



Performance Evaluation Report
for
Babcock and Wilcox Y-12 Technical Services, LLC

Contract Number DE-AC05-00OR22800

Evaluation Period: October 1, 2008 through September 30, 2009

The purpose of this Performance Evaluation Report is to provide a final report of the National Nuclear Security Administration (NNSA) evaluation of Babcock and Wilcox Y-12. Technical Services, LLC (B&W Y-12) performance for the period October 1, 2008, through September 30, 2009. This evaluation uses the guidance, criteria, measures, and process established in the Performance Evaluation Plan (PEP) approved at the beginning of this performance period. At Y-12, the fee pool was divided into three components: Base and Stretch Award Fee Incentives (AFIs), Base and Stretch Performance-Based Incentives (PBIs), and Multi-Site Incentives.

The Award Fee Incentives contains three major performance objectives: Business, Mission, and Operations. The Y-12 Site Office (YSO) met monthly with B&W Y-12 to provide feedback and progress in satisfying the detailed elements contained in the Award Fee Incentives outlined in the PEP. The first section of this report summarizes NNSA's evaluations for each Performance Objective (e.g., Business) and the topical areas (e.g. General Administrative Management) contained within each Performance Objective. An evaluation of the stretch objectives is also provided. Additional details supporting this report are contained in monthly performance evaluation reports provided to B&W Y-12.

The second section of this report presents the results of the PBI evaluation, both base and stretch. The PBI portion of the fee process is similar to past years and consists of negotiated specific incentives assigned to high priority activities where fee is earned based on quantitative/objective performance results such as product deliverables, schedule, and cost.

Finally, this report communicates information obtained from documented performance evaluations. This report is not intended to repeat assessment evaluations or create new information.

I. Business Management

The Business Management Performance Objective included the following topical areas: General Administrative Management, Procurement Management, Information Technology, and Contractor Assurance. The overall rating for Business Management for FY 2009 is Outstanding.

General Administrative Management

The overall rating for General Administrative Management is "Outstanding."

This rating reflects very effective funds and overall financial management including timely input for monthly financial plan processing, impact analyses, and budget deliverables, and above average progress against internal metrics as well as those reported from the CFO's office at the Service Center. Improved or sustained performance was evident in Fleet and Property Management including reductions in material delivery cycle times and better overall property records management. The Human Resources function performed well working a variety of issues including developing plans for a new shared services arrangement with Pantex that should result in future cost and process efficiencies. Throughout FY 2009, information requested from the B&W Y-12 legal organization was provided in a timely and complete manner, and support from communications services (photography, graphics) for public affairs continued to be excellent. The FOIA/Privacy Act programs were well organized and effective, with improvements in reporting noted this fiscal year. The Work For Others function exceeded their targeted goal of 28 proposals valued at almost \$35M. During FY 2009, The Hackett Group performed benchmark studies on B&W Y-12's CFO and HR functions. The CFO function garnered an overall rating of "World Class" and HR was identified as the top site in Staffing Services and Workforce Development.

Procurement Management

The overall rating for Procurement Management is "Good."

Business Utilization Goals, SCMC performance, Requirements Management, Prime Contract Administration were all performing very well. Procurement/subcontract management has room to improve. However, it was acknowledged that Procurement was processing a very heavy workload that includes Recovery Act work with many special requirements prescribed by the Recovery Act.

Information Technology

The overall rating for Information Technology is “Outstanding.”

B&W made positive improvements in the program by developing and meeting IT metrics, responding in a timely manner to HQ data calls, continuing the IT refresh program, supporting “green” IT initiatives, re-engineering the TP process, commercializing the EMBOS application, and supporting Enterprise Wireless objectives. However, additional work is needed in the area of contractor assurance to improve IT metrics (add SQA metrics and improve Records Management metrics) and to include YSO in B&W self-assessment activities and routine IT meetings. To date, B&W inclusion of YSO in general operational awareness activities was less than adequate. Overall, the B&W IT program was well-managed, developed and retained knowledgeable staff, implemented pro-active solutions, and quickly addressed any identified issues.

Contractor Assurance

The overall rating for Contractor Assurance is “Good.”

YSO reviewed and approved the B&W Contractor Assurance Program Description, Y15-906, on May 8, 2009. B&W deployed the Contractor Assurance Web Site which contains the following information: assessment activity; Issues Management; Lessons Learned; Metrics; Legacy Risks; Requirements Management; and Event Reporting. B&W established and provided performance demonstrating metrics to YSO in all 27 functional areas and provided leading metrics in 6 of the 27 areas. Metrics provided by the Performance Assurance Organization adequately reflected program performance. B&W has actively supported all NNSA LOCAS initiatives. All of the performance targets were evaluated as being met; however, YSO recognizes that while B&W has an issues management system in place, they are not meeting established goal in the area of CAP submission. Validation and verifications goals were met for the year.

II. Mission

The functional areas under the Mission area include Directed Stockpile Work (DSW), Campaigns, Readiness in Technical Basis and Facilities (RTBF) / Facilities Infrastructure and Recapitalization Program (FIRP), Nuclear Non-Proliferation (NN) and Naval Reactors, Transformation, Process and Productivity Improvements (PPI), and Project Management. These functional areas include the mission and project work that Y-12 is tasked to accomplish throughout the year.

Overall, B&W Y-12’s performance in the Mission area was “Good” in fiscal year 2009. The DSW program maintained W76-1 LEP deliverables well ahead of Pantex needs and significantly lowered the overall attrition rate by the end of the year. All surveillance and Joint Test Assembly deliverables were completed on schedule, and Quality Evaluation capabilities were fully reestablished. In the area of dismantlement, B&W exceeded the baseline plan by 10% which is 30% above FY08 quantities. Cost performance for one of the systems was equally outstanding with a 40% reduction in the “per unit cost” versus FY08. Within the Campaigns area, significant accomplishments included the deployment of new technologies into production including Infrared Debonding, Digital Radiography, and Direct Materials Manufacturing. Also very important from a productivity standpoint was the implementation of secure wireless technology at Y-12 for the first time ever.

Providing base support to the primary mission, B&W Y-12 continued its strong and effective management of the RTBF and FIRP areas. Facility availability, deferred maintenance, material disposition, material consolidation and Highly Enriched Uranium Materials Facility (HEUMF) Transition goals were met or exceeded. In an area for improvement in FY10, B&W Y-12 needs additional focus on resolving product quality issues within Material Recycle and Recovery. The NN and Naval Reactors functional area also met or exceeded all customer deliverables including the 2009 “Getting the Job Done” goal for removing SNM from NNSA sites. B&W Y-12 has taken a major role in efforts to develop an alternate fuel for the Reduced Enrichment for Research and Test Reactors (RERTR) program that included the production and delivery of U-Mo foils. Lastly, IAEA safeguards at the Y-12 site were completed in FY 2009 after 15 years and 170 inspections.

