functional EVMS experts?

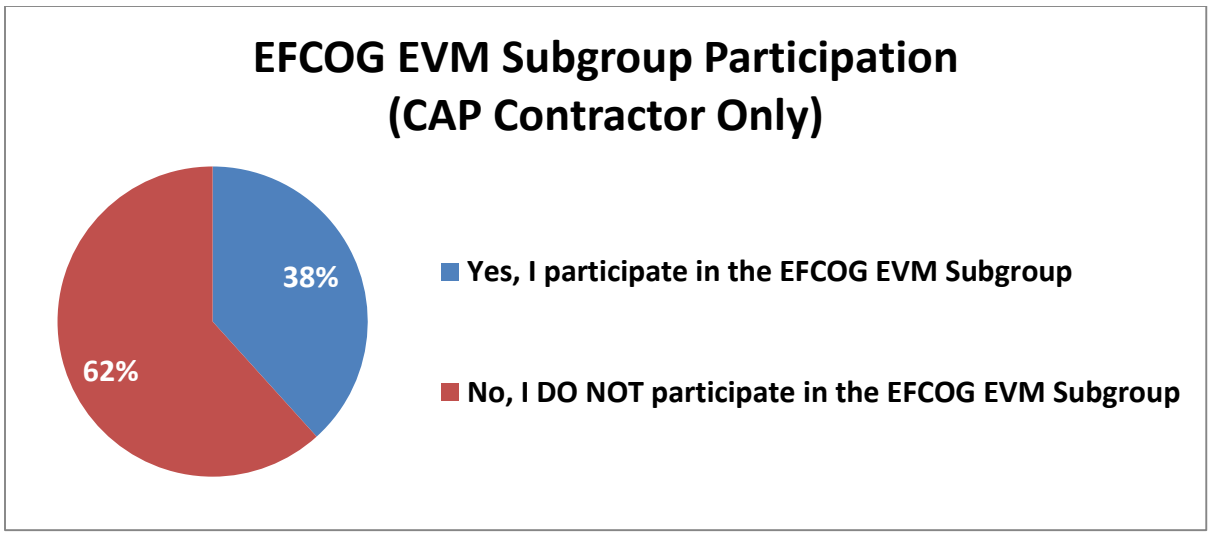
For this question, the survey provided some choices plus the opportunity to select 'Other' and fill in the blank. In total, 31% of responders thought monthly or quarterly newsletters directed to all EVMS practitioners would improve EVMS-related Communications. Twenty-eight percent of responders, mostly CAP Contractors, thought Web based forums for FAQs would improve EVMS-related Communications. Twenty-one percent of responders thought Call an 'Expert' help desk would improve EVMS-related Communications. Twenty percent of responders provided other suggestions would improve EVMS-related Communications. The list of comprehensive suggestions follows the chart.



The complete list of suggestions for improvements of EVMS communications are listed in Appendix A.

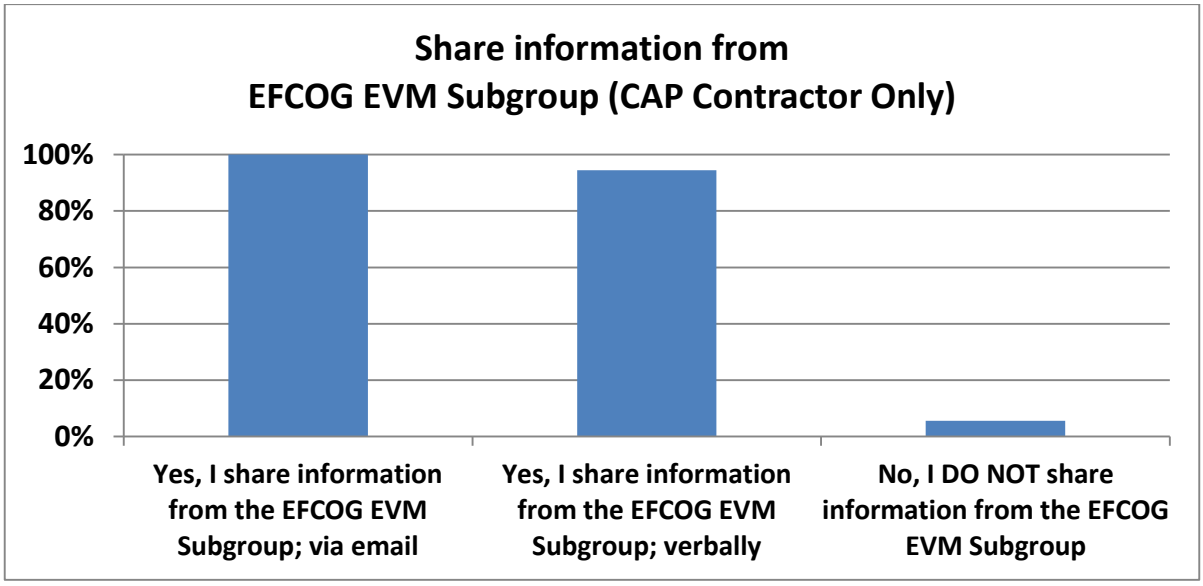
Question 6.5 - Do you participate in the EFCOG EVM Subgroup?

CAP Contractors were asked if they participate in the EFCOG EVM Subgroup. Sixty-two percent of the CAP Contractor responders do not participate, and 38% do participate.



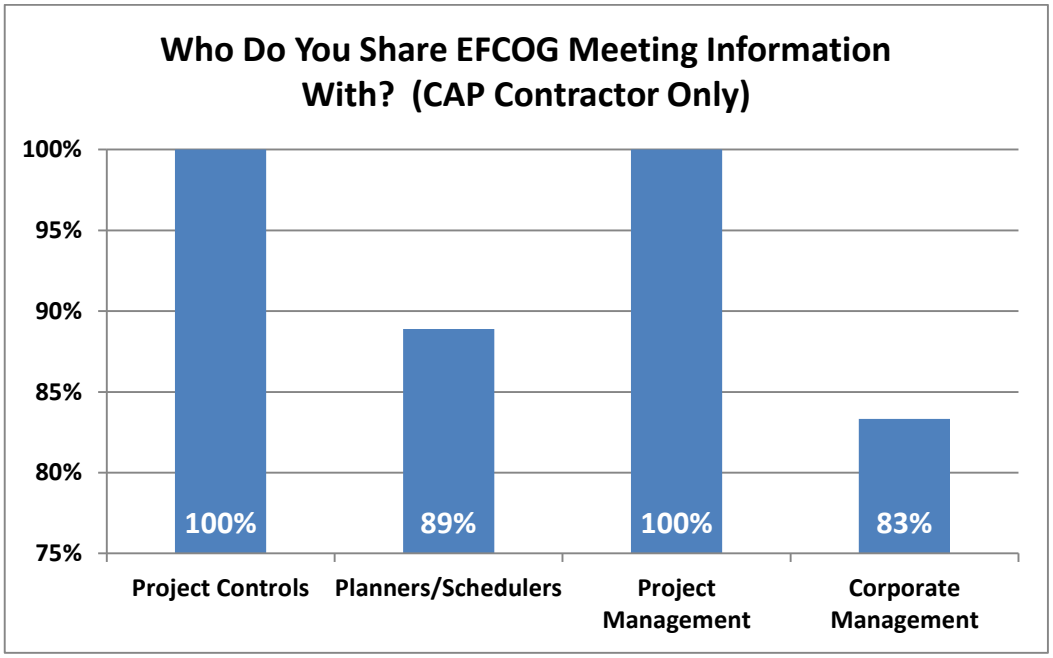
Question 6.5.1- If you participate in the EFCOG EVM Subgroup, do you share the information you learn from your participation?

All of the CAP Contractor responders who said they do participate in the EFCOG EVM Subgroup answered this follow-on question. All of the responders who participate in the EFCOG EVM Subgroup share the information via email and ninety-four percent also shares the information verbally. Six percent do not share the information.



Question 6.5.2 - If yes, with whom do you share the information you obtain from EFCOG meetings?

All of the CAP Contractor responders who said 'yes' to Question 6.5.1 also answered this follow-on question. All of these responders stated they share EFCOG meeting information with Project Management and Project Controls. Eighty-nine percent of these responders share EFCOG meeting information with Planners/Schedulers, and 83% of these responders share EFCOG meeting information with Corporate Management.



Topic 6 Findings Summary:

Survey responders were asked about improving communication, and identified improvements made over recent years that were beneficial as well as those that were non-value added. Responders gave numerous suggestions on how to improve in the future. The recurring theme throughout this survey is the need for consistency. Primarily the CAP Contractors want consistency from all levels of DOE that they deal with. Frustrations run high when they feel they are serving three different masters in terms of expectations. Both CAP Contractors and Federal Staff are pushing for consistency in oversight operations. Responders don't understand why the expectations and interpretations of the EIA-748 differ from one level of review (Site, PMSO, OAPM) to the next, one type of review to the next (EVMS Certification, EVMS Surveillance, EV Peer Reviews, etc.), and between one review team lead to another.

Responders identified their understanding of what method(s) are used to communication project performance from contractor to FPD to PMSO to OAPM to the Deputy Secretary. The comments were very similar and indicated an understanding of the process.

Survey responders gave suggestions for improvements in EVMS-related communications from HQ to functional EVMS experts, and also discussed EFCOG EVM Subgroup participation. Many survey responders gave additional comments and suggestions for improving EVMS in the future, as well as comments on personal observations of their experiences with EVMS.

Conclusion

Based on the level of participation from both the Federal Staff and CAP Contractors, the broad cross-section of locations, organizations, levels of responsibilities, H&A believes the information obtained is representative of the EVMS stakeholders. The structure allowed interested stakeholders to elaborate, provide examples of concerns, and make recommendations that will assist H&A in conducting the gap analysis and recommendations phase of the initiative to improve EVM and PM integration task. The stakeholders are commended for their participation and becoming part of the solution.

Appendix A – Comments from Survey Responders

Comments have been consolidated into categories: Baseline Change Management, Communication, Consistency, Culture, Customer Direction, Establishing the PMB, EVMS Procedures, EVMS on Operations, Funding, Industry Meeting Participation, Metric Manipulation, Oversight, Reporting Requirements, Resources, Review Process, Subcontractor, Training, and Use of Data. Each category is divided into two subcategories: Issues Reported by Responders and Recommendations from Responders. Each comment is preceded by a (C) or (F) to identify if the response came from a CAP Contractor or Federal staff.

Baseline Change Management – Issues Reported by Responders:

- (C) Volatility in changes on projects that is much more frequent than our ability to officially process changes or address impacts, all leading to baseline that doesn't reflect reality. Because of this, we need other ways, in addition to EVM, to understand status of project and to make credible forecasts.
- (C) Processing of project's management of changes for both internal and directed changes is too slow
- (C) Untimely contract modifications to support EVMS
- (C) Implementation of contractual changes including added/deleted scope (delays in contractual processing), FY focus, and funding driven breaks in logic
- (F) Change control not managed properly
- (C) Establishing baselines too early, which prompt numerous changes to the baseline
- (C) Freeze period is not in EIA-748, so why is that an issue? It might be a good practice but it is not a requirement.

Baseline Change Management – Recommendations from Responders:

- (F) It seems that what needs to be stressed both to DOE & contractor management is that variances are not 'bad', but they are simply indicators of trends and performance. The contractor CAMs should not be trying to reduce variances, but use them for what they properly are. Some contractors try to process BCPs under the scope change guise, but which really are just to eliminate a bad variance.

Sometimes it is appropriate to replan or rebaseline if the variances have become so significant that the variance values are meaningless – especially if caused by funding issues.

- (C) In my opinion, there will always be a desire to re-plan to avoid variances. That said, it is incumbent upon contractors to adhere to a rigorous change management process that ensures this does not occur.

