



U.S. Department of Energy  
Office of Inspector General  
Office of Audits & Inspections

# Audit Report

---

## Naval Reactors Information Technology System Development Efforts

DOE/IG-0879

December 2012



## Department of Energy

Washington, DC 20585

December 21, 2012

### MEMORANDUM FOR THE ADMINISTRATOR, NATIONAL NUCLEAR SECURITY ADMINISTRATION

A handwritten signature in cursive script, reading "Greg Friedman", is positioned above the typed name.

FROM: Gregory H. Friedman  
Inspector General

SUBJECT: INFORMATION: Audit Report on the "Naval Reactors Information  
Technology System Development Efforts"

#### INTRODUCTION AND OBJECTIVE

The Naval Reactors Program (Naval Reactors), an organization within the National Nuclear Security Administration, was established to provide the military with safe and reliable nuclear propulsion plants to power warships and submarines. Naval Reactors maintains responsibility for activities supporting the U.S. Naval fleet nuclear propulsion systems, including research and design, operations and maintenance, and the ultimate disposition of the nuclear propulsion plants. Naval Reactors is funded by both the Department of Energy and the U.S. Department of the Navy. To support its mission, the program and its contractors utilize logistical, financial management and human resources information technology (IT) systems.

In 2006, Naval Reactors initiated an effort to reduce overhead costs associated with duplicative services among its prime contractors. The effort resulted in the decision to develop an integrated Enterprise Business System (EBS) project that included procurement, finance, human resources and logistics modules. The EBS project is a multi-year, multi-million dollar development effort that will be completed using a phased approach. The procurement module alone is expected to cost approximately \$12.8 million, and Naval Reactors is in the initial stages of developing the finance module at additional cost. In an effort to address development issues, Naval Reactors performed an internal assessment of EBS during 2009. Due to the nature and scope of system development activities and mission importance, we initiated this audit to determine whether Naval Reactors effectively managed its information systems development efforts.

#### RESULTS OF AUDIT

We found that Naval Reactors had taken a number of positive actions designed to resolve development issues associated with EBS. In particular, management had taken actions to address problems identified during its 2009 internal assessment, including issues with project execution plans, budgets and schedules. Despite these actions, our review identified continuing system development issues. In particular:

- Contrary to Office of Management and Budget (OMB) guidance and the EBS project mission statement, neither Naval Reactors officials nor the project contractors had

adequately considered the use of a commercial-off-the-shelf (COTS) product prior to upgrading and modernizing the financial components of EBS. Specifically, the project team was unable to provide any formal analyses or justification for developing the system in-house. In addition, we found that Naval Reactors had encountered delays in the EBS development effort, resulting in additional costs and a later than expected completion date; and,

- Although previously identified as an issue in a 2009 internal assessment conducted by Naval Reactors, we found that the EBS project had still not been reported to the Department and OMB as a Major IT Investment, as required. Despite spending approximately \$10 million of the budgeted \$12.8 million for the procurement phase of the EBS development effort, officials had not submitted the required budgetary information to the Department or OMB, an action that could have allowed for improved performance monitoring.

The weaknesses identified were due, in part, to the lack of adherence to Federal and Naval Reactors policies and procedures. In particular, the decision to develop an in-house system rather than acquiring a COTS product was reportedly based solely on a decision of a senior official even though no alternative analysis was documented. Also, the EBS development effort did not follow Federal budgetary guidance for the reporting of IT investments, including submission of a capital asset plan to OMB.

Furthermore, we noted that a lack of a coordinated effort between the project stakeholders and team members likely contributed to project delays and cost increases. In particular, although the project manager at the site was assigned responsibility for successful completion of the EBS project, we noted that programming decisions were not being handled by that individual. Instead, a Naval Reactors Headquarters official was responsible for the day-to-day programming decisions. These communication problems contributed to conflicting status information regarding the project's progress. While the lack of full coordination alone did not necessarily result in the project being behind schedule, the communication problems were exacerbated by inadequate, decentralized tracking of project tasks. Had officials implemented an effective mechanism for tracking project progress, tasks that were behind schedule could have been addressed in a coordinated manner by everyone involved in the project.