B&W Y-12 provided outstanding support for site transformation efforts that included development of a comprehensive site master plan that provides an overarching strategy to guide future decisions. The downgrade of 9204-4 and the removal of materials from 9201-5 set the stage for reducing the ultimate deactivation and demolition costs for these facilities and their potential transfer to Environmental Management. Lastly, a strong emphasis on process and productivity improvement set a new record for productivity efficiencies and far exceeded the target by producing \$52.8M in efficiencies.

Directed Stockpile Work

The overall rating for DSW is “Outstanding.”

B&W Y-12 achieved nearly 100% of the baseline DSW deliverables and exceeded the baseline deliverables for W76-1 production and dismantlements. The overall W76-1LEP attrition rate improved from about 36% to a much better 15% based on factory implementation of work from the Attrition Reduction Study. The Dismantlement Program achieved the highest throughput level in over a quarter of a century by exceeding the baseline by 10% and exceeding the FY 2008 throughput levels by 30%. Full Surveillance capability and capacity was restored with the on-time completion of the Quality Evaluation (QE) Relocation Phase II project. Stockpile Services enabled the on-time delivery of all DSW deliverables despite a significant budget reduction when new budget authority was authorized by NNSA. All container work was completed on or ahead of schedule, and additional container work scope was accomplished within the funding level allocated by NNSA. Cost and schedule performance was within threshold for all DSW Programs. B&W Y-12 provided outstanding and timely support for NNSA HQ and YSO requests of which many required rapid responses.

Campaigns

The overall rating for Campaigns is “Good.”

Despite a number of challenges and setbacks throughout the year, B&W effectively managed and delivered quality products to their customers. All Campaigns Level 2 milestones were completed in FY09. The Stockpile Readiness Campaign delivered many new capabilities to the DSW program including two innovative technologies created and developed at Y-12 – Direct Lithium Materials Manufacturing and IR Debonding. The IR Debonding was completed ahead of the baseline schedule and the equipment was immediately utilized to meet a critical mission need in the Dismantlement program. Digital Radiography was deployed and used to qualify production parts for the first time ever. B&W Y-12 received the highest score in the complex for their “Electronic Bomb Book” business case and project proposal at the FY 2011 Integrated Priority List (IPL) meeting the Office of Stockpile Technology (NA-122.3). B&W actively supported and managed multi-site projects including the Non-Destructive Laser Gas Sampling project. The PDRD program far exceeded expectations by transferring a total of eighteen technologies to the next stage of maturation and deploying the first ever secure wireless system into a production area.

Readiness in Technical Base and Facilities/Facilities and Infrastructure Recapitalization Program. (RTBF/FIRP)

The overall rating for RTBF and FIRP is “Outstanding.”

B&W Y-12 effectively managed and exceeded established project goals to support HEUMF transition, Graded Security Protection implementation, and disposition of legacy nuclear and non-nuclear material. B&W Y-12 was proactive in managing the issues related to metal production. High quality metal was available to satisfy all program requirements. In addition to the production of purified metal, sampling and characterization was executed to ensure an adequate supply of high purity metal to meet requirements. Within MRR, B&W Y-12 successfully processed safe bottles through the Wet Chemistry systems and met all of the established performance targets. The storage program successfully disposed of approximately 70% of the materials required for the down-grading of 9201-5 and 9204-4 to below a hazard category 3, and successfully completed packing and shipping of DOE-owned special nuclear material located at White Sands Missile Range. Newly Generated Waste managed the successful disposition of over 325,000 cubic feet of Low Level Waste above the baseline amounts. FIRP performance for the year continued to be exceptional with an overall SPI of 0.99 and a CPI > 1.0.

Nuclear Nonproliferation and Reactors

The overall rating for Nuclear Nonproliferation, Naval Reactors, Other Reactors and Research Material Supply is “Outstanding.”

Some performance issues were noted in June/July which resulted in a downward trend; however the contractor took appropriate action in response to the concerns and continued strong performance in August. HEU Disposition projects and work scope associated with PBIs to deliver excess enriched uranium were effectively managed by B&W Y-12. Delivery schedules were met for excess enriched uranium supplied to customers and receipt of excess enriched uranium from DOE sites, including deliveries for the NR Program and DOE foreign and domestic customers. B&W Y-12 was key to the success of the NNSA Multi-Site Incentive to remove 8 MT SNM from NNSA sites. Y-12 shipped over 7.5 MT HEU to a disposition site, compensating for shortfalls at other NNSA sites. Y-12 support to programs in NA-21, NA-22 and NA-25 has expanded dramatically and positive feed back has been received from HQ program managers. Of particular note are the domestic response force training program sponsored by NA-21, the equivalent test sphere project sponsored by NA-22, the Reduced Enriched for Research and Test Reactors (RERTR) conversion program for research reactor fuels, and the Russian response force training program sponsored by NA-25. The response force training programs have made very good and creative use of old existing facilities at Y-12 providing a great value to NNSA. B&W Y-12 support of the NA-24 HEU Transparency Implementation Program continued to be consistent and of high quality. The overall stretch award fee milestone to increase support to NN was exceeded by a significant amount. There is good synergy between the nuclear nonproliferation and work for others programs and good reason for optimism with respect to the continued growth of these programs.

Transformation

The overall rating for Transformation is “Outstanding.”

B&W provided outstanding support for Y-12 modernization and complex wide transformation initiatives. The Master Plan and other transformation documents prepared this fiscal year were high quality and good decision making tools. The master plan including resource loaded schedule, maps, and interactive website that identified the actions needed to transform the Y-12 National Security Complex into a smaller, responsive, sustainable, and cost-effective enterprise is a valuable information and decision making tool. The B&W Modernization meetings and Site Planning Council meetings continue to be excellent forums for integration, communication, and decision making. The Complex Command Center business case package was completed and transmitted to HQ for review and concurrence. B&W also provided excellent input for the Infrastructure Sustainment & Modernization Report that will be used by the NPR Infrastructure Subgroup in drafting the NPR report.

Process & Productivity Improvement

The overall rating for Process & Productivity Improvement is “Good.”

B&W Y-12 set a new record for productivity efficiencies and far exceeded the target by producing \$52.8M in efficiencies. The PILS database allows for more reliable and timely reporting of projects. B&W Y-12 has established bi-weekly PVT meetings to verify the effectiveness of each organization’s plan and cost savings. These improvements will greatly improve this functional area in the future, but were implemented late in the year making verification of this year’s projects a time compressed effort.

Project Management

The overall rating for Project Management is “Good.”