Communication – Issues Reported by Responders:

- (C) I can honestly state that the information provided by OAPM a) has not been communicated broadly, so contractors don't know what is out there (e.g. the PASEG, ESSOP, EPASOP), b) has not been provided in any timely manner to facilitate compliance beforehand, and c) does not lend itself to interpretation by reviewers (which creates confusion and frustration when CARs are generated based on personal preference).
- (C) It is not easy to get relevant EVMS related information from DOE other than what is posted officially in 413. Most of the information we get is from word of mouth from other contractors via personal networks.
- (F) Regarding improving communication methods, not sure how much of this is value-added. HQ "call an expert" suggestion does not cut any ice with the contractors, who report to their respective FPD. The FPD is going to do whatever is in his best interest—i.e., looks the best, any "outside expert's" opinion notwithstanding.

Communication – Recommendations from Responders:

- (C) General DOE contractor observation: Contractors are overwhelmed, they want to do the right thing, yet are getting conflicting direction from local Fed, NNSA and HQ. To help DOE improve EVMS integration with PM on both the Federal and contractor levels across the complex, suggest an EVMS advocate (or board) that is not involved in the surveillance process. This advocate could provide, without retribution, the consistent EVMS compliant guidance for complex EVMS execution problems. This may be where EFCOG is going. But I think it would be helpful for a project to be able

to present a problem to an official advocate and receive a compliant solution that is acceptable to local and HQ.

- (F) Conduct EVMS workshops on an annual basis to share lessons learned and training on new tools.
- (C) Establish and maintain an EVMS certification/surveillance/CAR/CIO Library.
- (C) Publish lessons learned from various compliance reviews and make available to contractors (at least annually).
- (C) Retain public database of resolutions to issues between contractors and DOE/OAPM…just talking about rulings of issues commonly identified or where gray areas need resolution. This would help minimize misinterpretations on both sides.
- (F) Trend EVM findings/issues concerns across multiple sites/contractors.
- (F) If the communication is established in the same fashion as the PMCDP on Powerpedia, then it will be a successful platform.
- (F) Recommend that OAPM maintain a library of EV certification and surveillance: 1) LOIs/CRADs 2) CARs and CIOs 3) Corrective Action Plans 4) Certification / Surveillance final reports 5) EV Lessons Learned.
- (C) The training snippets, newsletters and web based forums are all good and very helpful and should help to keep everyone working more consistently
- (C) Easy to access training and guidance information is very helpful
- (C) Form an EVMS users group including contractor EVMS leads across the complex to discuss EVMS execution challenges and solutions with peers on their projects without retribution. This would promote compliance, consistency and training. To be able to meet quarterly would be great. This could be done by net meeting.
- (F) HQ needs to realize the EVMS expertise is in the field with the DOE and contractor folks.
- (C) Any communication must include DOE as well as contractors. The key is consistency throughout the agency. When so many players play with their own set of rules it becomes non-productive in trying to implement an EVMS.
- Hold Industry/DOE Meetings:
    - (C) ANNUALLY: Recommend annual DOE/Contractor EVMS workshop for Project Management/Project Controls Managers, similar to the annual Budget

Officers and Accounting Managers meetings. This would allow for regular sharing of knowledge, discuss re-occurring issues share lessons learned, discuss use of tools, and contract implementation to compare execution and management/oversight methodologies.

- (C) QUARTERLY: Quarterly review of project status and Monthly Performance Report "issues, concerns or areas of question" between DOE HQ, the field office POC and the Contractor, to ensure that all parties are engaged and understand the specifics of each Contract/project, rather than engaging in EVMS Surveillance activities without any knowledge specific to Contract requirements, annual funding limitations and other Acquisition strategy struggles specific to each individual Site/Project.
- AS NEEDED:
  - (C) Additional EFCOG Subgroup discussions/meetings/working sessions and/or conference calls to broaden the expectations and understanding
  - (C) Periodic webinars with topics solicited from the EVMS community or from HQ to get their message across on any concern areas.
  - (C) Host web workshops to further develop plans on implementing any actions resulting from this survey.
  - (F) Monthly VTCs with smaller groups to present available tools and benefits - as well as convey any new policies or procedures.
  - (C) Continued Road Shows
  - (F) Develop an EVM Focal Point Working Group, comprised of each organizational EVM Focal Point to share latest policy, guidance, initiatives, best practices. This group can help ensure that their organizations have the latest information to assist their projects. Integrated teams to discuss a common approach to EVM throughout the Department to foster consistent approaches to the tool and to determine where/when EVM is (1) applicable (2) useful and (3) best value to government for performance measurement.

- (C) Make sure you have the right people answering the questions. Many times the answers given are so vague that it causes a loss of integrity which will put the effectiveness of the system at stake. Ensure the right people are answering the questions.

- (C) Timely response to questions. A no blame or fault response to questions. Closer working with OAPM, EVMS teams at sites, and FPDs or DOE EV SMEs to better understand needs, improvements, and team concept to assure the valuable tool is used as a tool and not boat anchor.
- (F) The Humphreys Blog is an example of something that would be beneficial. Even references to the Humphreys monthly blog would be beneficial to DOE project analysts and contractor project controls personnel. As is, I am not sure DOE analysts/contractors are aware of or read the blogs.
- (C) Determine how to improve communications from the sites to HQs (PMSO and OAPM) while also following the lines of authority
- (F) The suggested improvement to improve communications from HQ to the field is to reverse the flow; it should be from functional EVMS experts to HQ as the experts are in the field.

Consistency – Issues Reported by Responders:

- (C) PMSOs issuing guidance that is in conflict with EIA-748 or OAPM
- (F) The biggest challenge that contractors' face when trying to implement a successful EVMS is the subjectivity of the certifying officials. I have been a part of ~ 10 reviews with at least 8 of the 10 review directors being different for each review. Inevitably I have witnessed the contractor receive corrective actions based on changes they made to the system as directed by the prior review team. There is no consistency w/ interpretation of the EIA-748.
- (C) Confusion among local DOE and Contractor on what constitutes a compliant usage of MR, definition of within-in scope and out of scope, application of DOE contingency
- (C) Communication seems to have degraded over the past several years. At the office of OAPM over the last 5 years there have been many retirements and much turn over. This causes inconsistency from a personnel standpoint. This may be why DOE does not seem to speak with one voice. Another issue is the various EVMS compliance departments throughout DOE and each has a different interpretation from the other.

- (C) The largest issues stem from getting different direction from local office, OAPM and other sites. Example: "Local office says why are you focusing on EVMS? Focus just on your schedule." There are lots of issues with interpretation of the requirements that leads to conflicting information.
- (C) We are striving to comply but would like to have a system that can be used by the project PMs, FPDs and DOE offices to get the appropriate response but it is not a one size fits all with the contracts structured the way that they currently are. The feedback that we have received has not been constructive in helping us to meet the goal. There has been lots of variability and conflicting information. A large portion of this is driven form the contract as it is set up and the desire to continue with an M&O contract while trying to impose a fixed price plus incentives contract.

Consistency – Recommendations from Responders:

- (C) In general, I don't think that the systems are the problem. The consistent application and integration of the proper processes are the challenge. Systems and systems flows are pretty much the same on every EVMS. Systems collect and house the data. The process on how, what and when data is collected, analyzed and reported seems to be the challenge on every project. Recommendations for improving processes are to get back to basics. Define, analyze, simplify, and train to the processes with consistency and rigor.
- (C) Consistency in the reviews would be helpful so that everyone could best prepare and be reviewed equally.
- (C) Establish and maintain a DOE and contractor EVM point-of-contact (POC) for each DOE Site. In addition, identify a DOE OAPM POC for each Site, to act as a compliance officer, where questions surrounding anomalous conditions or events impacting EVM can be assessed/evaluated from an OAPM central position. Once OAPM arrives at a guidance position, that guidance would be shared with all DOE contractors, providing consistent direction to all.
- (F) Clearly defined requirements/expectations need to be understood by everyone in order for them to be implemented and used effectively.
- (F) The need for consistency cannot be over-emphasized. On several occasions, we have asked for 'expert' advice, only to have that advice contradicted by other

experts or by OAPM management. I have been told that OAPM will not put its advice in writing, but I cannot confirm if this is truly the case. If this is true, it strikes at the heart of credibility of the OAPM.

Culture – Issues Reported by Responders:

- (C) A lack of acceptance that EVMS compliance is an absolute requirement that is not going away.
- (C) Rationalizing and justifying that somehow the requirements have changed, when in fact they have not.
- (F) Some projects don't think EVMS is essential for project success
- (C) The perception that EVM is somehow gone too far and impedes a project's progress.
- (F) Lack of desire to impose the rigor tight scope, budget, and schedule controls
- (F) Contractor and FPD relationship is often too close for parties to maintain their objectivity
- (C) Failure of DOE and Contractor Management to understand and embrace use of EVMS as tool to successfully management projects versus viewing it as just a reporting vehicle that eats up a lot of resources.
- (C) A culture in which reporting any negative performance data brings a great deal of attention and over-reaction such that there is fear of reporting any negative information even if there is a clear recovery plan that can be implemented.
- (C) "Culture" is the single largest hurdle to get over for EVMS in the DOE environment. DOE-OAPM has done a great job of demonstrating the importance of EVMS. However, the DOE field offices have not embraced the same level of importance or understanding, and thus the Contractor Sr. management teams are unable and perhaps unwilling to invest the required changes in process and implementation required to make the change to a more EVMS complaint posture in this more structured and DoD- aligned environment.
- (C) Contract Milestones that are driven by political pressures (State lawsuits, Consent Decree resolution, Tri-Party Agreements, etc.) can lead to poor planning (EVMS concerns with Negative Float in the baseline File) and issues with critical

path analysis. Additionally redacted monthly reports through the Field Office legal Departments may lead to frustrations for DOE-HQ, where the Official Use Only (OUO) has not been extended, for political reasons outside the control of the Contractor.

Culture – Recommendations from Responders:

- (F) We need to cultivate a mutual win-win successful project culture
- (F) OAPM's approach has been too much assessing, not assisting. We are trying to make a substantial change in the culture in DOE, this requires training and patience. We need to recognize that we have contractors that have bid optimistic costs and schedules, and we have DOE managers that, in many cases, got their positions because of their technical skills, not because of managerial skills.
- (C) Training to change the culture from we "have to do EVMS" to "want to do EVMS."
- (C) Making sure that all projects (from civil construction to R&D) understand the benefit to having a plan and reporting on that plan.
- (F) Emphasis has to be on recovery / corrective actions rather than punitive response.
- (F) On a large, complex design-build project, it seems to be easy to get out-of-line with the baseline – especially with funding and technical design issues constantly changing or not being resolved in a timely manner. This leads to significant cost and schedule variances – not all necessarily the contractor's fault – but the mentality seems to be that variances are "bad" and should be avoided at all cost (especially when contractor's bonuses are tied to CV & SV performance, or worse yet, DOE incentivizes for fee based on CV & SV performance).
- (F) It is well known that some DOE senior leaders are frustrated that EVMS data too often does not provide accurate/reliable performance information and/or does not provide early advanced notice that projects are in cost and/or schedule trouble. As a result, such leaders claim EVM doesn't work. EVM works, but requires that rigor and discipline be applied continuously, otherwise shortcuts are taken, noncompliant practices are followed and the integrity of the data suffers and becomes misleading and unreliable. Through effective analysis techniques, performance problems and

trends can be detected, even though SPI and CPI are near perfect and EAC is near BAC. The following is an example:

- (F) When it was discovered that a project was going to be $250M over budget, senior leadership was surprised and upset that the EVMS data did not provide early warning of the impending overrun. However, if the analyst or FPD had been more familiar with the data and used effective analysis techniques, they would have discovered a significant and recent negative cost variance trend, unrealistic EACs and a very high cost technical risk that had already been realized but was not being reflected in the EAC. When the performance trend is calculated and added to the cost of the realized technical risk they equal the value of the overrun. Therefore, senior leadership should not have been surprised.