Without adherence to appropriate system development requirements, future information system development efforts may experience problems similar to those identified in our report related to project management and result in schedule delays and cost overruns. Specifically, by not reporting IT investments to the Department and OMB, future efforts may not receive the appropriate Federal oversight needed to help ensure successful implementation. In addition, a formal analysis comparing the use of a COTS product to development of a system in-house can help ensure that the most cost effective solution is utilized.

We believe the issues identified provide valuable lessons learned that should be considered for any future development efforts. Notably, Naval Reactors told us that it had initiated action to

correct issues we observed and had requested that its contractor conduct an alternative analysis to determine whether the development of the EBS finance module should be an in-house effort or a COTS product.

While it may not be practical to complete formal analyses for certain components of the EBS project at this point in time, management should utilize this as lessons learned when considering implementation of other information systems. As such, we made several recommendations that, if fully implemented, should provide the opportunity to improve Naval Reactors' ability to effectively and efficiently manage future IT system development projects.

#### MANAGEMENT REACTION

Management generally concurred with the report's recommendations and indicated that it will take necessary corrective actions. Management expressed concern with several conclusions in our report. Our responses to these matters are summarized in the body of the report. Management's comments are included in their entirety in Appendix 3.

Attachment

cc: Deputy Secretary  
Associate Deputy Secretary  
Chief of Staff

**REPORT ON NAVAL REACTORS INFORMATION TECHNOLOGY  
SYSTEM DEVELOPMENT EFFORTS**

---

**TABLE OF  
CONTENTS**

**Project Management**

Details of Finding .....1  
Recommendations and Comments.....6

**Appendices**

1. Objective, Scope and Methodology .....8  
2. Prior Reports .....9  
3. Management Comments .....10

# NAVAL REACTORS INFORMATION TECHNOLOGY SYSTEM DEVELOPMENT EFFORTS

---

## PROJECT MANAGEMENT

In 2006, the Naval Reactors Program (Naval Reactors) initiated an effort to reduce overhead costs associated with duplicative services among its prime contractors that resulted in the decision to develop an integrated Enterprise Business System (EBS). The project is a multi-year, multi-million dollar development effort that will be completed using a phased approach and will include procurement, finance, human resources and logistics modules. The first phase of the EBS development effort was the procurement module, which started in 2007 and had an estimated cost of more than \$12 million. During the early stages of the procurement module's development, program officials spent more than \$5 million on software programming, system integration and hardware and software purchases. However, project officials indicated that specific project planning documentation associated with these costs was never developed.

In 2009, Naval Reactors management initiated an independent internal review of the procurement module development efforts. The assessment determined that the project was not following existing project management practices and guidance designed to help ensure successful planning and execution. In particular, the review noted that the development effort lacked a clearly defined scope, budget and project execution plan. These components would have been critical to the implementation of an Earned Value Management System (EVMS), enabling comparison of actual performance of work scope, cost and schedule to a baseline plan, while also using change control procedures to document any revisions to the agreed-upon baseline plan. In response to the internal assessment, Naval Reactors implemented several corrective actions, which included a formally approved project execution plan that defined the project's scope, schedule and budget, as well as defined roles and responsibilities for project team members.

Although positive steps were taken to improve the management and development efforts for EBS, our review determined that weaknesses remained related to the planning and execution of the project. Specifically, we determined that Naval Reactors officials and the project contractors had not fully considered the use of a commercial-off-the-shelf (COTS) product prior to upgrading and modernizing EBS. Furthermore, the development effort had not been reported as an information technology (IT) investment to the Office of Management and Budget (OMB), as required.

