

**Best in Class Project Management and Contract Management Initiative at the
Department of Energy's Office of Environmental Management – 9540**

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ABSTRACT

Since its founding in 1989, the U.S. Department of Energy (DOE), Office of Environmental Management (EM) has struggled with a legacy of inadequate project and contract management. This has been manifested in recurring scope changes, cost overruns and schedule delays, and has been documented in multiple internal and external reviews. To address this issue, EM has developed a vision for building a “Best in Class” Project Management and Contract Management (BICPM) organization. To develop the strategy and implement the process to accomplish this vision, EM contracted with the U.S. Army Corps of Engineers (USACE) and their support contractors. EM and the USACE Team developed a five-phased approach to implement the BICPM Initiative: (I) develop assessment criteria, (II) assess existing project and contract management capabilities, (III) develop an implementation plan, (IV) implement corrective actions, and (V) institutionalize BICPM.

Under Phases I and II, the USACE Team assessed the status of project and contract management capabilities at 16 EM offices. These assessments evaluated strengths and weaknesses in 12 key project management capabilities and benchmarks and three contract management benchmarks. Under Phase III, EM and the USACE Team developed the Corporate Implementation Plan which identified the key challenges and provided a roadmap to address these challenges and to implement BICPM. These challenges included: Federal staffing shortages; integration of project and contract management; further development of project-oriented culture; project baseline maintenance; consistent implementation of the DOE order for project management, 413.3A; and role of EM Headquarters in BICPM.

The shortage of qualified resources dedicated to supporting Federal project and contract management functions was identified as a primary cause for project and contract management difficulties within EM. The Corporate Implementation Plan outlined a set of 18 specific Recommended Priority Actions (RPAs) to address these challenges so EM can achieve Best in Class. For each RPA, a set of implementing steps and a summary of expected benefits has been developed. These benefits include increased Federal ownership of projects, standardization of processes, clear communication of requirements and policy to personnel, timely and effective change control for both project and contract management, and the identification and socialization of best practices across the EM Complex. These RPAs provide a clear and concise path forward that can be straightforwardly communicated to the entire EM organization and provide the foundation upon which a BICPM culture can be built. By implementing the RPAs EM has gained considerable momentum and progress towards institutionalizing BICPM.

PROJECT AND CONTRACT MANAGEMENT AT EM

Since its founding in 1989, the U.S. Department of Energy (DOE), Office of Environmental Management (EM) has struggled with a legacy of inadequate project management and contract management. This has been manifested in recurring scope changes, cost overruns and schedule delays, and has been documented in multiple internal and external reviews. EM leadership has committed itself to transforming project management and contract management at EM sites, at EM's Consolidated Business Center (CBC), and at EM Headquarters. To this end, they have developed a vision and strategy for building a "Best in Class" Project Management and Contract Management (BICPM) organization.

A "Best in Class" management organization possesses skills and knowledge in core project management and contract management capabilities. These capabilities address a broad range of activities, encompass leadership and continuous improvement, and are reflected in the knowledge, skills and tools needed to support excellence. They are validated by periodic and frequent measurement against established performance benchmarks.

In early 2007, the Assistant Secretary for Environmental Management summarized the Strategic Plan for achieving the BICPM vision using the graphic in Figure 1. EM developed a five-phased process to implement the BICPM Strategic Plan. EM enlisted the support and experience of the U.S. Army Corps of Engineers (USACE; Huntington and Walla Walla Districts) and their support contractors, Project Time & Cost, Inc. (PT&C) and Acquisition Solutions, Inc. (ASI), to undertake this process. The five phases are:

- Phase I – Assessment Criteria and Work Plan Development,
- Phase II – Assessment of Existing Capabilities,
- Phase III – Develop Corporate Implementation Plan,
- Phase IV – Implement Actions from Corporate Implementation Plan, and
- Phase V – Institutionalization of BICPM across the EM Complex.

ASSESSMENT FINDINGS

The Phase II Assessments evaluated the strengths and weaknesses in 12 key project management capabilities and against 3 contract management benchmarks. The USACE Team performed the assessments of existing project and contract management capabilities at 16 EM offices, including EM CBC and EM Headquarters. The results of the assessments were documented in the Compilation Assessment Report and an overall Contract Management Assessment Report. These reports identified specific challenges to developing a BICPM culture throughout the EM Complex and identified recommendations to implement BICPM within EM. As a result of the Phase II Assessments the USACE Team developed the Corporate Implementation Plan, which identified the following six significant challenges that EM must overcome to achieve BICPM.

Challenge 1 – Federal Staffing Shortages

A widespread shortage of Federal and support staff, as shown in Table I, was evident at all sites. Key functional areas where shortages exist include project management, contract management, baseline management and project controls. Specific positions for which insufficient staffing is available include: Federal Project Directors, Cost Engineers, Schedulers, Risk Management Specialists, Project Engineers, Procurement Specialists, Property Specialists, and Contracting Officer's Representatives. The Phase II Compilation Assessment Report identified, by site, specific gaps in core competencies associated with these personnel needs and proposed adding more than 150 additional project management and contract management personnel across the EM Complex.