Customer Direction – Issues Reported by Responders:

- (C) Failure to hold DOE and Contractor Project Managers accountable for effectively using EVM and managing their Projects consistent with EVM requirements
- (C) DOE's unwillingness to approve realistic baselines
- (C) Contract management vs EVMS alignment issues
- (F) Directed Scope changes
- (C) Work For Others (WFO) customers do not allow the use of MR
- (F) Mandated consent decree milestone make real project scheduling impossible
- (F) Inability of DOE HQ to stick with a fixed code of record for duration of the contract
- (C) The high volume of DOE driven scope changes to cost type contracts are being managed by DOE to a fixed contract price. It requires engagement of significant DOE and Contractor resources (PMs, CAMs, estimators, schedulers, EVM specialists, etc.) to generate review and definitize FAR based change proposals and once definitized, those same resources are involved in the development and incorporation of corresponding baseline changes into the Contractor's planning baseline. These changes require not only the addition of the new scope, but deletion of a corresponding existing scope value to maintain alignment with the Contract

Price. This results in a high volume of baseline changes and significant volatility to the Contractor's baseline.

Customer Direction – Recommendations from Responders: None

Establishing the PMB – Issues Reported by Responders:

- (C) We are struggling with putting in a full estimate at CD1 to CD4 when the work is not all authorized because this is what the customer wants to see. This has to change.

Establishing the PMB – Recommendations from Responders:

- (F) All work should be tied to outcomes. Tasks not directly related to should be apportioned.
- (C) To make improvements, scope must be clearly defined as opposed to accepting bids based on a preliminary design status.

EVMS Procedures - Issues Reported by Responders:

- (F) Current instructions, policies, SOPs, Snippets, etc. are difficult to find
- (F) Current perception by DOE programs and contractors is that Guides are best practices that are not mandatory. This precludes standardization across the complex in the implementation of EVMS uniformly.

EVMS Procedures – Recommendations from Responders:

- (C) Provide a comprehensive guidance document that explicitly describes each requirement, range of acceptability, and the corresponding, specific reference document that is used by OAPM to determine acceptability.
- (F) EVMS is a disciplined approach to gather earned value data and provide a uniform means for analyzing project status in an integrated manner. To be useful it needs to be uniformly implemented and understood. If not done uniformly, then project performance cannot be compared across programs and sites to identify prevailing issues.
- (F) Define EVMS requirements in a contractor requirements document.

- (F) Given the current situation with EM projects, identified by internal and external audits and reports, EVMS needs to be tightened up and mandate specific accountability at low enough levels to be timely and informative into corrective measures.
- (C) Create a “How To” for DOE HQ, DOE Local Office, and Contractor relative to establishing a Capital Asset Project.
- (C) In addition, when new data analytical tools are developed and utilized by reviewers, communications should go out from the certifying body that these tools are now being used (e.g. some of the “big data” concepts being bantered about).
- (C) Two other issues of note: a) OAPM uses references that are not-well known in the EM complex (e.g. the PASEG). Communication of these references is not well orchestrated, and b) DOE seems to rely of the EFCOG as the means to communicate EVMS expectations. Not all sites fully participate in the EFCOG WEVMS sub-group meetings and activities, so other means of communications to EVSM practitioners is advised.
- (F) There are a lot of good references. The challenge is keeping them 'front and center' when a question or issue comes up. Long URLs (like in topic 1 to the Snippets) don’t help. Too many places to look now - PowerPedia, Newsletters, Websites
- (C) Clear definition of the more rigorous EVMS review process in needed.
- (F) Need to develop guidance to fit several scenarios, i.e., large to small projects, construction vs cleanup projects, capital vs operations projects, etc.
- (C) If there are a small number of projects that are having performance issues, which will likely always be the case, they should be dealt with without changing the rules for everyone that is performing without issue. I believe that mandatory procedures and processes or the diminishing or elimination of tailoring to best fit given projects is a bad concept. Qualified people will manage projects well in a positive environment where communication is effective, problems are communicated and resolution to problems can be established. A “how-to” mandatory approach will result in inefficiency.

- (F) I was excited to hear that the DCMA is considering developing guidance for a tailored EVM approach to assembly type production. I think that much of the work completed in the EM program would benefit more from such an approach versus the EIA-748 standard EVM approach.
- (F) Regarding mandatory 'how to' instruction: Though environmental impacts vary from each site, including political, workforce union agreements, weather, etc., standardization of information becomes the one, true benchmark federal employees have to either hold contractors accountable or for HQ to hold sites accountable. However, it should be noted that there is motivation among personnel on both sides (HQ & sites) to interpret and communicate data that does not invite scrutiny or show less than satisfactory performance. Data can be interpreted several ways, depending on it and the complexities that it represents, but having "how to" mandates allow for more (than less) to better achieve expectation alignment.
- (F) We've got too much guidance! We don't need more. Memos are coming in covering things like undistributed budget that are not helping us. OAPM is quoting things like DOE Acquisition and Project Management Glossary of Terms whose definitions are not the same (by a long ways) as in the DOE 400 series (DOE G 413.3 series) guides. There is no consistency and OAPM is interpreting words to suit their own purposes.
- (F) I have been involved in spirited conversations/debates about how the "one size – fits all" approach does not work in our deactivation, decommissioning, dismantlement, and demolition environment within EM as compared to what is believed to be the driving force behind requirements that are perceived to pertain to Construction–as the case of Office of Science and Department of Defense. That argument somehow leads a significant portion of people to be able to discount the importance of those requirements (as in case of Orders, Guides, etc.) and simply believe that we cannot utilize those requirements as envisioned and allows the "tailoring" understanding to deviate. Perhaps what should be considered are specific set of requirements for the conditions within EM for the D4 efforts and considering the constraints placed upon the environments, such as stakeholder involvement, discovering waste sites previously unknown, tribal concerns, and

collective bargaining agreements. I understand there are differences between construction and demolition, including the mindset of employees and contractors, but to allow the continued discounting by federal and contractor workforces on the importance of a prescribed set of EVMS or Reporting requirements should be discontinued.

EVMS on Operations – Issues Reported by Responders:

- (F) EVM on EM Operations Activities: While some EVM practices should be used because they are best practices, I think some EIA-748 required EVM practices are unnecessary (Critical path on Operations activities). I think more should be done in the Department to discern when strict EIA-748 adherence EVM is useful and/or when tailored EVM systems are more useful.
- (C) Operations protocol project scope versus Capital Line Item projects: There is a concern with the annual "Fiscal year Work plans" for Operations Activities (OA), and the Funding of Cap Asset (CA) projects with annual funding limitations as well. These funding constraints have added complexities that appear to make EVMS non-compliances by design. For Contracts that have both OA and CA, as well as Contract completion dates – or completion contracts – true lifecycle baselines, forecasts and EACs are not possible for EVMS reporting. Additionally, Contractors are expecting that they should have one set of EVMS procedures and guidance processes, e.g. that there is no "graded approach" for Operations Activities.

EVMS on Operations – Recommendations from Responders:

- (C) There needs to be discussion on this topic as the Operations Activities is the overwhelming majority of all DOE Funded scope throughout the complex.

Funding – Issues Reported by Responders:

- (C) Back-fitting project scope and cost to pre-conceived funding ceilings
- (C) Lack of funding to support project initiation
- (C) Overly optimistic cost and schedule targets driven by DOE funding limitations, DOE commitments to Regulators, and Contractor performance incentives.

- (C) Funding changes invalidates the ability to measure performance against a changing baseline --- and any other situations that can create an unrealistic baseline
- (C) Funding availability, slow movement of funds, line of authorization too slow, funding approvals sit on DOE's desk
- (C) Funding limitations (as projects are not fully funded) prevent contractors from being truly able to manage the entire project scope to take advantage of opportunities or to address emergent risks.
- (C) Our current contract adds new scope through authorized unpriced work (AUW), but does it as chunks of funding. Therefore each new chunk requires us to add a new work package because the work package is in progress. This increases the number of work packages and charge codes required. It is like we are buying part of the work package a piece at a time. It sometimes makes it hard to distinguish the scope associated with each chunk of funding. Being able to add to in-progress work packages would make the process a lot more straight forward.
- (C) Funding is the key in gov't contracting. Bad news slows or stops funding. There are a myriad of reasons bad news is hidden, delayed, or minimized.

Funding – Recommendations from Responders:

- (C) Additional emphasis and attention must be focused in the areas of Acquisition strategy (annual funding, completion contract dates versus lifecycle, Project EVMS reporting expectations) Scheduling (formalization of IBRs, IMP and IMS review and concurrence, Project Schedule Architecture, Process and Products and schedule health metric and assessments) and Risk & Opportunity Management throughout the complex, as the Field office and the Contractors have adopted tailored approaches that may be difficult to demonstrate for compliance.
- (C) One issue does pop up often, however, that always seems to raise eyebrows relative to approval of changes that defer work – funding limitations. Project managers, operating in an environment where funding is provided by the drip, must make prioritization decisions when funding limitations prevent planned work from being performed. Control Account managers need flexibility to re-plan work (albeit to avoid schedule performance variances) when funding limitations, outside of their control, prevent planned worked from being performed.

Industry Meeting Participation – Issues Reported by Responders:

- (C) Previously, travel to EFCOG workshops, etc. was reimbursable, and actually encouraged. That seems to have changed, with DOE even having to approve/authorize travel to such events. This does not lend itself to participation.
- (C) EFCOG has never been something widely promoted or discussed where I am employed. I only recently found out it even exists. I think better information about these kinds of resources/groups would be helpful.
- (C) What is EFCOG? I'm on a large DOE job for 7 years and never heard of it.
- (C) I was unaware of EFCOG until this survey.

Industry Meeting Participation – Recommendations from Responders:

- (C) I think the communication that happens between contractors and OAPM at EFCOG is invaluable. I appreciate that the OAPM folks go through such lengths to participate and speak at these meetings and to ask for support. I think that the current OAPM management really is trying to make things better and it is greatly appreciated.

Metrics Manipulation - Issues Reported by Responders:

- (C) Drive to be 'green' at all costs ('Call to Pocket', 'BCP to Green', etc.)
- (F) Use of EV data for award fee or contactor executive bonuses
- (C) Not following system processes and procedures once it is certified
- (F) Manipulation of data within the certified system to make performance look good
- (F) Adjusting work activities not on the critical path to improve overall metrics
- (F) Using EVMS data as a performance indicator as opposed to a management tool
- (C) DOE gaming of EVM data for political reasons
- (C) Too much trying to get around EVMS or trick the system with huge WPs and CAs and long durations that cannot be used for real analysis. Too many claims that we have "lower level" tracking tools – if EV is used and kept correctly, those tools and waste of budget may not be needed.
- (F) Too much reliance on EVMS metrics and not enough on the upfront planning - e.g. having a WBS product oriented or using risks to formulate MR, etc.

- (F) DOE PMs and other program representatives' tendency to request the contractor to "move budget" and use the LOE EVT to improve performance data is still prevalent within the DOE.
- (F) In the past DOE has made (and may still make) SPI and CPI part of the fee determination. As a result, it has incentivized the contractor to inflate performance reporting. Further, FPDs are also evaluated on current performance metrics rather than on accurate performance reporting (or performance at the end of project), thereby perpetuating inflated performance reporting until it is too late to do anything about it.
- (F) DOE does not demand accountability on the part of its managers in terms of progress. Few problems strike out of the blue. There are almost always warnings. Those warnings are routinely ignored until the problem blows up in their faces.
- (F) This is the central problem. Do not report bad news. Rating projects (red/yellow/green) was the dumbest thing DOE ever did. An admiral once told me: If you make a man's destiny (i.e., career) dependent on a number, you will always get that number. It won't mean anything, but you will get that number. So many DOE projects fail because we will not accept bad news.

Metric Manipulation - Recommendations from Responders:

- (C) With EVMS, variances are expected but the key is that a thorough analysis is performed to determine the root cause and that appropriate corrective action are taken. There has been a tendency for DOE to jump earlier than needed when variances start to show up and that a negative trend has not been established yet. Asking question to ensure actions are being taken is crucial, but implementing additional frequent reporting requirements to early take a lot of additional project/lab effort that is better spent on addressing/resolving the problem instead of reporting on it. We have had instances where the project/lab had to report 2 to 3 times a week. This extra help from DOE causes the project to do creative manipulations to minimize variances and to look green, instead of managing their project to the schedule so they are green. This type of creative EV practices has been supported by senior lab management.