---

## Project Planning and Execution

We found that Naval Reactors had not fully analyzed options related to the acquisition/development of EBS and had encountered delays in the development effort. In particular, Naval Reactors officials had not adequately considered the use of a COTS product when the decision was made to upgrade and modernize the financial management components of EBS. Specifically, officials did not develop a detailed analysis of the costs and benefits of various alternatives to implementing the new information system, including consideration of security requirements and maintenance costs. Although we were told that the decision to proceed with custom development rather than a COTS product was made by a high ranking program official, no other information was available to support the decision. As noted by OMB Circular A-127, *Financial Management Systems*, agencies should utilize COTS products when upgrading financial management systems, including core financial management, procurement, payroll and budget formulation systems. Although OMB guidance and the EBS project mission statement recommended that the development effort utilize a COTS product, it was ultimately decided that the system would be developed internally. According to the Carnegie Mellon Software Engineering Institute, the utilization of COTS products can support important goals such as improving the quality and performance of systems, developing them more quickly and sustaining them in a more cost-effective manner. As Naval Reactors embarks on future system development efforts, completing in-depth analysis related to the utilization of COTS products will remain important.

We also found that completion of the final two components of the first phase of EBS – Receiving and Inventory – were delayed and, as a result, the expected completion date was pushed back. Although Naval Reactors had completed 8 of 10 EBS modules at the time of our review, it had not met milestones related to programming, testing and user acceptance for the final modules. While a Naval Reactors Headquarters official commented that the effort was on schedule, we learned that in March 2012, the completion date for the EBS Project was changed to August 2012, 4 months after the original baseline completion date. As a result of the delay and additional test work that needed to be completed, the project's total estimated costs were expected to increase by at least \$700,000. At the time of our review, however, we were unable to obtain justification for the additional estimated costs to complete the final modules even though such evidence was required by the EBS change management plan.

---

## Investment Reporting

Naval Reactors had not ensured that the EBS project was supported by a capital asset plan. Even though the estimated cost was more than \$12 million for the first phase, EBS was not reported as a Major IT Investment to the Department of Energy (Department) or OMB. OMB requires that high value IT investments such as EBS are subject to increased oversight because of the significant cost and potential risk to the Government. Specifically, OMB defines a Major IT Investment as having importance to the mission or functions of the agency, significant program or policy implications, and having high development, operating or maintenance costs. For projects that are dual-funded, such as EBS, OMB mandated that one agency submit the required budgetary documentation for the project. We noted that the 2009 internal assessment indicated the requirement to develop a capital asset plan and submit it to OMB. However, program officials had yet to take action to address this aspect of the assessment at the time of our review. While we do not recommend that Naval Reactors take action to develop a capital asset plan for the first phase of EBS, it is important that officials ensure future development efforts are supported by capital asset plans to help provide adequate oversight and transparency of the project.

### **Project Management Approach**

The issues identified occurred, in part, because Naval Reactors did not always follow Federal and/or programmatic policies and procedures to support EBS project planning and reporting efforts. Specifically, Naval Reactors did not follow existing programmatic guidance and project management practices, including Naval Reactors Procedure Manual 45A, which was replaced by Department Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*. Naval Reactors officials also did not take into consideration specific requirements set forth by OMB. In addition, we found that a lack of coordination between the EBS project stakeholders and team members, as well as inadequate tracking of project tasks, may have contributed to issues identified regarding the status of the project.

## Project Planning and Reporting

Although best practices suggest that an alternative analysis be conducted to ensure the most cost effective method of development is chosen, we found the development of an in-house system versus a COTS product was based on the decision of a senior Naval Reactors official even though no alternative analysis was documented. In particular, a Naval Reactors Federal official

---

explained that the program must retain sufficient in-house expertise to maintain and modify, as necessary, the EBS software instead of being reliant on an outside software company.

While relying on in-house expertise in lieu of outside vendors could potentially strengthen the reliability of EBS, we noted that it was still important to conduct a cost-benefit analysis to ensure that government resources were allocated efficiently. Department Order 413.3B states that officials should plan for the best cost and benefit life-cycle cost alternative, and the project should provide the greatest value to the Department. In addition, as noted by OMB, agencies should initiate the acquisition of new IT assets only when no existing alternative can meet the need, to simplify or otherwise redesign work processes to reduce costs, and to reduce project risk by avoiding custom designed components and ensuring involvement and support of users in the design and testing of the asset. Also, the *Federal Acquisition Regulation* requires that agencies perform acquisition planning and conduct market research for all acquisitions to ensure that the most suitable approach is utilized.