B&W has effectively managed projects within the CPI and SPI performance thresholds and has been effective in meeting cost and schedule baselines for line item projects. B&W Y12 has effectively managed project processes, systems and activities and met or exceeded performance objectives within the Performance Evaluation Plan. Project Critical Decisions for SIP, Microwave Development, and NFRR were of good quality and acceptable by HQ reviews and approved by the Acquisition Executives during the performance period. Safety strategy development for UPF, NFRR and HEUMF projects met expectations. Aggressive corrective actions for PWSU platform failure

incident were handled professionally and provided sound strategies for safety and quality issues. Aggressive response by B&W management resulted in successful completion of HEUMF operational readiness activities. Effective actions were implemented to improve Contractor Assurance system for projects and excellent metrics were developed which include leading indicators to measure project performance. UPF made significant design progress during the year and implemented a significant security strategy which will result in life cycle cost savings to the project.

III. Operations

“Operations” includes the areas of Operations, Engineering, Safety and Environment, and Safeguards and Security.

Operations Summary

Improvements throughout the year in several areas resulted in an overall improvement in Operations. These areas include Health and Safety, Maintenance, Work Planning and Execution (WPE), and Cyber Security. Health and Safety went from Good to Outstanding as a result of the excellent ISM Summit, the Safety EXPO, good safety statistics, improvements in worker involvement, excellent progress in closing HS-64 actions, steady progress on fire protection actions, and improving CAS metrics. In the area of Maintenance Effectiveness, a combination of strong maintenance metric performance and excellent management of workforce including apprentices, work planners, and ARRA workers drove the performance from Good to Outstanding. The award fee targets and measures for WPE were revised this year to provide a systems approach, as opposed to a transactional approach, and a balance between operational events, startup, metrics and continual improvement. The WPE performance went from Satisfactory to Good and was driven by a number of improvement initiatives, strong performance in startup, and sustained progress in 9212 wet chemistry processes. The performance in Cyber Security went from Good to Outstanding during the year. Notable improvements in Cyber include strong performance in the YSO/HSS classified cyber technical review; implementation of a proxy device on the unclassified network; implementation of a central logging capability; implementation of the first wireless dismantlement system; approval of a Blackberry sanitization process; implementation of a process to reduce 50% of cyber security plans; and their work to allow Blackberry devices into security areas. There were several issues involving the adequacy of criticality safety evaluations (CSEs); the timeliness of safety basis annual revisions; implementation of criticality safety controls; inadequate safety analyses; and safety basis violations. These issues detracted from the overall good performance in Engineering and Nuclear Safety. All other areas in Operations were rated Good or Outstanding throughout the year, resulting in an overall rating of Outstanding for Operations.

Facility and Site Management

The overall rating for the Facility and Site Management functional area is “Good.”

The overall performance for the year is considered to be Good with an upward trend. B&W has worked to improve their facility ratings and has taken the lead in working to improve cooperation and accountability in the PrYde program. The facilities continue to maintain a high level of availability and efforts to improve are evident. Operational Availability for the facilities stayed at or near 95% for the year. The facility infrastructure equipment has been at 100% ability to support production commitments since October 2008. During the year the Facility Condition Assessment Survey (FCAS) inspection team completed assessments of approximately 2.5 million gross square feet of real estate. Applied Technologies has worked steadily throughout the year to restore a storage/junk area (9202/181) to active laboratory status, and has also done a good job of improving the physical and material condition of the general floor and shop areas throughout Building 9202. Facility management is focusing on strengthening the facility operational readiness posture. An example of this strengthening of attention is the focused systems vulnerability reviews being performed by ARES Corporation.

Maintenance Effectiveness

The overall rating for Maintenance Effectiveness is “Outstanding”.

Overall Maintenance Effectiveness is rated Outstanding, which is an upward trend for the year. B&W maintained a consistently high level of performance across the spectrum of monthly reporting metrics that are reported.

Maintenance Completed Job trend averaged over 2000 per month. Outage performance was significantly above average with the exception of performance in Building 9204-2E. False Starts remained at a consistent and manageable level, but need to be driven down to lower levels. Overtime hours were managed well and only reflected a significant increase toward year end when ARRA support was necessary. B&W reported additional metrics during the year, but to date has not settled on whether they are returning consistently useful data. B&W is obligated to begin relying on and reporting this data during FY2010. YSO expressed lack of confidence in the quality of data reported against the Estimating Efficiency and Maintenance Backlog metrics, and B&W responded by committing to improve efforts in that area by making a number of improvements including focusing on estimating by work center and leveling the expectations for estimating hours through use of estimating software. FI&S has also taken steps to train new planners using a consistent standard and subject matter expert based approach. FI&S did an excellent job of managing the influx of new ARRA workers, including the introduction of approximately one hundred and forty new workers at the end of the fiscal year. FI&S has begun monitoring and tracking maintenance operations event frequency, and severity data and excellent work on integrating apprentices continues.

Work Planning and Execution

The overall rating for Work Planning and Execution (WP&E) is “Good.”

Work Planning and Execution (WP&E) is rated Good for the year. The award fee targets and measures for WPE were revised this year to provide a systems approach as opposed to a transactional approach and a balance between operational events, startup, metrics and continual improvement. The overall performance went from Satisfactory at the beginning of the year and has improved to Good at the end of the year. This improvement in rating was driven by a number of initiatives including the new procedure review process which was implemented to increase the evaluation rigor and improve the final product quality of procedures used in Production; the increased use of the initial event form throughout Y-12 organizations; the extensive cleanup efforts, which resulted in over 2 million pounds of waste of waste and excess materials being removed with no injuries; sustained progress in the wet chemistry processes in 9212 resulting in reduced liquid material at risk to the lowest level in recent history, which is a significant risk reduction to operations; continued strong performance in the startup program as evidenced by the successful ORR for the SST-E; the innovative Readiness Certification process developed and implemented for HEUMF; the reduction in the number of TSR violations from last year; and progress in readying movement of material from 9720-5 to HEUMF. The Production Division has made excellent progress in implementing the 7S program in several of the Production Facilities. The contractor continues to mature in the use of metrics for WPE; especially notable is the Event Severity and Frequency metrics. Some improvement was noted in expanding metrics beyond “Production only” metrics. A trend toward improved performance of critiques has continued throughout the year, however, there is still work to be done as not all events are appropriately critiqued and follow up on corrective actions are not necessarily effective. Reviews of AJHAs noted a trend for improvement of AJHA quality. B&W Y-12 continues its effort to improve the LO/TO program, and some improvement was noted although there continue to be issues. B&W significantly improved the shadowing opportunities in the latter half of the year. However, no significant progress was noticed on reducing the backlog of issues. There were also periods during the year when the contractor experienced a spike in abnormal events. In general, the contractor’s response to these challenges was acceptable and timely. As a result of a number of significant events occurring in June, the contractor took aggressive action to address the number of events, including assigning a team to review issues with out-of-calibration equipment. Despite the focused effort, the Contractor continues to struggle with control of equipment with expired calibration certifications. Issues with compliance with criticality safety postings were noted (sampling bottles, beakers in hood, stacking, etc), as well as some procedural compliance events (e.g., dismantlement case cut, use of draft procedures, etc). There was also a pressurized drum event earlier in the year, similar to issues noted in previous years.