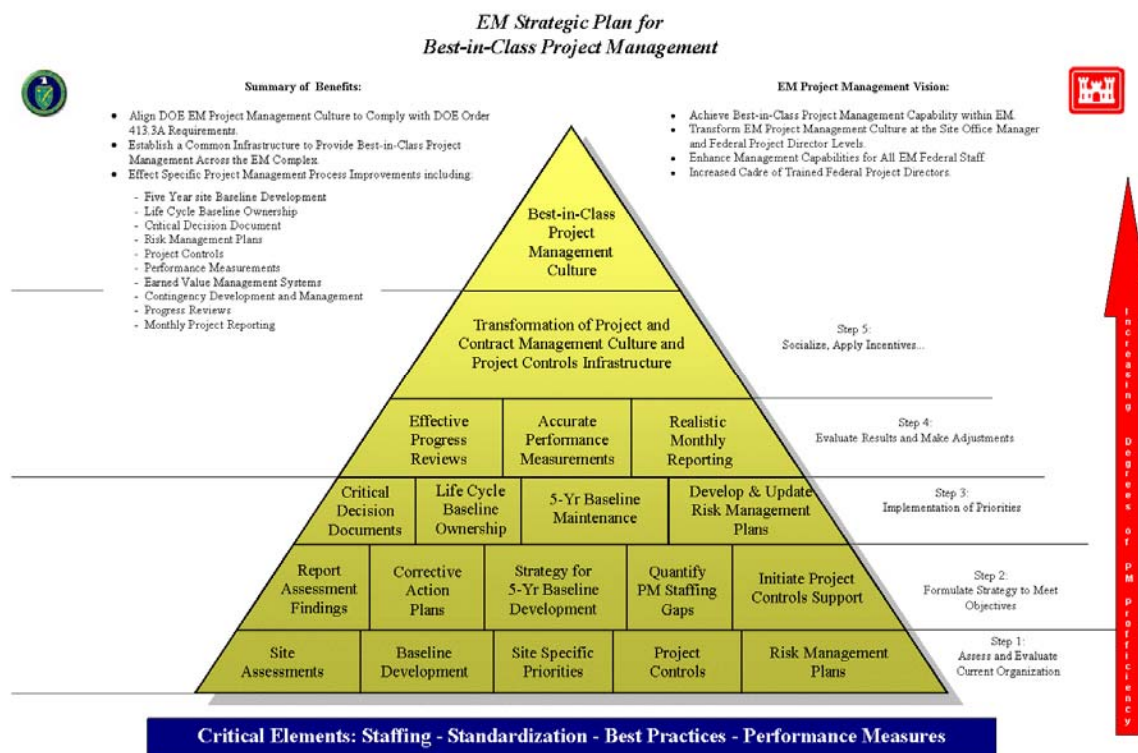


Figure 1. 2007 BICPM Strategic Plan

Challenge 2 – Integration of Project Management and Contract Management

Contract Management Plans have been developed and approved for most contracts, and well defined roles and responsibilities for contracting and property personnel appear to exist. Communication among contracting staff is generally good. However, integration between project management and contract management functions is inadequate at sites and at EM Headquarters. In some instances, this can be traced to ongoing shortages of Federal staffing in both the project management and contract management areas. Organizational “stove-piping” also contributes to the lack of integration between project management and contract management.

Challenge 3 – Further Development of Project-Oriented Culture

Most sites have not completely instituted a project-oriented culture that clearly moves the site toward the end state of the EM mission. As part of a project-oriented culture, sites have not adequately defined career paths or developed succession plans to help employees plan for transition away from current roles at the end of the cleanup process. The USACE Team observed the culture resident within sites, EM CBC and EM Headquarters. Sites have developed and are displaying some elements of a project-oriented culture. At a corporate level, EM needs to embrace a more complete transition from the old program/operating culture to the newer project-oriented culture. This transition will support sites in achieving significant cleanup progress.

Table I. Site Funding and Overall Staffing Needs

Site	FY08 EM Funding (\$M)	Current DOE Staffing	Additional Staff Needed	Total DOE Staff
Carlsbad Field Office (CBFO)	234.6	41	3	44
EM Consolidated Business Center (CBC) ^a	74.7	151	16	167
Idaho Cleanup Project (ICP)	513.7	57	7	64
Los Alamos Site Office (LASO) ^b	154.0	6	17	23
Portsmouth-Paducah Project Office (PPPO)	357.9	42	16	58
Nevada Site Office (NSO) ^b	80.4	2	4	6
Oak Ridge Office (ORO)	472.7	79	14	93
Office of River Protection (ORP)	969.5	106	13	119
Richland Office (RL)	896.7	244	30	274
Savannah River Site Office (SRSO)	1,131.2	325	30	355
Brookhaven National Laboratory (BNL)	28.4	e	2	---
Grand Junction Office (GJO)	23.7	e	1	---
Oakland Project Office (OAK)	18.7	e	2	---
Separations Process Research Unit (SPRU)	27.3	e	1	---
West Valley Demonstration Project (WVDP)	53.9	e	3	---
Total ^{c,d}	5,037.6	1,330	159	1,489

Notes:

- a. CBC Total includes all small sites not explicitly identified.
- b. Current EM staffing approximated by USACE Team.
- c. Total does not include \$657.3 million in funding for HQ Operations, Program Direction, Safeguards and Security, and Technology Development.
- d. Total current EM staffing includes the overall Headquarters count of 277 based on the Draft EM Human Capital Management Plan, dated Oct. 1, 2007.
- e. Individual current site staffing included in the overall Headquarters count of 277.