- (C) Remove the SPI/CPI incentives from the contracts ASAP. This incentivized metric drives the elimination of variance through change control and the use of management reserve. The objective should be to report an SPI/CPI that reflects the actual physical project progress/performance.
- (F) Most of the problems with unreliable EVMS data and late performance surprises on DOE projects have largely been due to intentional contractor practices to delay reporting of negative performance trends. There are well known practices that contractors use to deceive the true status of projects and ways to identify when they are used. We should make sure our FPDs and Project Analysts are aware of them and how to identify them. I do not believe we train our people sufficiently to do their jobs well. EVM is not rocket science, but it is not always easy to accurately interpret the data in front of us either. It takes tools that are available, knowledge of how to spot misleading data, and rigor in performing the EVMS oversight role. We can spend a boatload of money requiring contractors to cross every T and dot every I in EVMS implementation, but if we don't understand how, and identify when, deceptive EVMS practices are being employed, senior DOE leadership will continue to be surprised about poor performance late in the project executions.
- (F) My biggest concern here is the linkage between performance and reward for the contractor, and how it impacts the "honesty" in providing true project status to the Federal stakeholders. I think it is improving, but a process for de-coupling rewards for project performance and for reliable/honest reporting may need to be established. Granted, the monetary tradeoff in that equation will always be tilted in favor of the overall project's performance, but….. if you want to be able to use the huge investment we all make in EVMS for actual management of the project, the data has to be honest, accurate, and un-biased.
- (F) Contractors often use deceptive practices to avoid disclosing cost and/or schedule problems until late into the project. Most can be detected early through analysis techniques, exposed, and corrected to ensure accurate performance reporting and to prevent surprises later in the project. However, just like the rigor and discipline required of the contractor in their EVMS implementation, the DOE EVM analysts must apply rigor in their monthly analyses to identify deceptive or

noncompliant practices that may ultimately result in performance surprises by the customer. For this reason, DOE EVM analysts must have the training needed to analyze EVMS performance data and to identify contractor practices that may result in project performance appearing better than it actually is, especially when the DOE contract contains fee provisions that reward the contractor for CPI and SPI values near 1.0. Most of the time, it is not the missing signature on the WAD, excessive use of lags, occasional use of MR, or changes implemented before being approved that results in surprise cost or schedule overruns late in the project. Although such practices should obviously be identified and corrected, they are not the cause of most of the major project surprises being experienced by DOE.

- (F) Most of the major DOE project performance surprises senior leadership complaints about are attributed to contractor practices that intentionally keep performance problems from becoming visible to the customer until late in the project. A few examples include: 1) Front loading the baseline to achieve and maintain early positive cost and/or schedule variances, 2) rescheduling activities into the future to avoid schedule variances, 3) aggressive/inappropriate uses of MR, 4) not reflecting realized cost/schedule trends in the EAC and/or forecast schedule, 5) changing dependencies/durations to avoid moving completion date out or creating negative float, 6) making retroactive changes to S and/or P in the cumulative rather than current period to avoid notice of changes, 7) movement of resources from future planning packages to near-term work packages to eliminate cumulative variances (rubber baseline), etc.. Many of the above can be discovered using aggressive analysis methods that are often not found using standard analysis techniques and indices and are not taught in basic EVM training. It seems to me that such tricks of the trade, reasons they are used and how to detect them should be taught to FPDs and Project Analysts as part of their training. Granted, they need the basics of EVM, but, because of their unique roles, they should possess the knowledge to identify when contractors are using practices intended to present performance better than reality in order to make a CPI/SPI target or to delay reporting of poor performance issues.
- (F) DOE needs to clarify acceptable trend practices, appropriate uses of MR and DOE contingency. Too often MR and/or DOE contingency are used to inappropriately

cover negative cost trends. Contingency is also used to cover in-scope risks, thereby relieving the contractor of responsibility and accountability for their cost baseline. There are DOE risk guides published, but such guides are not followed ([name deleted] project being an example). Abuses are also rampant in the [name deleted] project, which has had a CPI/SPI of near 1.0 every month since the project was awarded. There should be more discipline by contractors and more oversight and enforcement by DOE regarding these areas. FPDs and Project analysts should be keenly aware of DOE policies regarding these areas and should enforce when policy and guidance is not followed. As an analyst I applied the rigor in my job like the rigor we expect from our contractors in the execution of the EVMS implementation. I called the contractor out on a monthly basis when I saw infractions and tricks being pulled. If the analyst doesn't do so, the contractor will take liberties and will be allowed to lose control. When they do so, we (the customer) let it happen and have no one to blame but ourselves.

- (F) It seems that we are paying too much attention to EV and change control, and not enough attention to the project schedule and the c of ETCs by the CAMs. EV tends to be backward looking – schedule data and ETC data provide the CAM with the opportunity to communicate where specific scopes of work are heading. On one project, the CAMs produced an unfiltered, unreviewed ETC each month – it was input directly to the Project Control System, with the CEO holding CAMs accountable for communicating ETC changes in sufficient time for the executive team to help mitigate or avoid the potential cost increases.
- (F) Staff (i.e. FPDs, analysts, HQ officials) should stop relying so heavily on metrics such as CPI/SPI & rely more on the establishment of the baseline, WBS, risks, etc. and the way trends / changes are managed for effective reporting of EACs & TCPI. Reliance on whether CPI/SPI is green is not what EVMS solely consists of - i.e. garbage in, garbage out!

Oversight - Recommendations from Responders:

- (F) Infractions of EVMS guidelines should be caught and documented by DOE analysts during the monthly project analysis cycle and corrected by the contractor. I

have found monthly written analysis of EVMS data of performance and guideline infractions delivered to the contractor for resolution are effective if followed up.

Reporting Requirements – Issues Reported by Responders:

- (C) Contractor performance reporting is a very elusive topic. It is unclear who at DOE-HQ ever looks at Contractor data. No comments or concerns have ever been provided regarding EVMS performance data from the DOE HQ.
- (C) Reporting requirements as provided through the Contract has remained unchanged since award and the monthly EVMS report has been more of a narrative document than a "traditional" EVMS report. DOE Field Office uses a monthly performance review presentation meeting with applicable FPDs and Contractor PMs. The Monthly Performance Report comments have been focused to variance analysis and achievements through the life of the contract.
- (C) Very little focus or feedback has been provided on Format 1-5 of the monthly report. The expanded Format 5, through EVMS CAR Resolution has appeared to be for compliance only and provides limited to no value to the field office. Examples that have been provided in format 5, without comment or feedback include: Retroactive changes, Management EAC narrative, CFSR alignment, Program Log (CBB and TAB alignment) Format 3 discussions, Format 4 discussions, anomalies such as IEWO, Acquisition Contract alignment requirements (not consistent with EVMS), Inter Contractor work for others, Contract alignment (PMB to Milestones) and indirect management. Perhaps PARS II data for Cap Asset projects are more proactive and discussions are held between the field office, HQ and the contractor.

Reporting Requirements – Recommendations from Responders:

- (F) Carefully create specific (prescribed) requirements for federal baseline reporting, and allow the field sites to use contractor performance to "inform" the federal baseline. This allows the "tailoring" that is so desperately pursued, but establishes a clear line in the sand for accountability of the field and do not waiver. Recognize and augment oversight where necessary when field sites proactively attempt to and report impediments to progress and corrective measures. Recognize

like-minded approaches (between field and HQ) to achieve project performance, in both efficiency and effectiveness, and establish clear expectations with contractors.

Resources - Issues Reported by Responders:

- (C) Projects cut project support functions from the budget down to almost nothing, leaving adequate resources for implementation of EVM best practices
- (F) Position, job series, and training significantly vary for those involved with EVMS within DOE.

Resources – Recommendations from Responders:

- (F) DOE HQ should focus more on getting the right EVM people (knowledgeable and experienced) on the projects and replace or retrain the ones that are not performing to standards.
- (C) I think the contractor's EV Lead or department should be separate from Project Controls. They need autonomy.
- (F) Regarding the sufficiency of skilled EVMS resources in DOE, I believe this area is lacking for the most part. There are certain pockets of expertise in all situations, obviously. But personalities, work ethic, and other non-tangible motivations may run contrary to an adequate population of informed, well-trained, and fully-functional workforce. EVMS can provide key insight to contractor or site performance. In that regard, it makes sense to have a vertical depth of competency that is validated early and often by HQ to ensure sites have and maintain this critical skillset.
- (F) Additionally, this should be one area of continuous improvement for contractors as well, as it has been demonstrated all too often that EVMS subject matter experts within the contractor workforces (as corporate representatives) attempt to flex their intellectual muscle by re-interpreting things worked carefully on by collaboration of HQ and field offices and convince their contracting representatives and President/Vice-President that implementation would be too expensive, too time intensive, and provide little to no additional value. This situation should be addressed.

Review Process – Issues Reported by Responders:

- (F) Significant issue with OAPM's adoption of an extended audit approach to EVMS reviews. This is not responsive to contract and project management support issues, ties up considerable resources, and has not been explained to EM HQ or the field. All it has done is to freeze any progress toward certification and surveillance reviews and made contractors skeptical of any intent for OAPM to judge any EVMS as acceptable.
- (C) DOE's projects are not like DODs projects and review teams need to understand how the intent of the guide is applied on the contract and project. Those words "intent" and "guidelines" were selected for a reason. To allow flexibility in meeting EIA-748, strict requirements do not work and forcing contractors to do something usually does not work, unless their EV system is way off base.
- (C) Legacy DOE processes (IEWO, Line of Credit and Site tool development and administration, tailored reporting) also lead to EVMS implementation challenges that cannot be easily resolved.
- (C) It is the opinion of Sites that have had recent review that there is no way to pass the more rigorous EVMS Review
- (C) Guidelines for EVMS have turned into hard, fast rules that leave the contractors with little choice but to incur additional costs implementing requirements that may be over and above what is required to successfully manage the work
- (C) Rigid EVMS requirements that make EVMS too hard and too restrictive result in data and management that is not meaningful. As a result people are trying so hard to comply with these rigid requirements that they lose site of the overall purpose of the EVMS principle, which is to have a system that provides meaningful performance information allowing early warning and correction for problems. As a result people are working for the system instead of the system working for them.
- (C) Requirements are becoming so stringent that EVM compliance in fact causes major project cost and schedule impacts –does the opposite of its purpose. I worry that at some point by making it too stringent, it will cause the overall project management community to decide it is not value added to the project. You already

are starting to see many groups in DOE and DOD taking exemption to the requirements.

Review Process – Recommendations from Responders:

- (C) Keep it simple: Define the purpose; stick to the EV rules, use the system to manage and keep the contractor honest.
- (C) Involve a HQ EVMS review of contract requirements and Capital Asset development prior to issue of contracts or starting a project. Clearly scoping a project can have more influence on successful completion than tracking a poorly scoped / conceived project.
- (F) The current line of CAM questioning by OAPM during EVMS reviews seems to expect CAMs to be EVMS experts. Granted, CAMs should know their baseline plan and be aware of the performance criteria and documents, logs and reports related to that plan. However, not all CAMs are experts, and should not end up with CARs solely because they are not experts. Their job is managing the accomplishment of technical scope, schedule, resources and performance related to their $5M to $500M of contract scope. I fully expect the project controls staff to be the EVMS experts and to be there to correct a CAM if he/she is taking an action that is noncompliant with the standard. The OAPM expectation that every CAM should be an expert is not realistic and, I believe, unreasonable.
- (C) A "one size fits all approach to EVMS" provides some significant challenges to the projects. Not all capital asset projects are construction of new facilities and thus should not be measured against those standards and requirements set forth as the criteria for a success EVMS implementation. The type of capital asset, the total project cost, and scope of the project all must be taken into consideration when determining the level of EVMS implementation that is required to produce accurate and meaningful data for a contractor to successfully manage the work.
- (F) DOE HQ should conduct real time root cause analysis when it is determine EVM data is not accurate, i.e., severe failures.
- (C) The ultimate goal of the EVMS Program is to provide meaningful performance information in a timely manner to aid in successful project execution and

completion. In this spirit, the EVMS reviews should be in the spirit of "we are here to help" not "we are here to see how many CARS we can write".