Training and Qualification

The overall rating for the Training and Qualification Program is “Outstanding.”

B&W maintained management attention on both the programmatic and implementation elements which resulted in a reduction of 1.3% in training deficits (well below the site-wide target level of 2.5%; a more rigorous self-assessment program; and overall performance improvement. B&W Training, Management, & Delivery (TMD) Organization,

Production Training and the Support Organization Training Managers/Analysts have repeatedly performed effective self-assessments and performance-based surveillances to identify issues and areas for improvement on or ahead of schedule. This year, the number of assessments performed was doubled; additional assessments were performed on organizations' training programs that had not been assessed recently. A consistent set of criteria was used in each assessment/surveillance with some issues appropriately identified and several resolved. B&W made significant progress in upgrading the training facilities to be more efficient and productive. Significant cost efficiencies were achieved in several areas, including training module conversion to web-based training, offering more web-based training options (over 108,000 hours saved), electronic scanning of official records (over 54,000), and archiving record history files. All award fee and stretch goals were met.

Engineering and Nuclear Safety

The overall rating for Engineering and Nuclear Safety is "Good."

Engineering performance for FY 2009 overall met expectations, but the good performance in the first three quarters was overshadowed by the Engineering errors that resulted in HEUMF testing delay and rework of several electrical circuits. Continued progress throughout the rating period was noted for the contractors' NCS program due to a concerted effort to address significant issues with NCS evaluation quality, particularly for HEUMF, and DOE Standard 3007-2007 compliance. This effort was considered responsive to YSO management expectations and included corporate resources being applied to evaluate and improve the program. The NCS program maintained a strong support of metrics, events reporting and categorization, and significantly improved outstanding issue backlogs. Major improvement actions for the primary extraction raffinate monitor and 9212 floor holdup analysis and evaluation appeared to be headed in the right direction. In the Safety Basis area, B&W Y-12 continued to provide revised safety basis documents to support annual updates, modernization, and changes to facilities. Completion and approval of the HEUMF safety basis and the 9212 annual update represented significant achievements. In addition to the HEUMF safety basis completion, follow-on DCNs (including incorporation of the DOE-STD-3007-2007 CSEs), and a Safety Basis Supplement, the B&W Y-12 facility safety organization provided support to projects and site Modernization objectives through support of the 9212 Recovery A project, the 9204-4 nuclear downgrade effort, 9206 Waste Solution Processing, and the project to move the Rubber Shop into 9204-2. Additional efforts to improve consistency in safety basis submittals were noted with the finalization of the TSR templates for CAAS and fire suppression systems.

Emergency Management

The overall rating for Y-12 Emergency Management Program is "Outstanding."

The Y-12 Emergency Management Program Organization (EMPO) continued to find innovative ways to develop training and exercise activities that enhanced Emergency Response Organization (ERO) response capability, both on-site and off-site. B&W Y-12 initiated improvements on several existing support systems. B&W Y-12 continued with initiatives to replace the Fire Hall and PSS/TSC with a new Complex Command Center. The project received CD-1 authorization and is ready to receive HQ authorization for signing necessary lease and construction agreements in early CY 2010. B&W Y-12 also diligently pursued ways to improve interoperability and collaboration with off-site agencies and organizations. B&W Y-12 continued to maintain a strong presence at the 2009 DOE Emergency Management Issues - Special Interest Group (EMI-SIG) Annual Conference and continued involvement through multiple EMI-SIG subcommittees. Additionally, Y-12 continued to foster interoperability with other Oak Ridge Reservation and HQ organizations by providing substantial support to the ORNL Full Participation Exercise, performing an evaluation of the Savannah River Site Annual Exercise, and year-round involvement with the DOE Meteorological Coordinating Council. Additionally, B&W Y-12 successfully completed all corrective actions from the HS-63 inspection conducted in October/November 2007. In recognition of the strong performance and the effective implementation of Contractor Assurance System processes, YSO was able to significantly reduce its direct assessment activities in this area. B&W Y-12 is in a good position to maintain high quality performance into the next fiscal year, based on experienced staff and mature program elements.

Radiation Protection

The overall rating for Radiation Protection is "Outstanding."

The B&W Y-12 RADCON program continued to be well implemented, in accordance with requirements, and with a proactive approach to identifying and addressing issues. Notable achievements included upgrading the site to the new iCams, upgrading the RWP generation process, continued DOELAP accreditation for the Internal and External Dosimetry programs, programmatic improvements that resulted in significant cost savings, and disposition of legacy materials. In addition, RADCON metrics, for the most part, were leading indicators which documented the overall health of the program. To maintain this performance rating, B&W Y-12 needs to improve personnel contamination controls; develop a methodology for ensuring that workers on radiological restriction do not enter radiological areas; work with facility organizations to ensure that the proper controls are in place (and practiced) to minimize personnel contaminations; and continue to develop initiatives that drive proactive performance.

Health and Safety

The overall rating for Health and Safety is “Outstanding.”

Overall assessment results indicated strong ES&H programs with no major program failures. Activities were conducted with a high regard for ES&H and regulatory requirements, and consistent with Y-12 NSC ISM policies and procedures. B&W Y-12 conducted numerous assessments across the Health and Safety disciplines and corrected issues in a timely manner. There was a strong safety culture exhibited by the ATLC, and the ES&H President’s Forum continued to be a strong tool for safety improvement and employee involvement. The subcontractor safety scorecard continued to be a good way of emphasizing B&W Y-12’s safety expectations. Safety statistics continued to trend well, and solid progress was made on developing CAS metrics. Notable activities included a very successful ISM Summit and the ES&H EXPO. Through Stretch Award Fee and PBIs, B&W Y-12 continued to make steady progress in FY 2009 on legacy issues from the FPPCCAP. The Fire Extinguisher Replacement Project installed 742 extinguishers in 29 buildings and demonstrated a commitment to completing onsite issues that have existed for decades. Lessons Learned improvements on the Freeze Protection Plan involving pre-staging and early preparation for areas prone to cold weather should improve the reliability of sprinkler systems during cold weather months and reduce down time on systems relied upon for safety basis, life safety, and property protection. B&W Y-12 continued on the path toward lifecycle management of chemicals and made significant progress in its UMC and disposition of excess materials. The project to classify chemicals in HMIS using the hazard classification methodology in locally enforced fire codes was completed. B&W Y-12 continued to perform commercial motor vehicle operations without a US DOT recordable accident (now 16 years). Packaging and transportation hazardous material operations have continued without violations of the US DOT Regulations for 15 years. This was a challenging year for industrial hygiene controls, especially as related to beryllium. YSO issued a Deficiency for beryllium controls related to personnel access. Clean-up of beryllium in the foundry in building 9202 resulted in anticipated high beryllium airborne levels, but workers were protected with appropriate respiratory protection. Another notable challenge for industrial hygiene included a personnel exposure to methylene chloride above the permissible exposure level (PEL).