Challenge 4 – Maintaining Project Baselines

By February 2008, EM had in place project baselines and Certified Out-Year Planning Estimate Ranges (OPERs) for all of its Project Baseline Summaries, which had been validated by an independent third party. This accomplishment is the result of extraordinary efforts on the part of EM and contractor personnel across the EM Complex during the previous 18 months. It will be important to build on the momentum gained by these efforts to maintain these baselines in response to directed changes in scope, cost and schedule that results from interactions with regulators, discoveries of additional areas of contamination, shifts in Congressional funding levels and changes in prioritization.

Challenge 5 – Consistent Implementation of DOE Order 413.3A

The primary orientation of DOE Order 413.3A, *Program and Project Management for the Acquisition of Capital Assets*, addresses new construction projects, rather than environmental cleanup projects. This presents specific difficulties for EM sites in applying the Order’s requirements for decontamination and decommissioning and environmental restoration, where site-specific conditions, end states and regulatory authorities make each project very unique. Sites are inconsistent in their approaches to preparing tailoring strategies. Most sites have prepared Integrated Project Team charters for their projects, but the consistency of the support that Integrated Project Teams provide to the Federal Project Director varies

considerably from site to site and from project to project. Processes and standards for the preparation of documents supporting Critical Decisions (CDs) do not provide clear guidance.

Challenge 6 – Role of EM Headquarters in BICPM

In the EM Headquarters assessment, the USACE Team observed that EM Headquarters is generally not performing as a champion for sites, an absolutely critical function to achieve significant cleanup progress. For example, the approval process for Critical Decision documents would benefit from streamlining. It currently requires too many reviews and reviewers are not held accountable for timely participation. Sites are reluctant to report negative project status because EM Headquarters responds with increased monitoring and control over sites, rather than with the increased support and resources necessary to identify and correct the root causes. Clear and consistent policy and guidance are not consistently available, especially on complex topics such as the risk management and the development and utilization of contingency.

RECOMMENDED PRIORITY ACTIONS

Under Phase III, Corporate Implementation Plan, the USACE Team developed a list of 18 Recommended Priority Actions (RPAs) which are identified in Table II. This section provides a synopsis of each of the 18 RPAs as identified in the Corporate Implementation Plan. Each synopsis explains the intent of the RPA and summarizes the benefits to EM of completing the action. As portrayed in Table II, the RPAs correlate to the challenges to BICPM that EM must address. Each RPA has been developed independently. While it is clear that interrelationships between the RPAs exist (e.g., completion of one RPA may significantly assist in the completion of another RPA), this section makes no attempt to identify or address these interrelationships. During implementation of these RPAs, EM and the USACE Team coordinated these actions with other on-going EM initiatives to ensure an integrated best in class effort and consistent consideration of all recommendations. Further, these RPAs reconcile well with site-specific corrective action plans.

RPA 1 – Assign Leadership for BICPM Implementation

The success of any project is dependent on leadership. Leadership of the BICPM Initiative will require extensive planning, a commitment to EM and the BICPM vision, enthusiasm for the task and the process, and constant communication with participants across the Complex. Establishing accountable leadership for the BICPM Initiative at EM Headquarters and in the Field, will encourage participation, increase BICPM ownership and provide clear direction and control. Establishing the EM Headquarters champion at a high level within the EM management structure will demonstrate the organization's buy-in and commitment to the BICPM concept.

RPA 2 – Provide Additional Project Management Resources

At the site level the most significant obstacle to BICPM is the lack of skilled and qualified project management resources. The Phase II Assessments recommended the addition of project management staff (cost estimators, schedulers, project controls and risk managers) to the existing contingent of project management professionals across the EM Complex. The ultimate long term solution is to attain adequate Federal staff levels at each site. Since the process for establishing new Federal positions and recruiting, training and deploying of Federal employees can take more than a year to accomplish, support contractor personnel will be required to address these needs in the near term. The Phase II Assessments identified the need for a total of 124 additional project management resources across the EM Complex.