- (C) I believe that peers are better as EVMS reviewers as they are working the same processes, challenges and issues as each other as opposed to an outside entity or DOE who are not really engaged in the same processes. I believe our internal reviews have been more productive when this has been the case. Also, peers might be more likely to have a "we are here to help" approach which is much more productive.
- (C) I would recommend consideration of more of a collaborative rather than adversarial approach would be much more effective. Help the contractors do the right thing. In a lot of the cases they just don't understand what is required or how it applies to their project. There is such a dislike and distrust of OAPM that contractors will not ask how to do something. I do believe the oversight is necessary but I also think a more collaborative and helpful environment would improve communication and performance results.
- (C) There has been a significant paradigm change when comparing EM-led reviews against OAPM-led reviews, the latter being much more rigorous. I would recommend that OAPM 'grease the skids' with any site that has yet to have an OAPM-led review to lay out expectations, well ahead of the any review.
- (C) When conducting an EVMS review, the PSO and site should be involved. Each PSO has qualified EV SMEs and they should be on the team. In addition, the team should be made up of Feds from all PSOs. It would be of great value for DOE to have SC members on an EM review or EM on an NNSA. That is how the Department will get better and stronger in EV, i.e. developing SMEs across the complex. That will improve surveillance review and site monitoring which is critical to ensuring the contractor continues to use its EV system in accordance to it policies and procedures and what system was certified.
- (C) The review process has become extremely difficult and non-value added. Some major concerns are the lack of consistency on expectations at the various levels within DOE. Some examples are the guideline interpretations, review titles/process (different from DOE procedures), and how reviews themselves are conducted. The

handling of CARs is a really big issue. For example why have a different CAR for each finding even though they are similar/alike. Not consolidating CARS into process categories adds significant workloads during the corrective action process. When a finding is identified during a review but evidence is provided that it was not a finding that should be taken off the CAR list. Again makes additional work for everyone with no value added. In addition streamlining of the Corrective Action Process would be of great help. The Corrective Action Plans handling has become like a "cottage industry" with every level within DOE wanting to be their mark on it. This agreement should be between the Review Director and the Contractor and having other tag-alongs is only making the process become an impossible beast.

- (C) OAPM has eliminated daily out-brief w/ contractors during reviews. This has been detrimental to the process and prevents miscommunications from being clarified / addressed until after a CAR is written…much more painful and unnecessary.
- (F) Recommend performing a Root Cause Analysis of why there have been EV struggles at some DOE locations (e.g. loss of certification). It could also be helpful to engage with other federal organizations that have had EV struggles and determine if they have conducted any RCAs. Also recommend that OAPM take a look at projects where EV is working well and determine why it works well at some locations. Without understanding why EV has worked well at some locations and why EV has had struggles at other locations, we cannot be certain that the actions being taken to improve EV will address the underlying causes of recent difficulties.

Subcontractor – Issues Reported by Responders:

- (C) Cost-type subcontractors are unable to adhere to EVMS implementation and reporting
- (C) DOE and the M&O's are unwilling to enforce requirements on subcontractors
- (C) Lack of credible schedule and status planning from FFP subcontractors.

Subcontractor – Recommendations from Responders: NONE

Training – Issues Reported by Responders:

- (F) For projects with a lengthy (over a year) re-baseline effort, some guidance would be appreciated on how to manage EVMS processes during these times. When might an OTB be appropriate to use?
- (C) Lack of EVMS understanding and enforcement by local DOE management
- (F) Lack trained PM's, CAM's, project controls support personnel
- (C) Insufficient DOE and Contractor Project Manager expertise, insufficient Contractor Control Account Manager expertise
- (C) Lack of experienced CAMs or University CAMs that are selected based on their position within a University
- (C) Reporting Requirements not enforced/understood at DOE Field Office level
- (C) Having Project Managers appointed that are technical experts that have little to no project management or EVMS experience, and look at EVMS more as just a requirement that needs to be meet and not as a tool that helps them manage their project

Training – Recommendations from Responders:

- (F) Recommend a higher level of training in use of PARS II, contractor's monthly reports and EVM in quarterly reports to accurately spot/pinpoint initial negative trends.
- (F) Recommend training project team & HQ liaisons on EVM techniques scaled to appropriate project complexity, value, and risk.
- (C) Recommend additional EVMS training for FPD and staff.
- (F) The training snippets are voluntary. They must be made mandatory to EVMS users and certification of continuous refresher training should be done in a bi-annual basis by electronic testing.
- (F) An EVMS development and certification program would assure a core of EVMS qualified personnel by site and programs. However, certification should be incentivized and rewarded at the employee performance plan.
- (F) On the job learning is critical to achieving a constantly learning organization. And, having strict requirements for entry to the federal workforce would further help to eliminate those who can articulate well, but not perform in line with the all expectations of a job. After placement in a federal position though, continued

certification-type requirements should be mandated as well as opportunities for participation in reviews of other sites, review and development of clarification or direction documents, etc.

- (C) A lot of focus is put on surveillances and reacting to surveillances. Suggest putting boots on the ground up front with more focus on the basics. Emphasize root cause analysis, variance analysis, estimate to complete, problem solving and corrective actions. Fixing the EVMS execution problems will make the surveillances go much better and take less time.
- (F) Availability of tailored training materials to make the subject area more approachable from the contracting viewpoint.
- (C) OAPM should come to the field to work with DOE and Contractor EVMS experts when not doing surveillance to broaden OAPM's experience.

Use of Data - Issues Reported by Responders:

- (C) Over reliance of 'forensic' analysis of performance data at the expense of reason and common sense
- (F) Data is not timely, accurate, or meaningful
- (F) My management is not interested in the data
- (C) Complexity of multiple systems/databases pulling together data in a useable/timely manner
- (C) Overreaction to variances, rather than to variance trends
- (F) Current results from EVMS surveillance reviews indicate that some projects/sites do not follow EVMS implementation procedures as required causing lack of credibility in the data provided. Lack of credibility taints project status reports causing necessary corrective actions to be too late to be effective in steering the projects to successful completion.

Use of Data - Recommendations from Responders:

- (F) Recommend DOE use the CPI and SPI properly by understanding schedule float and cost contingency. Cost and schedule contingencies are developed to address risks that will occur.

- (F) Communicate noncompliant EVMS practices noticed at sites that are degrading the reliability and accuracy of EVMS performance data, e.g. tricks of the trade, call the pocket) by making EVMS performance data appear better than it actually is. Provide methods to identify these non-compliances.
- (F) Performance trends are often overlooked by DOE analysts, both at the control account level and sometimes at the project level. I have seen cases where cost performance and schedule problems were not detected because the analyst was looking solely at the CPR/SPI. Often, especially when the contractor has front loaded the baseline to produce early cost and/or schedule positive variances. These variances can carry the project into 60 percent completion before they start going negative. However, if the analyst will do six-month, and on long projects, twelve-month average CPI/SPI they will notice performance turning down well before the indices indicate such, primarily because of the heavy weighting of the early performance data. If the analyst detects a downward 6-month CPR/SPI and that the same type work and expected performance will exist to the end of the project, such as D&D work, electrical, HVAC, piping, etc., one could use the 6-month or 12-month moving average CPI/SPI to predict future performance and EAC. While this approach seems simple and pretty straightforward, it is often not performed, and should be. Recommend this be taught in DOE EVM analysis courses, blogs, snippets, etc.
- (C) We have been running Acumen Fuse® for about six months and it provides great data and allows us to pick out bad data. My concern it will always be easy to mine out bad data and say the schedule is no good. Finding mistakes in the data is easy, but that does mean the whole schedule bad. We will find two things in the schedule and say the rest of the schedule is bad. If the CAM and his/her scheduler can explain it we should accept that.
- (C) Segregation by Element of Cost: There had been a new push to make work packages cost element pure. However this does not always make good sense. Example: When placing concrete you are doing certain pour and you have material, labor and equipment costs. Placing a pour is one work package, not three work

packages. Different cost elements costs can be captured within one package with tools we now have.

- (C) Government projects are notorious for being one of a kind. The estimates are prepared without design or clear direction or a good optimized plan for completion. On our job the building size was reduced to save money and now it's costing twice the budget to get all the equipment/pipe/electrical inside and meet regulations. The government people making early on decisions know very little about construction or construction management. And the contractors are telling the clients what they want/need to hear to make the job go forward. The process is flawed.
- (C) The most honest and meaningful reporting will be the result of an environment in which it is understood and accepted that projects can and will have issues, challenges, changes, delays, setbacks, etc. that will result in negative performance data at times. In such cases, the issues and resulting recovery plan need to be clearly understood and communicated without fear of blame, punishment, over-reaction or application of extensive auditing, inquiry or extensive oversight.
- (F) EACs have been notoriously unrealistic on many DOE projects. This includes at the project and the control account level. In some cases, EAC analyses may be appropriate at the work package level because of the size and length of the work packages. Further, too many projects have been allowed to continue without best case, worst case and most likely case EACs provided by the PM. DOE PMs are often not required to explain why their most likely EAC differs from the consolidated CAM EAC. Further, there are many cases where cost/schedule performance trends are not included in the PM's EACs, and should be. Where the DOE Project Analyst detects schedule and/or cost performance trends in the SPI/CPI that indicate future performance will be worse than the past, and the PM does not address this in his/her EACs, the PM should be challenged on it by the FPD in monthly reviews. Too often this is overlooked or not addressed and the PM EACs continue without challenge and correction. This is likely part of the reason senior DOE leadership is surprised with cost/schedule overruns late in the projects.

- (F) On a project I worked on 2000-2004, we had an 'off-line' EV system we used to check the data the contractor was providing us. This system involved taking the $4B in scope and splitting it into about 800 discrete activities. These activities were frozen in value and completion date, and could only be changed by the FPD equivalent. Federal staff used a 0/100 EVT on these 800 activities. Although using a 0/100 method on activities that were essentially Control Accounts is outside today's accepted practices, it provided the federal oversight staff with a key indicator on the contractor's progress toward achieving project goals – the federal staff was able to go to the work site and validate completion of each of the activities – this resulted in a federally validated BCWP against a frozen BCWS. The FPD had an extremely reliable indicator of schedule progress against the plan that was established at the start of the contract.

Appendix B - References

1. Mr. Paul Bosco, Director, OAPM Memo, February 23, 2015, Subject: Improving EVM and Project Management Integration


Adobe Acrobat Document

2. Federal Staff Survey


DOE FED Employees and Staff Support Sur

3. Capital Asset Project Contractor Survey


DOE CAP Asset Contractor Survey V1

4. U.S. Department of Energy Acquisition and Project Management Glossary Of Terms Handbook, September 5, 2014, http://energy.gov/management/downloads/doe-acquisition-and-project-management-apm-glossary-terms-handbook-final

Department of Energy
Washington, DC 20585

February 23, 2015

MEMORANDUM FOR DISTRIBUTION

FROM: PAUL BOSCO
DIRECTOR
OFFICE OF ACQUISITION AND
PROJECT MANAGEMENT

SUBJECT: Improving Earned Value Management and Project Management Integration

Consistent with the Secretary's memo dated December 1, 2014 on *Improving the Department's Management of Projects*, the Office of Acquisition and Project Management (OAPM) has tasked Humphreys and Associates (H&A) to assist in our initiative to improve Earned Value Management (EVM) and its integration with the Department's acquisition and project management policies and processes.

A properly implemented Earned Value Management System (EVMS) enhances front-end planning by integrating scope, schedule and cost; enables both the project owner and the project team with reliable cost and schedule status and forecasts and to take corrective action, when necessary; and, ideally, augments the owner's independent oversight capability without having to unnecessarily over-burden the project team. Results of recent risk-based, data-driven EVMS reviews have noted some issues with data transparency, reliability and predictability. We can do better.