Furthermore, Naval Reactors had not developed a capital asset plan because the EBS project team believed that the system did not meet the thresholds or definitions for submitting an Exhibit 300 to OMB. Specifically, a Naval Reactors official stated that the EBS project had not met the criteria for submitting an Exhibit 300. However, we noted that the scope and magnitude of the EBS project met the criteria for a Major IT Investment as defined by OMB. In addition, we noted that Naval Reactors did not take the Navy-funded portion of the project into consideration or the OMB reporting requirements for a dual-funded project. Once the EBS project team adopted Naval Reactors Procedure Manual 45A, contractor officials determined that it should have been reported to the Department and OMB as an IT investment because it exceeded the \$500,000 threshold for a financial system. However, Federal officials had not reported the required information.

#### Coordination and Project Tracking

Although identified in the internal assessment, coordination weaknesses among those responsible for the development effort continued, and may have contributed to delays in completing the first phase of EBS. In particular, we determined that coordination issues related to roles and responsibilities combined with a lack of centralized tracking of project tasks resulted in delays to the project. For example, we noted that while the EBS Program Manager at the site was assigned full responsibility for the

---

successful implementation of EBS, this individual did not have the authority to make programming decisions for the project. Instead, these decisions were directed by a Naval Reactors Headquarters official. In addition, the internal assessment noted that Naval Reactors Headquarters was taking on more of a participatory role rather than an oversight function, leading project team members to question who was responsible for the project. Even though a formal Communication Plan that outlined roles and responsibilities was approved in October 2009, we noted that coordination issues still existed 3 years later, as demonstrated by conflicting statements from various officials regarding the status of the first phase of the EBS project.

While the lack of full coordination alone did not necessarily result in the project being behind schedule, the effect of such communication issues were exacerbated by inadequate tracking of project tasks. For instance, another independent review by a Naval Reactors contractor led team determined that unfulfilled project tasks were being tracked in multiple systems, a problem that affected the development of the final components of EBS – Receiving and Inventory. The decentralized tracking of unfulfilled project tasks may have also contributed to conflicting statements regarding the completion status of the various development components that we were provided during our discussions with the EBS Program Manager and Headquarters officials. Had officials implemented an effective mechanism for tracking project progress, tasks that were behind schedule could have been addressed in a coordinated manner by everyone involved in the project.

## **Path Forward**

To its credit, Naval Reactors had taken a number of actions in response to the 2009 internal assessment, including the development of project plans, schedules and budgets. In addition, Naval Reactors took recent action subsequent to our audit work by requesting that its contractor conduct a cost-benefit analysis to determine whether to develop the EBS finance module in-house or utilize a COTS product. However, absent a well-defined schedule, scope and budget that includes established baselines and deliverables, future IT projects, including the remaining EBS phases, run a greater than necessary risk of cost overruns and schedule delays. Furthermore, without the required OMB submissions of project information, the remaining Major IT Investment phases of the project may not receive necessary Federal oversight and fiscal transparency. In addition, lacking adequate analyses, future system development efforts undertaken by Naval Reactors may continue to develop in-house projects even though a more cost-effective COTS solution may exist.

---

**RECOMMENDATIONS**

We believe the issues identified provide valuable lessons learned that can be applied to future system development efforts. Accordingly, to improve the effectiveness of the Naval Reactors system development practices, we recommend that the Administrator, National Nuclear Security Administration, direct the Naval Reactors Laboratory Field Office to:

1. Ensure that Federal and Department project management regulations are followed when proceeding with system development efforts, including performing cost/benefit analyses, as appropriate, to ensure that the method selected for IT development efforts provide the greatest return on investment;
2. Ensure that capital asset plans are completed for all IT investments and submitted to OMB, as appropriate; and,
3. Conduct internal assessments, as necessary, to ensure that system development projects are effectively managed.

**MANAGEMENT  
REACTION AND  
AUDITOR COMMENTS**

Management generally concurred with the report's recommendations and indicated that it will take action to address our recommendations. Management commented that the vision of the EBS was to consolidate numerous COTS business computer programs into a single integrated system. In addition, management agreed that capital asset plans should be developed and submitted to OMB, as appropriate. Furthermore, management stated that it was devoted to improving its system development procedures and performance as well as coordination and communication with prime contractors.