Table II. Crosswalk of Recommended Priority Actions and EM Challenges

Recommended Priority Actions	EM Challenges					
	Federal Staffing Shortage	Integration of PM and CM	Future Development of Project-Oriented Culture	Maintaining Project Baselines	Consistent Implementation of DOE O 413.3A	Role of EM Headquarters
1. Assign Leadership for BICPM Implementation	•	•	•	•	•	•
2. Provide Additional Project Management Resources	•	•		•	•	
3. Provide Additional Contract Management Resources	•	•		•	•	
4. Address Unresolved Baseline Change Proposals and Requests for Equitable Adjustment		•	•	•		
5. Develop and Improve Federal Work Plans at Each Site	•	•	•	•	•	
6. Provide Project Management and Contract Management Capability Reinforcements	•			•	•	•
7. Complete DOE EM Project Management Guidance		•	•	•	•	
8. Clarify Roles and Responsibilities between Project and Contract Management Organizations		•	•	•		•
9. Update and Implement Human Capital Plans	•					
10. Establish a Standardized and Integrated Change Control Process		•		•	•	•
11. Establish Standards for DOE EM Management Products and Practices		•	•	•	•	
12. Implement Enterprise Project Management Software Solutions		•	•	•	•	•
13. Streamline Critical Decision Document Review and Concurrence		•		•	•	•
14. Complete and Utilize Federal Risk Management Plans		•	•	•	•	
15. Maintain Validated Federal Five-Year Baselines and Out-Year Planning Estimate Ranges			•	•	•	
16. Implement Surveillances of Contractor Earned Value Management Systems		•	•	•		
17. Identify Site-Specific Best Practices and Adopt across the Complex		•	•	•	•	•
18. Prioritize Training and Professional Development	•	•	•	•	•	•

RPA 3 – Provide Additional Contract Management Resources

EM recognizes that effective contract management is one of the most critical components to successful project execution. The deployment of adequate contract management resources, in conjunction with project management resources, is fundamental to achieving a “Best in Class” project-oriented culture throughout the EM Complex. The Phase II Assessment Report recommended that 35 additional contract management professionals be deployed to sites across the EM Complex. With an adequate number of properly trained contract management personnel in place, EM will significantly increase its ability to

manage its contractors. When these contract management personnel are integrated with project management personnel, EM can achieve BICPM as it relates to interacting with site contractors in terms of contractual performance oversight, property management, performance monitoring and cost management.

RPA 4 – Address Unresolved Baseline Change Proposals and Request for Equitable Adjustments

The assessment found that the current value of unresolved Baseline Change Proposals (BCPs) and Request for Equitable Adjustments (REAs) associated with EM contracts exceeds \$6 billion. While the situational and institutional drivers for this condition must be addressed, EM must begin to address the most significant BCPs and REAs immediately. Waiting to correct the process will not reduce the backlog; it will only make it worse. EM must begin to address these BCPs and REAs so that gains made elsewhere under the BICPM Initiative will not be overshadowed. In parallel, EM should develop detailed contract management procedures that define contract and baseline change processes, including the development of independent estimates. The resolution of the EM backlog of unresolved REAs and BCPs will aid in bringing contracts up to date and allow the project to move forward.

RPA 5 – Develop and Improve Federal Work Plans at Each Site

The development and continuous maintenance of Federal Work Plans at each site is critical to allow for accurate tracking of EM responsibilities and obligations. Project Execution Plans are the core documents for management of a project and establish the overarching policies and procedures to manage and control project planning, initiation, definition, execution, and transition/closeout. Federal Work Plans provide a detailed real-time supplement to Project Execution Plans that dynamically identifies and tracks specific federal actions. Federal Work Plans for each site must be developed to synchronize with those of the site contractors, EM Headquarters and other associated EM sites.

RPA 6 – Provide Project Management and Contract Management Capability Reinforcements

The assessment teams repeatedly received confirmation of extreme resource shortages driven by short-term requirements for additional or specialized project management and contract management resources. Site-based resources often need assistance with document development or review of documentation for externally driven events or they could benefit from temporary access to resources with specialized skills. As the BICPM Initiative matures and there is more integration between project management and contract management processes, the use of specialized resource teams will assist in socializing the BICPM Initiative. Furthermore, this action item plays a key role in addressing limiting factors to the Integrated Project Teams that were identified in external assessment reports. By the use of a combination of Federal and contractor employees with specialized project management and contract management expertise, EM could develop teams of experienced personnel that have the capability to meet short-term project management and contract management surge requirements across the EM Complex. By establishing versatile teams of project management and contract management support resources, EM will be more capable of addressing critical resource needs in a timely manner. Having these resources available before situations arise will enable EM Management to focus on the issue(s) and free them from repeatedly having to address contractual or logistical constraints.

RPA 7 – Complete EM Project Management Guidance

EM needs to create and complete EM-specific project management guidance. Overall EM project management guidance (e.g., DOE Order 413.3A and associated guidance) has been created primarily with large capital projects in mind, with large structures and complicated processes as the end point of the project. This guidance does not uniformly address the needs of environmental cleanup projects. DOE

Order 413.3A requirements call for actions that are unnecessary or specify methodologies that, while necessary, are expensive and awkward to implement for cleanup projects. Existing efforts, such as the development of the DOE G 413.3-8 (Project Management Guide), are a good start towards providing the managers of environmental remediation projects with a map towards the goal of meeting the intent of DOE orders, but reducing the burden of unrelated steps specified in the orders. The Project Management Guide supplements DOE Order 413.3A by providing consistent guidance for EM Cleanup Projects, which include programs, Project Baseline Summaries, traditional projects and non-traditional projects. It would be beneficial to offer workshops that would demonstrate the scope and effect of changes made by the new guides. This would allow all sites to operate with the same set of assumptions and interpretations.