For EVMS to provide greater utility without being overly burdensome, we need to consider as many perspectives as possible. To that end, I encourage as many of our people as possible who work with or are familiar with an EVM system, processes and procedures to take this opportunity to voice their opinion and provide their perspectives and ideas to H&A, who will be collecting input by various means to include surveys and interviews.

I am confident that together we can identify and make the necessary changes that will result in DOE being a recognized leader in integrated EVMS and project management across government and industry. Contracting Officers and Federal Project Directors are asked to share the EVMS survey, when it is provided, with their contractor counterparts. Their input is also very important.

If you have any questions, please contact Melvin Frank at (202) 586-5519 or Melvin.frank@hq.doe.gov.

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The Leader in Earned Value Management Consulting and Training

INITIATIVE TO IMPROVE EVM AND PM INTEGRATION SURVEY

DOE FEDERAL EMPLOYEES AND STAFF CONTRACT SUPPORT VERSION

PURPOSE OF SURVEY: The initiative to improve EVM and PM integration was chartered by the Office of Acquisition and Project Management (OAPM), the primary organization responsible for EVMS policy and compliance under DOE O 413.3B. Humphreys & Associates, Inc. (H&A) is tasked with conducting this initiative to help DOE improve EVMS integration with PM on both the Federal and contractor levels across the complex. As EVM and PM Stakeholders in DOE, your participation in this survey allows you to be part of the solution. H&A will compile the results and use the data to provide recommendations for improvement to OAPM.

INSTRUCTIONS: Please select the answer in the format requested: Yes/No, enter an X, or fill in. You are encouraged to provide comments to elaborate. Space is provided after certain questions and also at the end of the survey. Please refer to the question number when using the comment space at the end.

RETURN YOUR SURVEY: You may return your completed survey by:

1. Email to: karen.urschel@humphreys-assoc.com
2. Mail to: Humphreys and Associates, ATTN: DOE Survey Responses, 9910 Research Drive, Irvine, CA 92618

SURVEY TOPICS

TOPIC 1: DOE Policies, Procedures – The 'what' and the 'how' of policies, guides, handbooks, and SOP is essential to understanding and application consistency. These questions relate to the adequacy of existing documents and recommendations for improvements to provide clear and concise direction. For a complete list, see http://energy.gov/management/office-management/operational-management/project-management/policy-and-guidance

1.1 Is sufficient DOE OAPM procedural guidance available to assist you in managing EVMS data and conducting analysis?

☐YES ☐NO

1.1.1 If NO, what additional topics would be helpful? FILL IN

1.2 DOE Order 413.3B is mandatory (unless exemption granted) and provides the 'what'. DOE uses guides (DOE G 413.3-XX series) and handbooks (WBS for example) to provide the 'how' which are not currently mandatory. OAPM uses SOPs (detailed procedures) which are mandatory within OAPM. In terms of EVMS, would mandatory 'how to' procedures that provide instruction for 'how' to conduct compliance reviews, guideline interpretation, scheduling, etc. assist in ensuring consistency among DOE review teams and for the contractor to know what to expect?

☐YES ☐NO

1.2.1 If NO, what are your concerns with this approach? FILL IN

TOPIC 1 COMMENTS/CONCERNS/RECOMMENDATIONS

TOPIC 2: Training – Trained resources are a key to success. DOE is interested in comments relative to the sufficiency of existing training and options for improving the knowledge base to provide consistency and depth.

2.1 Do you believe DOE has sufficiently trained EVMS labor resources to conduct analysis of EVMS data?

☐YES ☐NO

2.1.1 If NO, why do you think that is?

2.2 Is training guidance available to assist you with implementation questions?

☐YES ☐NO

2.2.1 If NO, have you looked for guidance in the DOE OAPM Training Snippets?

☐YES ☐NO

2.2.2 If YES, what additional topics would be helpful?

2.3 Have you taken the following courses via DOE's PMCDP Program?

2.3.1 Basic EVMS or EVMS 24/7 Online Course

☐YES ☐NO

2.3.1.1 If not, why not?

☐Requested but not approved ☐Not interested

☐Not available for my position ☐Other _____

2.3.2 Advanced EVM Techniques

☐YES ☐NO

2.3.2.1 If not, why not?

☐Requested but not approved ☐Not interested

☐Not available in my area ☐Other _____

☐Not available for my position

2.4 What other courses have you taken that you found beneficial?

2.5 Have you participated in a DOE Project Peer Review (PPR) with respect to EVMS?

☐YES ☐NO

2.6 Have you participated in a Certification or Surveillance Review?

☐YES, it was DOE-led ☐YES, it was contractor-led ☐NO

2.6.1 If YES, was the experience worthwhile and increased your knowledge and effectiveness?

☐YES ☐NO

2.6.2 If YES, would you recommend that experience to others?

☐YES ☐NO

2.6.3 If YES, who would you recommend participate in future reviews? (SELECT ALL THAT APPLY)

☐DOE Contracts Specialist or Contracting Officer

☐DOE Technical Representative (COTR)

☐DOE Federal Project Director (FPD)

☐DOE EVM Specialist/Analyst

☐Contractor Project Manager (PM)

☐Control Account Manager (CAM)

☐Contractor EVM Specialist/Analyst

☐Contractor Project Controls Specialist

☐Contractor Planner/Scheduler

☐Other: _____

2.6.4 If NO, you would not recommend the experience to others, why not?

_____

_____

Development of an internal EVMS Development / Certification Program is an option being considered for DOE employees. It could apply to those Federal employees who have EVM oversight, analysis, and assessment responsibilities.

2.7 Would you favor an internal DOE EVMS Development / Certification Program?

☐YES ☐NO

2.8 What elements would you recommend as part of the DOE EVMS Development / Certification Program? (select all that apply)

☐EVMS experience pre-requisites

☐Formal education pre-requisites

☐Internal EVMS-related Courses

☐Rotational assignments at various sites and/or HQ

☐Participation on Review Teams doing EVMS-related tasks

2.9 Do you believe there would be a benefit in having a DOE certification/testing program before participating on a compliance related review team in a leadership role?

☐YES ☐NO

2.10 Do you believe participation in a DOE review team should be a requirement as part of an EVMS development program?

☐YES ☐NO

TOPIC 2 COMMENTS/CONCERNS/RECOMMENDATIONS

TOPIC 3: DOE Skilled Labor Resources - To ensure consistency in interpretation and guidance to the contractors, DOE needs to identify the EVMS related functional resources. This series of questions relates to identifying adequacy of existing resources.

3.1 Is there a dedicated resource on your project that analyzes EVMS data?

☐YES ☐NO

☐N/A; I am not currently assigned to a project team that has EVMS.

3.1.1 If YES, what is the frequency of analysis for **each** EVMS applicable project assigned?

☐At least monthly ☐Semi-annually

☐Quarterly ☐Annually

☐Other_____

3.1.2 If NO, why not?

☐Lack of training

☐Need additional resources but unable to because of funding constraints

☐Need additional resources but unable to attract qualified candidates

3.2 Does your site have sufficient skill labor resources to conduct analysis of EVMS data for each EVMS-applicable project?

☐YES ☐NO

3.2.1 If YES, what is the frequency of analysis for **each** EVMS applicable project assigned?

☐At least monthly ☐Semi-annually

☐Quarterly ☐Annually

☐Other_____

3.2.2 If NO, why not?

☐Small project; FPD handles the analysis

☐Need additional resources but unable to because of funding constraints

☐Need additional resources but unable to attract qualified candidates

☐I do not have a current EVMS-applicable project.

TOPIC 4: Tools – DOE is interested in determining the tools used, if any, to analyze the reported EVMS data.

4.1 Identify what EVMS Data Analysis Tools are used where you work.

Analysis Tool Category	**Select from list; Fill in name if "Other"**	**Version # and Date of last update**
Schedule Health Assessment	☐Deltek Acumen Fuse ☐Encore Analytics Empower ☐STAT ☐Steelray ☐Other_____	Ver # _____ Last Update _____
EVM Data Analysis	☐Encore Analytics Empower ☐Deltek wInsight Analytics ☐Other _____	Ver # _____ Last Update _____
Risk Assessment	☐Deltek Acumen Risk ☐Pertmaster ☐@Risk ☐Risk Plus ☐Other _____	Ver # _____ Last Update _____
PARSII Reports	☐Yes ☐No	N/A

4.2 If you do not use assessment tools, why not? (check all that apply)

☐Lack of skilled labor resources available

☐Rely on contractor's assessment

☐No value in the EVMS data so no need to assess

☐No tools available

☐ Other_____

4.3 Does your project create monthly written analysis of cost and/or schedule performance?

☐YES ☐NO ☐DO NOT KNOW

4.3.1 If YES, how are root causes and corrective actions developed? (check all that apply)

☐Experience

☐Discussions with responsible parties

☐Cause/Effect diagrams

☐5 Whys

☐Fishbone Diagrams

☐Six Sigma

☐Other: _____

4.3.2 If NO, monthly written analysis is not conducted, why?

4.3.3 If NO, monthly written analysis is not conducted, why not?

_____

_____

_____

4.4 Have you used the Reports section of PARSII, in the Analysis Reports folder?

☐YES ☐NO

4.4.1 If NO, why not?

_____

4.4.2 If YES, were the reports helpful?

☐YES ☐NO

4.4.2.1 If YES, which PARSII Analysis reports do you use most often?

4.4.2.2 If NO, what did you not like about the PARSII Analysis reports? Please be as specific as possible.

4.4.3 What suggestions do you have to improving PARSII Analysis Reports (new reports, improving existing reports, deleting reports)?

TOPIC 4 COMMENTS/CONCERNS/RECOMMENDATIONS

TOPIC 5: USE OF EVMS DATA – The goal of EVMS is to provide performance data that can be used to identify cost and schedule problems, mitigate risks, and predict future performance.

5.1 Do you believe that ANSI/EIA-748 compliant EVM Systems provide data from which to make management decisions and forecasts?

☐YES ☐NO

5.1.1 If NO, why? (check all that apply)

☐Data is not timely

☐Data is not accurate or meaningful

☐My management is not interested in the data

☐Other (specify): _____

5.2 Based on your experience, what do you believe are the top 10 barriers, if any, for successful EVMS? Rank your responses by numbering your choices from 1 to 10, 1 being the leading barrier.

_____Conflicting interpretations of ANSI/EIA-748 between contractor and DOE

_____Conflicting attitudes/culture/goals between higher level management and project execution level

_____Lack of training on new policies

_____Unclear policies, procedures, guidance, and Data Item Descriptions (DIDs)

_____Unclear reporting requirements

_____Inconsistent contractual requirements/language

_____Funding changes invalidates the ability to measure performance against a changing baseline

_____Insufficient availability of skilled planners/schedulers

_____Insufficient availability of skilled EVMS specialists

_____Insufficient tools

_____Insufficient expertise in operating software

_____Outdated or insufficient tools to support EVMS requirements

_____Inability of cost-type subcontractors to adhere to EVMS implementation and reporting

_____Lack of credible schedule and status planning from FFP Subcontractors

_____Volatility of technical products or services

_____Overly optimistic budget and schedule targets driven by competition

_____Other:_____

_____Other:_____

_____Other:_____

_____Other:_____

5.3 Based on your experience, what are the top 10 interpretation issues? Rank your responses by numbering your choices from 1 to 10, 1 being leading issue.

_____Product oriented WBS

_____Integration of systems

_____Scheduling

_____Establishing the PMB

_____Use of Management Reserve

_____Use of Undistributed Budget

_____Incorporation of Authorized Unpriced Work

_____Variance Analysis

_____Root Cause Analysis

_____Corrective Action Plans

_____Level of Effort

_____Freeze period

_____Indirect cost management

_____Directed changes versus internal re-planning

_____Retroactive Changes

_____Over Target Baseline/Over Target Schedule

_____Element of Cost

_____Impact of Government caused funding constraints on PMB

_____DOE Data Call in support of a review

_____Reporting requirements (Project or Contract)

_____Other:_____

_____Other:_____

_____Other:_____

_____Other:_____

5.4 Have you ever observed or are you aware of pressure to avoid reporting 'bad news'? (Select all that apply)

☐Re-plan or some other action to avoid reporting impending poor cost performance

☐Re-plan or some other action to avoid reporting impending poor schedule performance

☐Delay Estimate to Complete (ETC) increases

☐Other:_____

5.5 If you checked a box in Q5.4, in your opinion was it driven by: (check all that apply)

☐ Contractor management ☐DOE management

TOPIC 5 COMMENTS/CONCERNS/RECOMMENDATIONS:

TOPIC 6: IMPROVING COMMUNICATION – Clear and transparent communication between all parties is essential to consistency of understanding and application.