Management expressed concerns with a number of assertions in our report. In particular, management stated that a COTS product was considered as part of a "make versus buy" analysis prior to upgrading and modernizing the financial components of EBS. While we agree that an analysis was conducted by the prime contractor, it was not approved by Naval Reactors officials because it did not align with the goals and objectives of the project. Naval Reactors disclosed in the disapproval that it was evaluating different approaches to EBS streamlining and support and would provide the prime contractors with additional direction.

Although management commented that sufficient tracking tools were in place for assessing progress of the EBS project, we found evidence indicating that tracking tools were not always effective. In particular, we noted that an independent review of the EBS project conducted in January 2012 by a Naval Reactors contractor led team

---

identified various issues related to tracking project tasks, including both informal and inconsistent methods used to track the progress of certain issues.

Management's comments are included in their entirety in Appendix 3.

## Appendix 1

---

<b>OBJECTIVE</b>	To determine whether the Naval Reactors Program (Naval Reactors) effectively managed its systems development efforts.
<b>SCOPE</b>	The audit was performed between October 2011 and December 2012, at Naval Reactors Laboratory Field Office and the Bechtel Marine Propulsion Corporation in West Mifflin, Pennsylvania, and Naval Reactors Headquarters in Washington, DC. The audit was limited to the review of Naval Reactors system development efforts.
<b>METHODOLOGY</b>	<p>To accomplish our objective, we:</p> <ul style="list-style-type: none"><li>• Reviewed applicable laws and regulations, including those pertaining to information technology project management;</li><li>• Reviewed applicable standards and guidance issued by the Office of Management and Budget and the National Institute of Standards and Technology;</li><li>• Reviewed prior reports issued by the Office of Inspector General and the U.S. Government Accountability Office; and,</li><li>• Held discussions with officials from Naval Reactors Laboratory Field Office, Headquarters and Site Support Contractors.</li></ul>

We conducted this performance audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Accordingly, we assessed significant internal controls and Naval Reactors implementation of the *GPR Modernization Act of 2010* and determined that it had not established performance measures for system development. Because our review was limited, it would not have necessarily disclosed all internal control deficiencies that may have existed at the time of our evaluation. We did not rely on computer-processed data to satisfy our objectives.

Management waived an exit conference.

### PRIOR REPORTS

- Audit Report on [\*The Department's Capital Planning and Investment Control Activities\*](#) (DOE/IG-0841, September 2010). The Department of Energy (Department) had not effectively implemented a capital planning and investment control process for controlling and managing information technology (IT) spending. Specifically, management tools required by the Office of Management and Budget, such as IT investment portfolios and capital asset plans, which enable the Department to select and control its IT investments, had not been properly implemented. Program and site officials had either not identified or had misclassified investments, valued at more than \$371 million, in their IT investment portfolios. In addition, Major IT Investments used to help accomplish the mission of the Department were not always supported by required capital asset plans. Such plans are necessary to ensure that IT initiatives are implemented in a timely and cost effective manner. These issues were due, in part, to problems with the Department's policy and guidance. In particular, guidance issued by the Department's Office of the Chief Information Officer was not consistent with Federal requirements related to identifying and reporting Major IT Investments. As a result, IT capital planning activities did not provide Department senior management with timely and accurate information essential for making informed decisions about investments that compete for limited resources.
- Audit Report on [\*The Management of the National Nuclear Security Administration's Classified Enterprise Secure Network Project\*](#) (DOE/IG-0823, September 2009). We found that neither the planning for nor the execution of the Enterprise Secure Network (ESN) had been effective. Despite 9 years of development and expenditure of at least \$153 million, ESN went fully operational 3 years after its planned completion date. While capable of transmitting classified data, approximately 150 software applications used for classified processing had not been certified or approved for operation on the network. Furthermore, although justified and planned as a network provider for all of the National Nuclear Security Administration's (NNSA) Advance Simulation and Computing supercomputers and other classified systems, the network lacked sufficient capacity for such traffic, which resulted in the continued operation and maintenance of a separate classified network. These issues were attributable, in large part, to problems with planning and management of the ESN effort. For example, in spite of the Department requirements to the contrary, ESN planning and development did not incorporate project management controls and protections required for efforts anticipated to cost more than \$20 million. As a result, NNSA had not properly tracked project costs for the first 7 years of the development effort.