RPA 8 – Clarify Roles and Responsibilities between Project Management and Contract Management Organizations

The assessment confirmed that deficiencies in the coordination and resolution of project changes with contract changes continue to negatively impact EM's project performance. The contract management assessment identified several weaknesses that impact both project management and contract management organizations. These weaknesses included a lack of independent government estimates, outstanding REAs or unresolved baseline changes, a lack of integration of government furnished materials into project schedules, a lack of adequate oversight of government property, and inadequate requirement definition processes. The relationship between project management and contract management is a fundamental pillar of successful project execution. These organizations must communicate continually throughout the project lifecycle and work together to communicate and address situations that will impact each other. This priority action focuses on defining the individual and interrelated processes for these organizations, then facilitating changes in site and EM Headquarters business practices to meet the objectives of both groups. By strengthening the relationship between the project management and contract management organizations, EM will be better able to manage project scope, cost and schedule more effectively. By developing a process model for change control and publishing procedures, project management and contract management resources will be using the same "playbook" to make decisions and advance projects.

RPA 9 – Update and Implement Human Capital Plans

The Human Capital Plan is the basis for determining the number of resources, types of required skills and many other human capital related demands. Human capital development is a long term initiative and will require significant time to achieve. For example, proactive communication of requisite skills and the required number of resources for each site are essential elements of the plan. Active and continuous monitoring of hiring processes and professional development activities against the Human Capital Plan will ensure that EM can achieve BICPM personnel requirements.

RPA 10 – Establish a Standardized and Integrated Change Control Process

EM is challenged by not having an integrated, rigorous project management and contract management change control process. In particular, the project management and contract administration processes are currently managed separately and are, at times, independent of one another. Without understanding the daily tangible interrelationship, EM Federal Project Directors, Contracting Officers and Contracting Officer Representatives do not understand each others roles, responsibilities and accountabilities throughout the project lifecycle. Consequently, contracts and baselines are misaligned, and collaboration and teamwork are prevented, which results in increased project costs and schedules. During performance of this enabling role by EM Headquarters, confusion will be replaced by collaborative teamwork. The clarity of communicating contract processes and project requirements will align contracts and project baselines.

RPA 11 – Establish Standards for EM Management Products and Practices

An opportunity exists to maximize the efforts of the individual EM site staffs by creating standards for EM management products and practices. Without established standards for reporting, reviewing and monitoring, sites can produce products that differ from the outcome desired by EM Headquarters. This can range from misinterpreted Quarterly Project Review data to repetitive findings from one External Independent Review to the next. This often involves sites making an effort along one set of assumptions, and then having to re-create that work when informed of the need to conform to a different set of assumptions.

RPA 12 – Implement Enterprise Project Management Software Solutions

At present, a wide range of project management software tools are being used by the sites. Completing the analysis, design, development and implementation of a comprehensive project portfolio management system would enhance BICPM implementation. Such a system would include specific sub-systems that contribute to project management and contract management. These sub-systems would include, but are not limited to, portfolio management, cost estimating, scheduling, risk and contract management. These sub-systems depend on information from one another to properly baseline and manage a project. Time and cost resources from EM are at a premium and need to be expended on project planning and execution. Simple and effective systems need to be put in place to focus reporting cycles on making management decisions using project information, not trying to obtain, disseminate and report project data. Standard off-the-shelf software generally has a large user community that could be recruited to address resource shortages. Standard project management software tools are a pre-requisite for EM to attain BICPM status. This action will provide a common platform and language for developing and communicating project management information and provide a consistent, repetitive and successful process for project execution.

RPA 13 – Streamline Critical Decision Document Review and Concurrence

The Phase II Assessment noted work flow inefficiencies and obstacles to the review and approval process of CD documents at EM Headquarters. CD documents submitted by the sites are often incomplete, late or require revision. Consequently, EM Headquarters personnel spend considerable time working with the sites, revising CD documents and then returning them to EM Headquarters for concurrence. Currently, this process is slow and inefficient. Streamlining the CD package review and concurrence process requires several major initiatives including: (1) working with the sites to ensure that requirements for CD documents are understood, (2) establishing and communicating standards regarding CD document content and format to the sites, and (3) substantially modifying current EM Headquarters concurrence procedures. The streamlined CD document process will enable planning for CD package arrival, ensure the CD package moves through EM Headquarters approval process and ensure that CD document approvals are achieved within established deadlines. The completion of these steps will significantly facilitate a consistent, repetitive and successful CD document approval process for EM projects.