6.1 What improvements made by DOE HQ over recent years have you found beneficial? (select all that apply)

☐Various 413.3 Guide updates

☐Sharing of internal OAPM Standard Operating Procedures, i.e. EVMS Surveillance Standard Operating Procedure (ESSOP) and EVMS Project Analysis Standard Operating Procedure (EPASOP)

☐OAPM Road Show – 1 to 2 day on site Federal employees and DOE Contractor meetings to share HQ initiatives and provide forum for discussion and feedback

☐OAPM Articles in the PMCDP Newsletters

☐EVMS Training Snippets (available via PARSII, EFCOG, and DOE Internal PowerPedia)

☐Analytical approach to streamline assessment (risk-based, data driven)

☐Other: _____

6.2 Are there any of the above improvements in the previous question that you feel are non-value added? Please identify those and explain why in the space provided.

_____

_____

_____

_____

6.3 Based on your experience, do you know what method(s) are used to communication project performance from contractor to FPD to PMSO to OAPM to the Deputy Secretary?

☐YES ☐NO

6.3.1 If YES, please briefly explain your understanding of the process.

6.4 What suggestions do you have for improvements in EVMS-related communications from HQ to functional EVMS experts?

☐Monthly or quarterly newsletters directed to all EVMS practitioners

☐Web based forum for FAQs

☐'Call an expert' help desk

☐Other suggestions:

TOPIC 6 COMMENTS/CONCERNS/RECOMMENDATIONS

DEMOGRAPHICS PORTION OF SURVEY: This information is being collected by H&A for statistical purposes to determine if the responses reflect the broad spectrum as intended or smaller groups. If there are any questions you prefer not to answer, please skip them; however, these types of questions are important.

7 Are you employed by:

☐A DOE Contractor ☐The Dept. of Energy ☐A DOE Staff Support Contractor

8 Role

☐Vice President
☐Director
☐Contracts Specialist or Contracting Officer Technical Rep (COTR)
☐Project Manager (PM)
☐Federal Project Director (FPD)
☐EVM Specialist/Analyst
☐Project Controls Specialist
☐Planner/Scheduler
☐Other: _____

9 Organization

☐Site Office
☐Business Center
☐PMSO
☐OAPM
☐Other: _____

10 Are you working on at least one current EVMS applicable project?

☐YES ☐NO

10.1 If not, when was the last time you worked on an EVMS applicable project?

Fill in year: _____

11 Location

☐Albuquerque Complex
☐Argonne National Lab
☐Brookhaven National Lab
☐Fermi Nat'l Accelerator Lab
☐Idaho National Lab
☐Knolls Atomic Power Lab
☐Los Alamos National Lab
☐Lawrence Berkeley Nat'l Lab, CA
☐Lawrence Livermore Nat'l Lab
☐Oak Ridge National Laboratory
☐Office of River Protection, WA
☐Pacific Northwest Nat'l Lab
☐Princeton Plasma Physics Lab
☐Pantex Plant
☐Portsmouth/Paducah
☐Richland
☐Sandia National Lab
☐Savannah River Site
☐Stanford Linear Accelerator Center
☐Thomas Jefferson Nat'l Accelerator Lab
☐Y-12 National Security Complex
☐Other: _____

12 Experience: See Table

	1-5 (1)	6-10 (2)	11-15 (3)	16-20 (4)	20+ (5)
Years of Work Experience (1)	☐	☐	☐	☐	☐
Years in Earned Value Management (2)	☐	☐	☐	☐	☐
Years with Company/Division/Department (3)	☐	☐	☐	☐	☐

13 What is the highest level of education you have obtained?

☐High School
☐Associate's Degree
☐Bachelor's Degree
☐Master's Degree
☐Doctorate

14 Do you have an EVMS related certification? Select all that apply.

☐EVP (AACEI) ☐PSP (AACEI) ☐PMP (PMI)

☐Other (Title and Sponsoring Organization): _____

15 Name (Optional):_____

16 Email (Optional):_____

17 Phone (Optional):_____

18 Do you wish to be contacted by Humphreys and Associates, Inc. to further discuss your responses or ideas for improving EVMS and PM integration in DOE? ☐YES (check box)

If YES, check box and ensure your contact information is in blocks 15-17 above.

Thank you for taking the time to participate in improving EVMS and Project Management integration. Your contribution is appreciated!

If you wish to include any additional comments for improvement, please attach additional pages as necessary to this survey or use the spaces provided. Reference Q# if appropriate.

HUMPHREYS & ASSOCIATES

Contact Us: (714) 685-1730

The Leader in Earned Value Management Consulting and Training

INITIATIVE TO IMPROVE EVM AND PM INTEGRATION SURVEY

DOE CAPITAL ASSET CONTRACTOR VERSION

PURPOSE OF SURVEY: The initiative to improve EVM and PM integration was chartered by the Office of Acquisition and Project Management (OAPM), the primary organization responsible for EVMS policy and compliance under DOE O 413.3B. Humphreys & Associates, Inc. (H&A) is tasked with conducting this initiative to help DOE improve EVMS integration with PM on both the Federal and contractor levels across the complex. As EVM and PM Stakeholders in DOE, your participation in this survey allows you to be part of the solution. H&A will compile the results and use the data to provide recommendations for improvement to OAPM.

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RETURN YOUR SURVEY: You may return your completed survey by:

1. Email to: karen.urschel@humphreys-assoc.com
2. Mail to: Humphreys and Associates, ATTN: DOE Survey Responses, 9910 Research Drive, Irvine, CA 92618
3. Hand it personally to Karen Urschel for those completing it at either the February 2015 EFCOG Workshop or the March 2015 Acquisition and Project Management Workshop

SURVEY TOPICS

TOPIC 1: DOE Policies, Procedures – The 'what' and the 'how' of policies, guides, handbooks, and SOP is essential to understanding and application consistency. These questions relate to the adequacy of existing documents and recommendations for improvements to provide clear and concise direction. For a complete list, see http://energy.gov/management/office-management/operational-management/project-management/policy-and-guidance

1.1 Is sufficient DOE OAPM procedural guidance available to assist you in successfully maintaining your ANSI/EIA-748 compliant EVMS?

☐YES ☐NO

1.1.1 If NO, what additional topics would be helpful? FILL IN

1.2 DOE Order 413.3B is mandatory (unless exemption granted) and provides the 'what'. DOE uses guides (DOE G 413.3-XX series) and handbooks (WBS for example) to provide the 'how' which are not currently mandatory. OAPM uses SOPs (detailed procedures) which are mandatory within OAPM. In terms of EVMS, would mandatory 'how to' procedures that provide instruction for 'how' to conduct compliance reviews, guideline interpretation, scheduling, etc. assist in ensuring consistency among DOE review teams and for the contractor to know what to expect?

☐YES ☐NO

1.2.1 If NO, what are your concerns with this approach? FILL IN

TOPIC 1 COMMENTS/CONCERNS/RECOMMENDATIONS

TOPIC 2: Training – Trained resources are a key to success. DOE is interested in comments relative to the sufficiency of existing training and options for improving the knowledge base to provide consistency and depth.

2.1 Have you participated in a DOE Project Peer Review (PPR) with respect to EVMS?

☐YES ☐NO

2.2 Have you participated in a Certification or Surveillance Review?

☐YES, it was DOE-led ☐YES, it was contractor-led ☐NO

2.2.1 If YES, was the experience worthwhile and increased your knowledge and effectiveness?

☐YES ☐NO

2.2.2 If YES, would you recommend that experience to others?

☐YES ☐NO

2.2.3 If YES, who would you recommend participate in future reviews? (SELECT ALL THAT APPLY)

☐DOE Contracts Specialist or Contracting Officer

☐DOE Technical Representative (COTR)

☐DOE Federal Project Director (FPD)

☐DOE EVM Specialist/Analyst

☐Contractor Project Manager (PM)

☐Control Account Manager (CAM)

☐Contractor EVM Specialist/Analyst

☐Contractor Project Controls Specialist

☐Contractor Planner/Scheduler

☐Other: _____

2.2.4 If NO, you would not recommend the experience to others, why not?

_____

_____

Development of an internal EVMS Development / Certification Program is an option being considered for DOE employees. It could apply to those Federal employees who have EVM oversight, analysis, and assessment responsibilities.

2.3 Do you believe there would be a benefit in having a DOE certification/testing program before participating on a compliance related review team in a leadership role?

☐YES ☐NO

2.4 Do you believe participation in a DOE review team should be a requirement as part of an EVMS development program?

☐YES ☐NO

TOPIC 2 COMMENTS/CONCERNS/RECOMMENDATIONS

_____

_____

_____

TOPIC 3: DOE Skilled Labor Resources - N/A to DOE Capital Asset Contractors

TOPIC 4: Tools – DOE is interested in determining the tools used, if any, to analyze the reported EVMS data.

4.1 Do your EVMS Engines (Cost/Schedule/Reporting) allow for the export of data in UN/CEFACT XML schema? (The UN/CEFACT XML schemas provide, among other things, a way for project management software applications to exchange schedule and cost data with each other.)

☐YES ☐NO ☐DO NOT KNOW

4.2 Identify what EVMS Data Analysis Tools are used where you work.

Analysis Tool Category	**Select from list; Fill in name if "Other"**	**Version # and Date of last update**
Schedule Health Assessment	☐Deltek Acumen Fuse ☐Encore Analytics Empower ☐STAT ☐Steelray ☐Other_____	Ver # _____ Last Update _____
EVM Data Analysis	☐Encore Analytics Empower ☐Deltek wInsight Analytics ☐Other _____	Ver # _____ Last Update _____
Risk Assessment	☐Deltek Acumen Risk ☐Pertmaster ☐@Risk ☐Risk Plus ☐Other _____	Ver # _____ Last Update _____
PARSII Reports	☐Yes ☐No	N/A

4.3 Does your project create monthly written analysis of cost and/or schedule performance?

☐YES ☐NO ☐DO NOT KNOW

4.3.1 If YES, how are root causes and corrective actions developed? (check all that apply)

☐Experience
☐Discussions with responsible parties
☐Cause/Effect diagrams
☐5 Whys
☐Fishbone Diagrams
☐Six Sigma
☐Other: _____

4.3.2 If NO, monthly written analysis is not conducted, why?

_____

_____

_____

4.4 Have you used the Reports section of PARSII, in the Analysis Reports folder?

☐YES ☐NO

4.4.1 If NO, why?

_____

_____

_____

4.4.2 If YES, were the reports helpful?

☐YES ☐NO

4.4.2.1 If YES, which PARSII Analysis reports do you use most often?

_____

_____

_____

4.4.2.2 If NO, what did you not like about the PARSII Analysis reports? Please be as specific as possible.

4.4.3 What suggestions do you have to improving PARSII Analysis Reports (new reports, improving existing reports, deleting reports)?

TOPIC 4 COMMENTS/CONCERNS/RECOMMENDATIONS

TOPIC 5: USE OF EVMS DATA – The goal of EVMS is to provide performance data that can be used to identify cost and schedule problems, mitigate risks, and predict future performance.

5.1 Do you believe that ANSI/EIA-748 compliant EVM Systems provide data from which to make management decisions and forecasts?

☐YES ☐NO

5.1.1 If NO, why? (check all that apply)

☐Data is not timely

☐Data is not accurate or meaningful

☐My management is not interested in the data

☐Other (specify): _____

5.2 Based on your experience, what do you believe are the top 10 barriers, if any, for successful EVMS? Rank your responses by numbering your choices from 1 to 10, 1 being the leading barrier.