MANAGEMENT COMMENTS

DEPARTMENT OF ENERGY  
**Memorandum**

DATE: /5 November 2012

REPLY TO  
ATTN OF: NA-30

SUBJECT: MANAGEMENT RESPONSE TO THE DRAFT AUDIT REPORT ON NAVAL REACTORS  
INFORMATION SYSTEM TECHNOLOGY EFFORTS

TO: Rickey Hass, Deputy Inspector General for Audits and Inspections, Office of the Inspector  
General, Eastern Audit Division, United States Department of Energy

Naval Reactors (NR) agrees in principle with the Office of the Inspector General's (OIG) recommendations and remains dedicated to improving our policies and practices. However, there are several instances in the report where NR takes issue; these are listed below in detail.

The vision of NR's Enterprise Business System (EBS) was to consolidate over 400 in-house and commercial-off-the-shelf (COTS) business computer programs residing on the Naval Nuclear Propulsion Program network to a single integrated system. Having streamlined, simplified and standardized the Program's procurement processes, successful implementation of EBS-Procurement at Bechtel Plant Machinery Incorporated (BPMI) was vital to fully garnering the resulting efficiencies

References (a) through (x), provided previously to the OIG (with the exception of references i, s, v, w, and x), document the evolution of the EBS vision from original inception through development and implementation. In reference (c), NR directed the prime contractors to begin working toward this vision by combining the Common Financials and Standard Logistics databases. The strategy to do so evolved over a series of progressive steps into the EBS-Procurement project. References (d) through (m) document the iterative progression of the EBS-Procurement project from a vision to a detailed plan.

Naval Reactors provides the following in response to specific OIG comments:

1. OIG Comment (cover memo, page 2, first bullet): "Contrary to Office of Management and Budget (OMB) guidance and the EBS mission statement, neither Naval Reactors officials nor the project contractors had adequately considered the use of a commercial-off-the-shelf (COTS) product prior to upgrading and modernizing the financial components of EBS".

NR Response: In June of 2008, as the EBS vision grew as a concept, a NR prime contractor, BPMI, provided a recommendation that included a "make versus buy" analysis. Naval Reactors provided this letter, reference (e), to the OIG. BPMI

NR:DF:JDMay H#12-04806

recommended using already developed custom applications in conjunction with COTS software to achieve a "best value" EBS.

2. OIG Comment (cover memo, page 2, second bullet): "... the EBS project had still not been reported to the Department and OMB as a Major IT investment, as required".

NR Response: NR agrees with the OIG recommendation to complete capital asset plans (Exhibits 300 and 53) and submit to OMB as appropriate. NR notes that the Department of Energy (DOE) threshold for requiring an Exhibit 300 increased from \$5M to \$25M between BY11 and BY12. Therefore, at the time NR understood the full cost of the EBS project in March of 2010, the FY11 budget was on the Hill and EBS did not meet the threshold for reporting in the next budget submission (BY12). NR will ensure future IT projects with a three-year cost of more than \$25M are reported to DOE in accordance with DOE order 413.3b, the Department's Program and Project Management Manual for the Acquisition of Capital Assets.

3. OIG Comment (cover memo, page 2, paragraph 3): "In response to our audit work, Naval Reactors requested the contractor conduct a cost-benefit analysis to determine whether the development of the EBS Finance module should be an in-house effort or a COTS product."

NR Response: NR requested the Prime contractors perform a market survey/analysis-of-alternatives in response to the primes' proposed cost and schedule to develop EBS-Finance in-house and not in response to the audit work. This request and the Prime contractors' response, concluding the use of COTS, are provided in references (z) and (aa).

4. OIG Comment (cover memo, page 2, paragraph 3): "Naval Reactors' internal procedures also stated that if the Department's annual development cost for software developed for a financial system exceeded \$500K, it should be reported to OMB".