RPA 14 – Complete and Utilize Federal Risk Management Plans

DOE Order 413.3A and DOE Manual 413.3-1 establish requirements for development and maintenance of Federal Risk Management Plans at all sites. A Federal Risk Management Plan identifies the project and programmatic risks for the near-term and OPER components of all EM projects. The plan also establishes estimates for unfunded contingency to address those risks that are exclusively under the control and responsibility of EM. Unfunded contingency is determined by EM management through a quantitative risk analysis. This contingency has two components: (1) cost risks associated with identified programmatic risks and (2) schedule risks associated with accommodating these risks in the project

schedule. Utilizing thoroughly developed Federal Risk Management Plans raises EM Headquarters and Congressional confidence by demonstrating consistent and forward looking methods of planning. Following this process, the estimates for unfunded contingency will provide Headquarters better input and documentation for the determination of EM environmental liabilities.

RPA 15 – Maintain Validated Federal Five-Year Baselines and Out-Year Planning Estimate Ranges

By February 2008, project baselines and certified OPERs for all of EM's Project Baseline Summaries were validated by an independent third party. This accomplishment is the result of extraordinary efforts on the part of EM and contractor personnel across the EM Complex during the prior 18 months. EM plans to build on the momentum gained by these efforts to maintain these baselines in response to directed changes in scope, cost and schedule that results from interactions with regulators, discoveries of additional areas of contamination, shifts in Congressional funding levels and changes in prioritization. Maintaining project baselines ensure that the front-end planning efforts are not lost or do not become obsolete due to large time gaps between revisions. Maintaining all current EM Federal baseline data will provide valuable information to all levels of EM Management, including EM Headquarters, Federal Project Directors, Project Managers, Contract Managers and Finance personnel.

RPA 16 – Implement Surveillances of Contractor Earned Value Management Systems

The 32 guidelines laid out in the ANSI/EIA-748-A, *Standard for Earned Value Management Systems* (EVMSs), allow for in-depth oversight of a contractor's EVMS. Surveillance plans should be developed in accordance with these guidelines. Monthly EVMS surveillance ensures the contractor is utilizing the certified EVMS or that the EVMS in use is capable of being certified. Full implementation of this RPA will allow EM to better oversee baseline management, contract management challenges and project controls challenges.

RPA 17 – Identify Site-Specific Best Practices and Adopt Across the Complex

Best practices is a management tool which asserts that there is a method, process or activity that is more effective at delivering a particular outcome than any other method. Best practices can also be defined as the most efficient (least amount of effort) and effective (best results) way of accomplishing a task, based on repeatable procedures that have proven themselves over time. Despite the need to improve on processes as times change and conditions evolve, best practices is considered by some to describe the process of developing and following a standard way of conducting work that multiple organizations can use for management and policy. The notion of best practices does not commit people or companies to one inflexible, unchanging practice. Instead, best practices is a philosophical approach based on continuous learning and improvement. These best practices, if implemented complex-wide, will help other sites address key project management and contract management challenges and increase standardization of practices across the Complex.

RPA 18 – Prioritize Training and Professional Development

The shortage of qualified Federal staff is likely to remain a challenge for some time since "growing" experts in these professional areas requires decades of training and experience. Project skill gaps in fields such as cost estimation, project scheduling, and risk analysis will be bridged by the BICPM Initiative if conducted as planned and implemented fully. Prioritizing training and professional development will help raise the caliber of EM's project management and contract management staff and the overall effectiveness of its ongoing management activities. As the number of Federal staff increases and they

gain experience, dependence on contractor input will be reduced. Prioritizing training is another way EM Headquarters can lead an effective enabling role in support of the overall mission.

IMPLEMENTED RECOMMENDED PRIORITY ACTIONS

This section provides a discussion of the RPAs that have been implemented since the release of the Corporate Implementation Plan in March 2008. Many of these RPAs are being implemented in a phased approach due to availability of resources. Therefore, the discussion focuses on those phases that have been completed and are currently being implemented. A brief discussion is provided of anticipated follow-on efforts.

Due to the pressing need for site support personnel, RPA 2 – Provide Additional Project Management Resources was instituted almost immediately. The support personnel are anticipated to be in place until they cross-train and share lessons learned with existing and new Federal staff. Similarly, RPA 6's project management and contract management capability reinforcements were made available almost immediately based on specific needs such as cost estimating support. Between April and September 2008 EM also began work on the following RPAs:

- RPA 1 – Assign Leadership for BICPM Implementation;
- RPA 5 – Develop and Improve Federal Work Plans at Each Site;
- RPA 7 – Complete DOE EM Project Management Guidance;
- RPA 9 – Update and Implement Human Capital Plans;
- RPA 10 – Establish a Standardized and Integrated Change Control Process;
- RPA 11 – Establish Standards for DOE EM Management Products and Services;
- RPA 12 – Implement Enterprise Project Management Software Solutions;
- RPA 13 – Streamline Critical Decision Document Review and Concurrence; and
- RPA 14 – Complete and Utilize Federal Risk Management Plans.

A discussion of select RPA examples follows.