_____Conflicting interpretations of ANSI/EIA-748 between contractor and DOE

_____Conflicting attitudes/culture/goals between higher level management and project execution level

_____Lack of training on new policies

_____Unclear policies, procedures, guidance, and Data Item Descriptions (DIDs)

_____Unclear reporting requirements

_____Inconsistent contractual requirements/language

_____Funding changes invalidates the ability to measure performance against a changing baseline

_____Insufficient availability of skilled planners/schedulers

_____Insufficient availability of skilled EVMS specialists

_____Insufficient tools

_____Insufficient expertise in operating software

_____Outdated or insufficient tools to support EVMS requirements

_____Inability of cost-type subcontractors to adhere to EVMS implementation and reporting

_____Lack of credible schedule and status planning from FFP Subcontractors

_____Volatility of technical products or services

_____Overly optimistic budget and schedule targets driven by competition

_____Other:_____

_____Other:_____

_____Other:_____

_____Other:_____

5.3 Based on your experience, what are the top 10 interpretation issues?

Rank your responses by numbering your choices from 1 to 10, 1 being leading issue.

Use the blank space provided below to elaborate if desired.

_____Product oriented WBS

_____Integration of systems

_____Scheduling

_____Establishing the PMB

_____Use of Management Reserve

_____Use of Undistributed Budget

_____Incorporation of Authorized Unpriced Work

_____Variance Analysis

_____Root Cause Analysis

_____Corrective Action Plans

_____Level of Effort

_____Freeze period

_____Indirect cost management

_____Directed changes versus internal re-planning

_____Retroactive Changes

_____Over Target Baseline/Over Target Schedule

_____Element of Cost

_____Impact of Government caused funding constraints on PMB

_____DOE Data Call in support of a review

_____Reporting requirements (Project or Contract)

_____Other:_____

_____Other:_____

_____Other:_____

_____Other:_____

5.4 Have you ever observed or are you aware of pressure to avoid reporting 'bad news'? (Select all that apply)

☐Re-plan or some other action to avoid reporting impending poor cost performance

☐Re-plan or some other action to avoid reporting impending poor schedule performance

☐Delay Estimate to Complete (ETC) increases

☐Other:_____

5.5 If you checked a box in Q5.4, in your opinion was it driven by: (check all that apply)

☐ Contractor management ☐DOE management

TOPIC 5 COMMENTS/CONCERNS/RECOMMENDATIONS:

TOPIC 6: IMPROVING COMMUNICATION – Clear and transparent communication between all parties is essential to consistency of understanding and application.

6.1 What improvements made by DOE HQ over recent years have you found beneficial? (select all that apply)

☐Various 413.3 Guide updates

☐Sharing of internal OAPM Standard Operating Procedures, i.e. EVMS Surveillance Standard Operating Procedure (ESSOP) and EVMS Project Analysis Standard Operating Procedure (EPASOP)

☐OAPM Road Show – 1 to 2 day on site Federal employees and DOE Contractor meetings to share HQ initiatives and provide forum for discussion and feedback

☐OAPM Articles in the PMCDP Newsletters

☐EVMS Training Snippets (available via PARSII, EFCOG, and DOE Internal PowerPedia)

☐Analytical approach to streamline assessment (risk-based, data driven)

☐Other: _____

6.2 Are there any of the above improvements in the previous question that you feel are non-value added? Please identify those and explain why in the space provided.

_____

_____

_____

_____

6.3 Based on your experience, do you know what method(s) are used to communication project performance from contractor to FPD to PMSO to OAPM to the Deputy Secretary?

☐YES ☐NO

6.3.1 If YES, please briefly explain your understanding of the process.

6.4 What suggestions do you have for improvements in EVMS-related communications from HQ to functional EVMS experts?

☐Monthly or quarterly newsletters directed to all EVMS practitioners

☐Web based forum for FAQs

☐'Call an expert' help desk

☐Other suggestions:

6.5 Do you participate in the EFCOG EVM Subgroup?

☐YES ☐NO

6.5.1 If YES, do you share the information you learn from your participation? (Check all that apply)

☐Send email with points discussed ☐Share verbally

6.5.2 If YES, with whom do you share the information you obtain from EFCOG meetings?

☐Project Controls

☐Planners/Schedulers

☐Project Management

☐Corporate Management

TOPIC 6 COMMENTS/CONCERNS/RECOMMENDATIONS:

DEMOGRAPHICS PORTION OF SURVEY: This information is being collected by H&A for statistical purposes to determine if the responses reflect the broad spectrum as intended or smaller groups. If there are any questions you prefer not to answer, please skip them; however, these types of questions are important.

7 Are you employed by:

☐A DOE Contractor

☐The Dept. of Energy

☐A DOE Staff Support Contractor

8 What is your role in your organization? (choose from list or fill in)

☐Vice President
☐Director
☐Contracts Specialist or Contracting Officer Technical Rep (COTR)
☐Project Manager (PM)
☐Federal Project Director (FPD)
☐EVM Specialist/Analyst
☐Project Controls Specialist
☐Planner/Scheduler
☐Other: _____

9 What is your organizational department (choose from list or fill in)

☐Accounting
☐Contract Administration
☐Engineering
☐Finance
☐Management
☐Project Controls
☐Project Management
☐Scheduling
☐Subcontract Management
☐Other: _____

10 Employer:

☐ARC & WGI
☐B&W Pantex
☐B&W Y-12
☐BEA
☐BMI
☐BNI
☐BSA
☐CHPRC
☐CWI
☐FRA
☐JSA
☐LANS
☐MOX Services
☐Parsons Govt. Services Inc.
☐Princeton University
☐SRNS
☐SRR
☐Stanford University
☐UC-LBNL
☐UCOR
☐U Chicago Argonne
☐URS
☐WCH
☐WRPS
☐Other: _____

11 Are you working on at least one current EVMS applicable project?

☐YES ☐NO

11.1 If not, when was the last time you worked on an EVMS applicable project?

Fill in year: _____

12 Experience: See Table

	1-5 (1)	6-10 (2)	11-15 (3)	16-20 (4)	20+ (5)
Years of Work Experience (1)	☐	☐	☐	☐	☐
Years in Earned Value Management (2)	☐	☐	☐	☐	☐
Years with Company/Division/Department (3)	☐	☐	☐	☐	☐

13 What is the highest level of education you have obtained?

☐High School ☐Bachelor's Degree ☐Doctorate

☐Associate's Degree ☐Master's Degree

14 Do you have an EVMS related certification? Select all that apply.

☐EVP (AACEI) ☐PSP (AACEI) ☐PMP (PMI)

☐Other (Title and Sponsoring Organization): _____

15 Name (Optional):_____

16 Email (Optional):_____

17 Phone (Optional):_____

18 Do you wish to be contacted by Humphreys and Associates, Inc. to further discuss your responses or ideas for improving EVMS and PM integration in DOE? ☐YES (check box)

If YES, check box and ensure your contact information is in blocks 15-17 above

Thank you for taking the time to participate in improving EVMS and Project Management integration. Your contribution is appreciated!

If you wish to include any additional comments for improvement, please attach additional pages as necessary to this survey or use the spaces provided.

Appendix C – Abbreviation and Acronym List

AACEI – Association for the Advancement of Cost Engineering *While our official name is AACE International, we started as the American Association of Cost Engineering and then became the Association for the Advancement of Cost Engineering before adopting the current official title of AACE International.

AICP– American Institute of Certified Planner

APM – Acquisition and Project Management

AUW – Authorized Unpriced Work

BNI – Bechtel National, Inc.

CA – Control Account

CAM – Control Account Manager

CAP – Capital Asset Project Contractors

CAR – Corrective Action Request

CCE - Certified Cost Engineer

CCEA - Certified Cost Estimator/Analyst

CD – Critical Decision

CFSR – Contract Funds Status Report

CHBWV – CH2M Hill Babcock & Wilcox West Valley, LLC

CIO – Continuous Improvement Opportunities

CNS Pantex – Consolidated Nuclear Security, LLC, Pantex Plant

CNS Y-12 – Consolidated Nuclear Security, LLC, Y-12 National Security Complex

COTR – Contracting Officer Technical Representative

CPA - Certified Public Accountant Certification

CPARs – Contract Performance Assessment Reporting System

CPI – Cost Performance Index

CPM - College of Performance Management

CPR – Contract Performance Report

CPSG LLC (MOX) – CB&I Project Services Group, LLC, (Mixed Oxide Fuel Fabrication Facility)

CWI – CH2M-WG Idaho, LLC

D&D – Deactivation and Decommissioning

DCMA – Defense Contract Management Agency

DOD – Department of Defense

DOE – Department of Energy

EAC – Estimate at Completion

EFCOG – Energy Facility Contractor's Group

EIA –Electronic Industries Alliance

EM – Environmental Management

EMERS – Environmental Management Enterprise Requirements System

EPASOP – Earned Value Management Systems Project Analysis Standard Operating Procedure

ESSOP – Earned Value Management Systems Surveillance Standard Operating Procedure

ETC – Estimate to Complete

EVM – Earned Value Management

EVMS – Earned Value Management System

EVP - Earned Value Professional

EVT – Earned Value Technique

Fluor B&W Portsmouth – Fluor Babcock & Wilcox Portsmouth

FM – Functional Manager

FPD – Federal Project Director

FRA – Fermi Research Alliance, LLC

FY – Fiscal Year

H&A – Humphreys & Associates, Inc.

HANDI – Hanford Data Integrator System

HQ – Headquarters

IBR – Integrated Baseline Review

ICEAA - International Cost Estimating and Analysis Association

IEAC – Independent Estimate at Completion

IEWO - Inter-Entity Work Order

IMP – Integrated Master Plan

IMS – Integrated Master Schedule

IPPM - Integrated Program Performance Management

IPT – Integrated Product Team

IT – Information Technology

JSA – Jefferson Science Associates, LLC

LANS – Los Alamos National Security

LOE – Level of Effort

M&O – Management and Operating Contracts

MPM – Micro-Frame Program Manager

MR – Management Reserve

NDIA – National Defense Industrial Association

NNSA – National Nuclear Security Administration

NSTec – National Security Technologies

OA – Operations Activities

OAPM – Office of Acquisition and Project Management

OIC – Operations Improvement Committee

OMB – Office of Management and Budget

OPA – Office of Project Assessment

OPM – Office of Personnel Management

OUO – Official Use Only

P6™ – Oracle® Primavera P6™ Professional Project Management

PARSII – Project Assessment and Reporting System

PASEG – Planning and Scheduling Excellence Guide

PM – Project Manager

PMB – Performance Measurement Baseline

PMCDP – Project Management Career Development Program

PMCS – Project Management Control Specialists

PMI - Project Management Institute

PMP - Project Management Professional

PMSO – Project Management Support Office

POC – Point of Contact

PP – Planning Package

PPR – Project Peer Review

PSO – Program Secretarial Officer

PSP - Planning and Scheduling Profession

R&D – Research and Development

RevCom – Review and Comments System

SAP – Systems Applications and Products Enterprise Resource Planning System

SC – Office of Science

SME – Subject Matter Expert

SOP – Standard Operating Procedures

SPI – Schedule Performance Index

SRNS– Savannah River Nuclear Solutions

SRR – Savannah River Remediation

STAT – Schedule Test and Assessment Tool

TCPI – To Complete Performance Index

TPC – Total Project Cost

UB – Undistributed Budget

UCLA – University of California, Los Angeles

UC-LBNL –University of California Lawrence Berkeley National Laboratory

UCOR – URS & CH2M Oak Ridge, LLC

UN/CEFACT XML – United Nations Centre for Trade Facilitation and Electronic Business, Extensible Markup Language

VAC – Variance at Completion

VAR – Variance Analysis Report

VTC – Video Tele Conference

WBS – Work Breakdown Structure

WFO - Work For Others

WP – Work Package

WRPS – Washington River Protection Solutions, LLC