Environmental and Waste Management

The overall rating for Environmental and Waste Management is “Good.”

Noteworthy achievements during the FY included the successful disposal of over 360,000 cubic feet of LLW at NTS; receipt of the TPS performer status from TDEC; receipt of a Closing the Circle Award from the White House; numerous successes in the UMC program; submitting a NPDES permit modification allowing for reduced flow and monitoring in East Fork Poplar Creek; and no findings identified during six external regulatory inspections. Concerns identified include the continued storage of LLW greater than one year; repeated violations of the sanitary discharge permit; the breaching of a pressurized cylinder in the 9720-58 yard; and failure to follow the ROD agreements for treating sump water from 9204-4.

Quality Assurance

The overall rating for Quality Assurance is “Good.”

The aggregate evaluation of surveys and assessments conducted this year indicated the WQA program was effectively implemented. The QAS-1.0 survey conducted by YSO of the Y-12 Weapons Quality Program concluded that the requirements of QC-1, Weapon Quality Policy, were met. The Specification Exception Report (SXR) metrics indicated that First Submission Efficiency remained at or above 90% for the last 12 months and the SXR/Unit submitted remained below 10 for the past 12 months. The reduction in ORMC Laboratory backlog of active systems/equipment decreased with target goals met throughout the fiscal year such that the 31-60 day backlog closed out at 14% (target <35%). Numerous required documents were submitted to YSO for review and approval on time. There were no Incoming Material Reports (IMRs) written against material sent from Y-12 this Fiscal Year. B&W Y-12 documented issues discovered during the acceptance process via QADRs and all of the QADRs written in the last year were for minor issues which did not affect the fit, form, or function of the product. Although some progress has been made towards NQA-1 implementation, the pace of contractor actions has been slow and a plan for implementation was not developed or in place by the end of the period. This is a significant concern for the improvement of Facility QA at Y-12.

Safeguards and Security (S&S) Program Management

The overall rating in the area of S&S Program Management is “Outstanding.”

YSO saw strong performance this year with the strong results from the OIO inspection; a strong performance assurance program; effective use of new technology; YSO approval of the HEUMF MAA Security Plan; excellent integration with WSI; the roll-out of the SSTARs system; a strong issues management program; the development of the Blackberry purging process; a well managed training program; strong VA and incident program management; the submission and quality of the FY 2010 Annual Operating Plan; the submission and quality of the FY 2010 PEP; the approval of four revised IPs; the approval of the HEUMF PIDAS; and YSO’s approval of the Program Management metrics. Issues noted this year included ongoing issues at Alpha 1; ProForce overtime levels; the May JCATS shutdown; and the May CAS/SAS failures. However, Y-12 promptly addressed these issues and by the end of the FY, the issues were corrected.

Physical Security

The overall rating in the area of Physical Security is “Good”

Accomplishments this period include the stand up of the Highly Enriched Uranium Material Facility (HEUMF), which required extensive system level and performance testing activities to validate proper operation of security barriers and systems. Also during this period, B&W completed revisions to the security system at Alpha-1. The security system revisions corrected previously identified problems with the system installed by American District Telegraph (ADT). The revisions will allow removal of protective force compensatory measures. Security System made significant progress in developing electronic databases to track and manage maintenance records, configuration management and maintain Material Equipment Lists (MELs). The combination of these databases will facilitate more efficient and improved documentation of security systems operations. Opportunities for improvement include; fully implement the requirements to include all applicable SNM Vault Type Rooms, inside the Protected Area, under deviation NNSA-YSO-07-190), address barrier operation/maintenance issues recurring with vehicle barriers at portals 5 and 25, and resolve the security systems corrective maintenance backlog issue.

Information Protection

The overall rating in the area of Information Protection is “Outstanding.”

During FY 2009 B&W administered an exceptional Information Protection program that met all DOE, NNSA and B&W Y-12 requirements/directives and expectations as verified via contractor self-assessments, YSO oversight, and external inspections. B&W effectively reduced total holdings of classified documents, electronic media, and parts disposing of over ~ 90,000 cubic feet of classified parts. In addition to achieving the destruction of classified documents, electronic media, and parts, B&W has shown great initiative in exploring alternative methods of destruction that are secure, cost-effective and environmentally friendly. Because of continued efforts by B&W to reduce classified holdings, fewer security repositories are needed thereby eliminating the need for purchases of GSA-approved security containers in the near future. The B&W OPSEC program continued to demonstrate its high

level of performance conducting well-attended and informative monthly OPSEC Working Group Meetings. The meetings included guest speakers arranged through coordination with the DOE Office of Counterintelligence highlighting topics such as terrorism and counterintelligence. The B&W OPSEC Program Coordinator supported YSO in preparation of the Annual Oak Ridge Area Threat Statement for 2009. The B&W TSCM Officer provided support for the Telecommunications Proposal process used to approve wireless devices. The TSCM Officer's involvement to this process facilitated the approvals for wireless devices such as RFID tags, MotoMesh camera system, and the wireless dismantlement system. Throughout the year, B&W SS&ES conducted monthly meetings for all Division Security Officers (DSO) in order to provide updated Classified Matter Protection and Control (CMPC) information to all areas of the Y-12 Plant. YSO has observed a high level of participation in the DSO program especially during monthly DSO meetings. B&W conducted numerous field verifications of security repositories, shredders, reproduction machines, and ACREM throughout Y-12 as well as off-site subcontractor facilities. These field verifications were both scheduled and unscheduled. Field verifications and self-assessments conducted by B&W were methodical and consistent. Use of detailed and current checklists by B&W employees greatly enhanced the self-assessment process. Issues resulting from assessments and field verifications are efficiently tracked to closure. During a two-month period in FY 2009, YSO conducted weekly assessments of various aspects of the B&W Information Protection program. All topical areas were included in these YSO weekly assessments. While no findings resulted from these YSO assessments, some minor observations, administrative in nature, were made. B&W made immediate corrections as appropriate, to all observations made by YSO during these weekly assessments. The B&W Classification Office has done an outstanding job in managing a comprehensive and complex program that meets DOE policy requirements. Forty-eight assessments were conducted by YSO during FY 2009 on various areas of this program. In addition, the Office of Independent Oversight (OIO) conducted a comprehensive survey of the B&W Y-12 Classification and Controlled Information Program during September and October. The program was rated Satisfactory and complimentary comments were made in the survey report. Two findings were issued that were addressed during FY 2009. One finding noted that correct classification instructions were not included on several documents containing National Security Information. The Corrective Action Plan (CAP) for that finding was verified as closed. Another finding noted that B&W had not adequately documented a comprehensive self-assessment program. In this case, the survey report stated that an acceptable plan was in place to correct this issue. The CAP for that finding was closed. The following quote in the 2008 Office of Independent Oversight Inspection Report sums up the status of the Y-12 Classification program: "Inspection of the CIC programs at YSO and B&W revealed effective programs that are well managed by knowledgeable, experienced classification officers. A number of noteworthy accomplishments were identified during the inspection."