RPA 2 – Provide Additional Project Management Resources

Beginning in September 2007, EM, through the USACE Team, deployed approximately 50 additional project management resources at 14 sites (see Table III). This deployment of project management resources was the first activity undertaken as part of the BICPM Initiative Phase IV – Implementation. This effort was undertaken to begin to address the severe shortage of EM project management staffing. Since September 2007, the level of support has remained at about 50 full time equivalents (FTEs) and they have been tasked with specific work related to issues such as cost estimating, scheduling, risk management, and project controls.

BICPM site teams are being staffed to a level that ensures steady activity but they are not expected to handle every conceivable project management need. Support personnel are assigned tasks based on priorities that are identified at each site as each task order is put into place and as funding becomes available. These priorities are largely those identified by the Site Technical Monitors, who have been empowered to coordinate the BICPM Initiative with Federal Project Directors, the Site Manager and other personnel. Surge support under RPA 6 is being used to augment BICPM teams to provide for resource-intensive project management activities. The sites have also been filling project management positions with new Federal employees based on EM decisions and the duration of the cleanup mission. While this has reduced the need for outside support, contractors are still needed. The ultimate long term solution remains to attain adequate Federal staff levels at each site.

Table III. Project Management Site Resources Deployed in September 2007

Site	Total Need	Placed Per Phase IV	Remaining Needs
Carlsbad Field Office (CBFO)	3	2	1
EM Consolidated Business Center (CBC)	9	0	9
Idaho Cleanup Project (ICP)	6	3	3
Los Alamos Site Office (LASO)	17	5	12
Portsmouth-Paducah Project Office (PPPO)	12	5	7
Nevada Site Office (NSO)	4	2	2
Oak Ridge Office (ORO)	13	8	5
Office of River Protection (ORP)	7	3	4
Richland Office (RL)	23	8	15
Savannah River Site Office (SRSO)	21	7	14
Brookhaven National Laboratory (BNL)	2	1	1
Grand Junction Office (GJO)	1	1	0
Oakland Project Office (OAK)	2	2	0
Separations Processing Research Unit (SPRU)	1	1	0
West Valley Demonstration Project (WVDP)	3	2	1
Total	124	50	74

RPA 7 – Complete EM Project Management Guidance

During FY 2008 EM began its implementation of RPA 7 – Complete EM Project Management Guidance. This effort is intended to standardize the application and implementation of the DOE project management guides. The 2008 effort included finalization of the Environmental Management Cleanup Projects Guide (DOE G 413.3-8), developing a draft Environmental Management Contingency Implementation Guide, and developing an initial draft Environmental Management Project Management Implementation Guide. These guides are expected to supplement DOE Order 413.3A by providing consolidated and consistent guidance for EM cleanup projects. Future work is anticipated to include finalizing these guides including processing them through EM’s formal guidance document development procedure. This will be followed by developing and conducting workshops to socialize the guides across the EM Complex.

RPA 9 – Update and Implement Human Capital Plans

During FY 2008, the USACE Team worked with elements of DOE to develop a BICPM Human Capital Summary Report, which contains an updated gap analysis, by site, that can be used to determine progress made in eliminating Federal staffing shortfalls. RPA 9 also addresses Federal staffing shortages by identifying skills gaps and training needs for Federal project management and contract management staff to fill key vacancies at sites where BICPM contractor staff is currently providing support. It provided an update to the Phase II assessment, which identified specific gaps by site in core competencies associated with these personnel needs. Since the September 2007 timeframe the sites have been moving forward with the recommendations, and the resource gaps that were identified have in many instances been filled with a combination of Federal and contractor personnel. The Human Capital Summary Report provides a breakdown of what resource needs have been filled via Federal or contractor resources. In the future the EM Workload Forecasting System will be used to monitor skills gaps on a regular basis. EM will also use the site workforce planning processes to continually assess the resource needs. In addition to the Human Capital Summary Report, the RPA 9 effort included developing a training matrix. This matrix lists available courses and certifications in the areas of project management, contract management, cost engineering, and scheduling. It is anticipated this list will be utilized in combination with current EM

training courses to develop a comprehensive training program for project and contract management work disciplines that can be fully implemented across EM.

RPA 10 – Establish a Standardized and Integrated Change Control Process

The Corporate Implementation Plan noted that EM is challenged by not having an integrated, rigorous project management and contract management change control process. In particular, the project management and contract administration processes were managed separately and at times were independent of one another. Under RPA 10 – Establish a Standardized and Integrated Change Control Process – the team conducted a number of tasks including developing a process model, performing training, assessing current practices, and developing site-specific corrective action plans. After developing the process model and conducting training, the RPA 10 Team assessed sites by comparing current practices to the EM Process Model. The identification of gaps led to the development of plans to bring each site's project and contract management practices into compliance with Headquarters' standard practices. The team then developed a Site Corrective Action Plan for each site, which provided a roadmap to bring site practices into compliance with the EM Process Model. During FY 2009, EM anticipates following up on the RPA 10 effort by implementing RPA 8 – Clarify Roles and Responsibilities between the Project Management and Contract Management Organizations. This will include clarifying roles and responsibilities, as the name implies, plus evaluating progress made under the site-specific corrective action plans, developing process maps, and ensuring the proper roles are filled by personnel with the proper skill sets.