NR Response: NR notes that EBS-Procurement and Finance are not financial systems as defined by OMB or DOE. In reference (bb), OMB defines a financial system as "an information system that may perform all financial functions including general ledger management, funds management, payment management, receivable management, and cost management". NR considers that EBS does not meet this definition. Therefore, the \$500k threshold, cited in the OIG report, does not apply.

5. OIG Comment (cover memo, page 2, paragraph 4): "Had officials implemented an effective mechanism for tracking progress, tasks that were behind could have been addressed in a coordinated manner by everyone involved in the project".

NR:DF:JDMay H#12-04806

NR Response: NR considers that sufficient tracking tools were in place. Specifically, the prime contractors maintained a detailed Project schedule reflecting current status (dates/percent complete) on open tasks. The project team then communicated this information to prime contractor management on a weekly basis and to NR on a bi-weekly basis. Further, the prime contractors included the EBS-Procurement project in the monthly status reports to the Manager of the Naval Reactors Laboratory Field Office. In addition, the primes used the existing System Service Request system to track the status of 1,000+ test findings. The EBS-Procurement project team had visibility of actual versus planned progress and shared this information via regular communication methods (weekly and bi-weekly meetings, various reports) to key stakeholders.

6. OIG Comment (Details of Findings, page 4, paragraph 1): "...we noted that while the EBS Program Manager at the site was assigned full responsibility for the successful implementation of the EBS, this individual did not have the authority to make programming decisions for the project."

NR Response: Bettis Atomic Power Laboratory General Manager Morgan Smith provided this authority via official announcement dated January 4, 2008. Further, the NR process requires key technical and financial decisions be recommended by contractors to NR for approval. References (g), (i), (l), (n), (p), (r), and (v) are all prime contractor key decision recommendations signed by or concurred on by the EBS Program Manager and sent to NR for approval. References (h), (k), (m), (o), (q), (s), and (w) are all NR response letters which disposition the Program Manager's recommendations. NR will ensure communication lines and resource authority are understood by all parties for future projects involving multiple prime contractors.

7. OIG Comment (Details of Findings, page 5, recommendation 3): "Conduct internal assessments, as necessary, to ensure system development projects are effectively managed".

NR Response: NR agrees with the OIG recommendation. As noted in the report, NR did, in fact, complete an internal audit in 2009. Further, NR assembled an EBS Tiger Team on January 18, 2012. The Team's objective was to conduct an independent review to assess the EBS-Procurement preparedness and risk posture as it related to initial roll-out of the EBS-Procurement system. Bechtel Marine Propulsion Corporation (BMPC) Memorandum, Serial FS(BS-FS)-12-003, transmits the observations and recommendations of the Team. NR provided this letter to the OIG.

NR is devoted to improving of our system development procedures and performance as well as our coordination and communication with our prime contractors. NR concurs, in principle, with recommendations 1 through 3 and will conduct future projects accordingly.

NR:DF:JDMay H#12-04806

Thank you for the opportunity to comment on the draft of the report.



S. R. Scharpnick  
Naval Reactors

References:

- (a) Prime recommended Future Business System Vision, Serial B-C(FS)-109 dated Dec 19, 2005
- (b) NR approval of Future Business System Vision, Serial PNR-FIN-06-029 dated March 10, 2006
- (c) NR Request for Prime Contractors to develop an EBS, Serial H-07-02068 dated July 15, 2007
- (d) Bettis/KAPL Proposed Strategy to Implement a Fully Integrated EBS, Serial EBS-7 dated June 20, 2008
- (e) BPMI Recommendation to Implement an EBS, Serial BPMI-INC-ENG-22113 dated June 20, 2008
- (f) NR disapproval and request for action to Develop EBS Procurement and Finance Modules, Serial H-08-04638 dated Dec 19, 2008
- (g) Prime Recommendation 45A Compliance Strategy, Serial EBS-16 dated July 7, 2009
- (h) NR Approval with Comment Requesting PEP, Exhibits 53 & 300, and Test & Implementation Plans, Serial H-07-02068 dated Sept 14, 2009
- (i) Prime Recommendations, Procurement CD-1-2-3 & eMail, Serial EBS-19 dated Oct 29, 2009
- (j) EBS Program Review, Dual Pipeline discussion, Serial b-eps-33 dated Nov 19-20, 2009
- (k) NR CD-1-2-3 Disapproval with request to revise PEP, Serial H-10-00133 dated Jan 22, 2010
- (l) Prime recommendation EBS PEP including Procurement, Serial EBS-36 dated Feb 25, 2010
- (m) NR PEP Approval w/ comment TEC = \$11.8M, Serial H-10-01007 dated March 25, 2010
- (n) Procurement Change Request Form (CRF) 001, Serial BS-EBS-10-002 dated Aug 10, 2010
- (o) NR Approval of CRF 1 TEC = \$11.7M, Serial H-10-03427 dated Sept 8, 2010
- (p) CRF-002, Serial FS(BS-EBS)-11-025 dated Oct 18, 2011
- (q) CRF-002 Approval w/ comment withholding increase in TEC = \$11.7M, Serial H-11-04643 dated Nov 8, 2011

## Appendix 3 (continued)

---

NR:DF:JDMay H#12-04806

- (r) Prime recommended EBS-Procurement Implementation Plan, Serial BS-EBS-12-002 dated Feb 1, 2012
- (s) NR approval of Implementation Plan request for site schedule, Serial H-12-00973 dated March 14, 2012
- (t) Schedule by Site, Serial FS(BS-EBS)-12-006 dated March 30, 2012
- (u) Telecon to obtain rollout concurrence, Serial BS-EBS-12-007 dated April 11, 2012
- (v) CRF-003, Serial BS-EBS-12-021 dated Aug 30, 2012
- (w) NR approval of CRF-003 Approval TEC = \$13.91M, Serial H-12-04080 dated Sept 13, 2012
- (x) Primes Test and Acceptance Plan, Serial BS-EBS-12-022 dated Sept 27, 2012
- (y) EBS-Finance in-house development, PEP FS(BS-EBS)-12-009 dated May 30, 2012
- (z) NR Laboratory Field Office request for a Market Survey, NRLFO:FIN:12-075 dated June 29, 2012
- (aa) EBS-Finance PEP including COTS Market Survey, FS(BS-EBS)-12-024 dated October 31, 2012
- (bb) OMB Circular No. A-127-Revised

Copy to (Prime Contractor): KAPL ADSARS  
Copy to (All Others): None

## CUSTOMER RESPONSE FORM

The Office of Inspector General has a continuing interest in improving the usefulness of its products. We wish to make our reports as responsive as possible to our customers' requirements, and, therefore, ask that you consider sharing your thoughts with us. On the back of this form, you may suggest improvements to enhance the effectiveness of future reports. Please include answers to the following questions if applicable to you:

1. What additional background information about the selection, scheduling, scope, or procedures of the audit or inspection would have been helpful to the reader in understanding this report?
2. What additional information related to findings and recommendations could have been included in the report to assist management in implementing corrective actions?
3. What format, stylistic, or organizational changes might have made this report's overall message more clear to the reader?
4. What additional actions could the Office of Inspector General have taken on the issues discussed in this report that would have been helpful?
5. Please include your name and telephone number so that we may contact you should we have any questions about your comments.

Name \_\_\_\_\_ Date \_\_\_\_\_

Telephone \_\_\_\_\_ Organization \_\_\_\_\_

When you have completed this form, you may telefax it to the Office of Inspector General at (202) 586-0948, or you may mail it to:

Office of Inspector General (IG-1)  
Department of Energy  
Washington, DC 20585

ATTN: Customer Relations

If you wish to discuss this report or your comments with a staff member of the Office of Inspector General, please contact our office at (202) 253-2162.

This page intentionally left blank.

The Office of Inspector General wants to make the distribution of its reports as customer friendly and cost effective as possible. Therefore, this report will be available electronically through the Internet at the following address:

U.S. Department of Energy Office of Inspector General Home Page  
<http://energy.gov/ig>

Your comments would be appreciated and can be provided on the Customer Response Form.