Cyber Security

The overall rating in the area of Cyber Security is "Outstanding."

Significant positive program aspects seen this fiscal year include the strong performance in the June Office of Independent Oversight/YSO oversight activity; implementation of Proxy device and antivirus module; central logging progress; FY2011-2015 budget preparation; updated AIS handbook; hosting FISMA pilot training; implementation of a process to reduce cyber security plans by 50%; deployment of additional firewalls; the approval of the Blackberry clean up procedure; the technical and programmatic cyber security work to support Blackberry devices in security areas; the approval of the updated Site Cyber Risk Assessment, addressing operational risk; the results from the unannounced YSO unclassified network scanning assessment; HEUMF and UPF coordination/support; overall NAP implementation plan milestones progress; and overall leadership with regards to obtaining policy clarifications and deviations to ensure a compliant program and cost savings. During this FY, YSO noted some issues related to the cyber program including: the use of privileged accounts for non-privileged work; the cyber risk assessment not being accepted by Y-12 Senior Management; risk assessments in an unapproved format; timeliness of cyber plan submissions; self-assessment reports being issued in a timely manner; data call errors; chain of custody issues; and the lack of progress on removing additional Desktop Administrative privileges. These issues were overcome throughout the FY. To maintain this rating, Y-12 should ensure programmatic and technical self-assessments are conducted and reports issued in a timely manner; ensure plans for further reduction of Desktop Administrator privileges are implemented; and ensure creative cyber security approaches are suggested and implemented.

Personnel Security

The overall rating in the area of Personnel Security is “Good.”

B&W Y-12 continues to meet requirements and performs in a satisfactory manner maintaining an effective program. The contractor continues to document their self-assessment program effort in Visitor Control completing peer review checklists for Classified Visits; HRP Temporary and Permanent Removals; and Special, Large, and Distinguished Visitor visits. B&W Y-12 Personnel Security and Procurement successfully continued to conduct their joint efforts to address working with sub-contractors in the personnel security area, which includes retrieval of security badges, and debriefs of employees to ensure the SF 312, *Classified Information Nondisclosure Agreement*, is completed. Primary focus after the OIO for Personnel Security was in the continuation of enrollment and issuance of the HSPD-12 credentials. The conclusion of this effort at the end of FY 2009 is a 99% enrollment completion and 97% activation—successful program effort. During the year in the HSPD-12 effort there were some areas noted as open for improvement, which included the issue of incorrect HSPD-12 badges to two YSO federal employees, ensuring the termination of clearances for individuals not actively employed, and reconciliation of badging access records and the badging system. YSO has not seen any repeat issues in these areas since these incidents. Earlier in the FY, the contractor and YSO noted an area for improvement regarding the weekend HRP drug and alcohol testing process and notifications of general HRP actions to PSS during off-hours. Since March of the FY, this effort has improved and YSO assessments documented the positive improvements. This will continue to be an area of focus in FY 2010. Other areas open for improvement are the development and scheduling of self-assessments in Personnel Security with particular emphasis in creating and conducting self-assessments badging, access authorization, and HRP. From a Contractor Assurance System (CAS) perspective, YSO is not afforded shadow opportunities in these areas. The implementation of using the electronic fingerprinting piece tied to HSPD-12 in support of Access Authorization efforts per the NNSA Service Center began in late March and continued through the rest of the FY with no major issues noted. This effort replaces the need to submit hardcopy fingerprints to the Office of Personnel Management. The 2009 B&W Clearance Review was developed and distributed to all division managers and was used to provide input to the requested review from HQ DOE and NNSA to access the possible deletion and/or downgrade of current clearances. The process developed for this effort was well thought out, and distribution was timely. Information gathered shows potential cost savings. During this report period, an effort to streamline access processes was implemented through a standing order, which eliminated the requirement for uncleared personnel to present U.S. citizenship documentation when accessing the Y-12 site. Visitors are now required to complete and sign documentation certifying their U.S. citizenship.

Nuclear Materials Control and Accountability (NMC&A)

The overall rating in the area of NMC&A is “Outstanding.”

An independent assessment conducted by the DOE Office of Independent Oversight (OIO) noted that “the combination of program administration and reliable materials accountability, integrated with effective materials control elements, provides assurance that special nuclear material is effectively accounted for and controlled.” The program continued to be recognized as a leader in the DOE Complex. The rating for FY 2009 was based on overall program performance, completion of two iterations of the Comprehensive Analysis of Safeguards Strategies (COMPASS) Report on program effectiveness, continued progress toward reducing uncertainty associated control limits, and approval of a revision of the NMC&A Plan to support HEUMF readiness. NMC&A demonstrated high performance and a strong contractor assurance process. The program continued to work an outstanding Incident of Security Concern (IOSC), reduce Propagation of Variance (POV) limits for MBA 77, enhance the Hold-up Measurement Program, and execute the HEUMF NMC&A program.

FY 2009 STRETCH AWARD FEE INCENTIVES

I. MISSION

A. Readiness in Technical Base and Facilities (RTBF)

Performance Measure: RTBF program elements are executed in accordance with Work Authorizations, Work Authorization Directives, Prioritized Project Lists, the Integrated Priority List process, program implementation plans, and all other program requirements.

Performance Targets:

- a. Reduce the amount of highly enriched uranium in safe bottles to 100kg total in Material Recycle and Recovery process and process storage areas and maintain that level.
- a. Remove 50 organic safe bottles from M-wing, process and discard an equivalent number of organic safe bottles, and manage the inventory of organic safe bottles in all facilities.
- b. Disposition 3500L of primary extraction raffinate to building 9818.

Each of the three performance targets were met at 100 percent completion.

B. Campaigns

Performance Measure 1: Campaigns program elements are executed in accordance with Work Authorizations, Work Authorization Directives, Prioritized Project Lists, the Integrated Priority List process, program implementation plans, and all other program requirements.

Performance Targets:

Deploy the Infrared (IR) Debonding equipment by July 30, 2009.

B&W deployed the IR Debonding equipment on July 28 after receiving start-up authorization. It has already been utilized to meet a critical mission need in the Dismantlement program.

Performance Measure 2: Demonstrate the first use of a fully accredited secure, wireless system (thick client, data diode, and wireless) in the Dismantlement area by 9/30/2009. (Change Request 09-46) 50K

Performance Targets:

- a. Approved Cyber Security Plan(s). The wireless plan must be in the 14.2C version
- b. Clocking record which will demonstrate first use.
- c. Approval to operate (full accreditation) the system.
- d. Telecommunications Proposal approval for wireless equipment.