RPA 11 – Establish Standards for EM Management Products and Practices

During FY 2008, draft standards were developed under RPA 11 – Establish Standards for EM Management Products and Practices. These included standard operating policy and procedure documents for preparing for external independent reviews and for performing independent project reviews. During FY 2009, it is anticipated that these draft standards will be finalized under the appropriate EM processes and then be distributed for implementation.

RPA 13 – Streamline Critical Decision Document Review and Concurrence

During FY 2008, draft standards were developed under RPA 13 – Streamline Critical Decision Document Review and Concurrence. These included standard operating policy and procedure documents for project critical decision approval process and EM projects corporate change control process. During FY 2009, it is anticipated that these draft standards will be finalized under the appropriate EM processes and then be distributed for implementation.

Use of RPA 2 Site Support Staff to Implement RPAs

Beginning in September 2008 a concerted effort was made to use the site support staff provided by RPA 2 to implement RPAs 14, 15, and 16 instead of creating separate stand-alone teams. Brief descriptions of the implementation approach follows.

Implementation of RPA 14 – Complete and Utilize Federal Risk Management Plans will result in the identification of project and programmatic risks. Once these risks are identified the support staff will determine EM's unfunded contingency for the site through a quantitative risk analysis. The Federal Risk Management Plans will document the following aspects of risk management: goals and objectives of the risk management process, risk handling strategies, roles and responsibilities, procedures for identifying and incorporating new risks, tracking and closeout procedures, and identification of the Risk Manager(s).

Implementation of RPA 15 – Maintain Validated Federal Five-Year Baselines and Out-Year Planning Estimate Ranges will result in current EM Federal baseline data that will provide valuable information to all levels of EM Management, including EM Headquarters, Federal Project Directors, Project Managers, Contract Managers and Finance personnel. Support staff will work to synchronize the project mission and the supporting project work scope, update OPER baseline estimates as their scope matures and the scope moves into the five-year baseline window, and ensure estimates and schedules have valid assumptions. They will also consider new technologies in completing the work scope, coordinate with other EM sites, and evaluate changes to regulatory agreements and EM reprioritization efforts. Finally, they will ensure that potential risk events are also reviewed periodically and the associated probabilities and consequences have been incorporated into the maintained baseline elements.

Implementation of RPA 16 – Implement Surveillances of Contractor Earned Value Management Systems will result in site-specific surveillance plans that will be developed in accordance with the ANSI/EIA guidelines. Monthly EVMS surveillance ensures the contractor is utilizing the certified EVMS or that the EVMS in use is capable of being certified. Full implementation of this RPA will allow EM to better oversee baseline management, contract management challenges and project controls challenges. Surveillance plans are anticipated to be revised to incorporate “lessons learned” from the initial implementation. A reviewer’s checklist is often created and designed to ensure the subject project elements comply with the guidelines. Recurring activities include conducting monthly reviews both by interviewing cost account managers and by personally verifying the integrity of project information. Then project information is reviewed including project documents listed on a pre-planned document list. Surveillance and trend analysis results are collected and tracked. Reviews may also include a monthly sampling of the 32 guidelines.

PATH FORWARD

Significant progress has been made by EM towards achieving Best in Class Project Management and Contract Management, however, much work still remains to be done. The improvements made so far has EM headed in the right direction and this momentum must be sustained, measured and verified. Implementation of the Recommended Priority Actions will continue. Many of the RPAs are still underway and the full benefit of the products and tools developed are just starting to materialize. For example, RPA 11 – development of standardized processes – will continue. On the other-hand several RPAs have been completed and the products or tools developed are now in use. For example, EM is now using a standardized and integrated change control process developed by RPA 10.

To address the fundamental underlying cause for the project and contract management difficulties EM has experienced over the years, EM will hire experienced project management and contract management staff with skills in the core project management capabilities of cost estimating, scheduling, project controls, and risk management. EM will also continue to hire younger staff and provide them with the necessary training and mentoring to become experienced project and contract management professionals. A challenge for EM in the future will be to maintain this expertise. This increased emphasis to hire qualified Federal staff will fill the critical skills gap in the areas of project and contract management.

Another important task that is just now beginning as part of the BICPM Initiative is to develop performance metrics that EM can use to measure improvements in project and contract management throughout the life-cycle of a project. Even though the ultimate project management performance measure is to complete a project within the originally approved cost and schedule baseline, it is envisioned that a number of other metrics will be developed to gauge improvement in project and contract management.

EM senior management also recognizes the importance and challenge of institutionalizing the “Best in Class” culture of project management and contract management and ensuring that continual improvement is emphasized and expected. This will ensure EM will not view that a “Best in Class” EM is an end state but a continuous journey of improvement and strengthening of its capabilities, processes, people, and performance.