B&W demonstrated the first use of the classified wireless barcode readers to two representatives from YSO on September 24, successfully completing the criteria for this milestone. B&W received the approval to operate from YSO on September 22. The use of this wireless system is the first of its kind ever to be deployed into a secure area at Y-12.

C. Nuclear Nonproliferation (NN) / Naval Reactors (NR)

Performance Measure: The NN program is executed in accordance with Work Authorizations, Work Authorization Directives, Prioritized Project Lists, and other program requirements.

Performance Targets:

- a. Significantly increase Y-12 support to the Defense Nuclear Nonproliferation mission areas. The indicator of success will be an increase of \$3M (available BA) over the final FY08 funding level (this excludes the HEU material disposition program funded by NA-26).

B&W Y-12 exceeded the stretch award fee target to increase its support to the NNSA Defense Nuclear Nonproliferation Program. B&W Y-12 increased Y-12 support to the NN program by bringing in a total of \$13.7M (excluding NA-26). This is a growth of \$6.7M over the FY08 funding level and significantly exceeds the \$3M goal.

D. Complex Transformation

Performance Measure: Participate and ensure support for implementation of the Complex Transformation implementation progress measures at Y-12. Facilitate communication and contractor support for overall Complex Transformation integrating activities to develop efficient business practices and systems integration processes across the Complex.

Performance Targets:

- a. Execute facility risk review (FRR) for non-EU operations.

A Facility Risk Review for the lithium, special materials, depleted uranium/binary, and general manufacturing operations was completed as required. The document appears to be high quality but will undergo a detailed YSO review and comment process during October/November.

- b. Complete detailed planning for how Y-12 will support IFDP.

B&W has done an outstanding job planning the ARRA work scope by strategically utilizing IFDP funding to stand-up an experienced organization and prepare project proposals for the recovery act scope of work. As a result of these innovative efforts, B&W was able to mobilize field resources on the first working day following the notice to proceed on May 7. B&W Y-12 was credited by the DOE In-Process Review team in July 2009 as being one of the best prepared and planned ARRA projects in the Complex resulting from the expeditious mobilization and immediate work start in the field. B&W also supported other initiatives that will reduce the cost and complexity of executing IFDP work scope in the future including a conceptual design and cost estimate to reduce the size of the PIDAS, de-inventory and down grading the hazard category of 9204-04 and 9201-05 (in progress), and utility re-route work in 9201-5.

E. Process and Productivity Improvements

Performance Measure: Improve cost and schedule performance, and demonstrate effective communications, and incorporate Lessons Learned from completed initiatives.

Performance Targets:

- a. Attain a \$25.7M cost savings realized through efficiencies and Y-12 site-wide productivity improvement efforts. Evidence supporting the B&W Y-12 initiatives will be submitted with the appropriate detail such that YSO can objectively and/or subjectively evaluate the proposed savings. Any cost savings amount included in the Y-12 fee to be assigned to the multi-site cost savings PBI will not be included in the Y-12 site-specific savings realized, and vice versa.

B&W Y-12 did an excellent job in exceeding the performance target for efficiencies. The President and General Manager of B&W Y-12 set a self-imposed goal of \$40M for productivity improvement efficiencies, which was distributed in discrete goals for each division. This aggressive target was surpassed by a final value of \$52.8M, a record performance for Productivity Improvement at Y-12. However, reporting of the finished projects to YSO began in the final quarter of the fiscal year, making verification difficult.

II. OPERATIONS

A. Engineering and Nuclear Safety

Performance Measure: The Y-12 Engineering Program will be managed and implemented in accordance with applicable requirements of DOE Order 420.1B, Facility Safety; Engineering S/RIDS; and the Y-17 series procedures.

Performance Targets:

- a. Develop and implement a graded approach for the application of American Welding Society requirements in the existing Y-12 Welding Program that is concurred upon by YSO.

The Y17-015 Welding Program Manual was revised with an effective date of 9/30/09. All training was concluded prior to the effective date. The training was conducted for the Field/Design Weld Engineers and supervision, Quality welding program oversight personnel. B&W Y-12 failed to obtain YSO concurrence as stated in Award Fee statement and the program changes were made effective the last day of the performance period so implementation could not be verified to ensure intended results were realized.

- b. Develop, and issue for use, a design analysis calculation (DAC) that documents threshold analysis for consequence comparison, using the MACCS2 computer code, for use with new nuclear facilities (similar to DAC-FS-900000-A004). Update associated facility safety procedures for use of the new DAC by 12/31/08.

A new Design Analysis Calculation (DAC-FS-900000-A025, *Y-12 Generic Threshold Analysis for use with DOE-STD-1189*) was completed and issued to replace DAC FS-900000-A004 for use with new nuclear facilities. Facility Safety procedures were not updated, but instead a Standing Order was put in place. High consequence threshold quantities were calculated using the MACCS2 X/Q for UPF ($8.07E-5$ s/m³). This allowed the UPF project to utilize the information in DAC-FS-900000-A025 as directed by the SO when Hazard Evaluation Studies were initiated. However, the SO was to expire when procedures Y74-48-007 and Y74-48-008 were revised to allow for use of DAC-FS-900000-A025 but no later than June 29, 2009. The procedures have not been revised and the SO has expired.

B. Health and Safety

Performance Measure: The Industrial Safety, Chemical Safety, Industrial Hygiene, Fire Protection, Occupational Medicine, and Transportation Safety Programs are managed and implemented in accordance with 10 CFR 851, Worker Safety and Health Program; DOE Order 420.1, Facility Safety; DOE O 460.1B, Packaging and Transportation Safety; DOE Order 461.1A, Packaging and Transfer of Materials of National Security Interest; DOE Order 460.2A, Departmental Materials Transportation and Packaging Management; DOE Order 440.2B, Aviation Management and Safety; applicable S/RIDs and Y79-001INS, Y-12 Fire Protection Program Manual, applicable S/RIDs and procedures (e.g., Y73-001PD, Industrial Safety Program, Y15-635PD, Integrated Safety Management, Y71-939GUD, Guidelines For Storing Hazardous Chemicals and Y71-937PD, Chemical Safety Management Program, Y73-200PD, Industrial Hygiene Program and Y78-001, Occupational Medicine Program).

Performance Targets:

- a. Complete five items from the high priority list and 20 items from the moderate priority list within the Fire Protection Comprehensive Corrective Action Plan.

All functional testing for the high priority items has now been completed and verified. Repair and/or replacement of 20 moderate items has been completed and independently verified. Additionally Fourteen items, three high and 11 moderate, have been completed and independently verified from the FPPCCAP list.

C. Environmental and Waste Management

Performance Measure: The environmental and waste management programs will be managed and implemented in accordance with applicable environmental laws; regulations; DOE Orders 435.1 and 450.1; and Y71 series procedures.

Performance Targets:

- a. Deinventory materials in Building 9206 to facilitate transfer of the building to the Environmental Management Organization. Techniques such as material relocation, waste disposition, or reuse could be used.

No substantial progress was made on this effort before it was transferred into ARRA scope.

D. Facilities and Site Management

Performance Measure: All facilities are managed and maintained effectively and efficiently, such that mission accomplishment is supported in a safe and secure manner.

Performance Target:

- a. Improve appearance and operational efficiency in the Technology Development buildings 9202 and 9203.
 - Implement 7S or similar process and demonstrate in at least 2 areas in each building 9202 and 9203
 - Implement and sustain improvements in PRYDE ratings.
 - Improve material conditions such that Freeze Protection Programs can be effectively implemented.
- b. Add a 5th electrical panel for replacement in 9212.

All performance targets were met without incident.

E. Maintenance Effectiveness

Performance Measure: The contractor shall demonstrate efforts and results to continually improve, including the efficient accomplishment of work, the reduction in rates, cost-savings opportunities, management of workforce and preparing for the future, and the accomplishment of mission in a safe and secure manner.

Performance Targets:

- a. Submittal of additional metrics by 1/31/09. The following are examples to be considered:
 - Preventative Maintenance Metrics (e.g., PM vs CM Ratio, PMs Completed vs Scheduled, Late PMs, Active vs Inactive PMs and Equipment, Funded vs Unfunded PMs)
 - Mean Time Between Failures/Mean Time To Repair (MTBF/MTTR)
 - Percentage of Maintenance Work Orders requiring rework
 - Cost of Maintenance Work Planned vs Actuals
 - Maintenance Cost Per Production Unit
 - Deferred Maintenance/FCAS Metrics
 - Work orders generated/closed out.
 -

Partially met. Since submittal of the metrics, FI&S has not fully implemented them for use as evaluation tools. The reasons are varied, in part because some of the metrics need further refinement and in part because it is questionable whether the metrics provide any value. In any event, FI&S has not moved aggressively to either refine them once developed or to offer more useful alternatives during this fiscal year. YSO has asked that further metric development continue to reflect it's wishes that metrics be leading

and predictive of negative trends well in advance of them actually developing into something detrimental to implementation of a robust maintenance program.

F. Work Planning and Execution

Performance Measure: The contractor shall provide an environment conducive to good conduct of operations, including a commitment to continual improvement in operations and providing a clean work area.

Performance Targets:

- a. Safety Basis Materials of Concern Inventory/Evaluation: Complete the phased approach described in the project document with the objective to significantly reduce the likelihood of a SBMOC event in the future. This will require a substantial inventory review of DYMCAS and Workstream for all production facilities. Complete means that questionable containers (i.e. contents could not be confirmed within the timeframe of the evaluation) in the facility have been brought to the attention of the Facility Contract.

Walkdowns were completed for 9215, 9720-38, 9720-59 and 9811. Numerous findings were identified in 9215. The walkdown in 9204-2E was not conducted due to higher priority workload (HEUMF).

- b. Expand or repeat the cleanup initiative initially demonstrated in 9212 to at least 6 of the production facilities (i.e., 9204-2E, 9204-2, 9212, 9215/9998, 9720-5, 9201-5N, 9201-5W, and 09225-3).

Very significant progress was noted at various Y-12 facilities in which a total of 2.24 million pounds of waste and excess materials were removed without injuries. The 7S process has also made significant improvements in facilities appearance and efficiencies. These type facility improvements are also important because they typically also produce improvements in employee moral that lead to better personnel performance.

- c. Provide the capability to clean items received at the warehouse with radiation contamination above receipt limits. The purpose of this action is to attempt to clean items from other facilities that are above acceptance limits. (9720-5 Cleaning Capability)

A JPA was developed and implemented that allows warehouse personnel to inspect and clean drums as necessary during their normal operations.

G. Training

Performance Measure 1: B&W Y-12 Training Management & Delivery Organization, Production Training, Facilities, Infrastructure, and Services Training, and B&W Y-12 Support Organizations will perform up to 3 additional programmatic self-assessments to verify that the training program is properly implemented.

Performance Targets:

- a. The programmatic self-assessments are in addition to those identified in the integrated assessment schedule.

B&W performed 3 additional programmatic self-assessments not on the annual schedule; the reports were accurate, thorough, and documented correctly. YSO reviewed these reports and had no concerns. B&W met this criterion.

- b. The scope of the programmatic self-assessments will focus on specific topical areas identified in DOE Order 5480.20A.

YSO reviewed the assessment reports submitted and concurs that the specific DOE Order 5480.20A topical areas were evaluated; topics such as continuing training, qualification/certification, and job classification determination were included. No YSO concerns were noted and B&W met this criterion.

- c. Perform these additional assessments by August 15, 2009, and provide final reports to the YSO Training Manager no later than 30 days after completion of the assessments.

YSO verified that the three additional assessments were performed, and reports were generated and delivered to YSO on time with no concerns noted. B&W met this criterion.

- d. Assessment criteria shall include an evaluation of any closures from deficiencies generated from YSO assessments performed in previous fiscal years, including, but not limited to, evaluation of the conduct of Performance Documentation Checklists (PDCs), classroom training, and implementation of completed Training Impact Assessments (TIAs).

YSO reviewed the assessment reports and verified that scope included reviews of any previous YSO deficiencies. No concerns were noted and B&W met this criterion.

Performance Measure 2: B&W Y-12 Training Management & Delivery Organization, Production Training, Facilities, Infrastructure, and Systems Training, and B&W Y-12 Support Organizations will consolidate up to an additional 100 files of the official hard copy training records.

Performance Targets:

- a. The working records will be condensed to the most recent qualification period (3 years) and the remaining historical records.

B&W reported, and YSO validated, that 116 qualified positions were condensed and archived on time. No YSO concerns were noted and B&W met this criterion.

- b. The records will be archived in accordance with the B&W Y-12 record retention procedure by August 30, 2009.

B&W reported, and YSO validated, that 116 qualified positions were condensed and archived on time. No YSO concerns were noted and B&W met this criterion.

Performance Measure 3: Enhance capabilities in Jack Case Center classroom training facilities to provide a more effective learning environment.

Performance Targets:

- a. Update the classroom/laboratories to include PC projection systems that can interface well with other media types, rework of short walls, and adding remote mice, lighting control, and ergonomic furniture by September 15, 2009.

Projection systems, along with a consolidated instructor workstations, were installed in three Jack Case Center classrooms and two computer labs. These significantly improved the presentation quality and use of space in the rooms. No further progress was made to modify computer lab short walls. Approval for use of remote mice was obtained from security, and a new model was purchased for use in each training area. No other lighting control is required at this time since projection systems are in place. YSO used this new equipment on several occasions during FY09 for federal training and confirms the improvement in the classroom/laboratory environment. B&W has met this criterion.

- b. Partitioning, enclosure, and sound-proof the south wing classroom(s) to make more efficient use of available training space by September 15, 2009.

Work was completed in the Jack Case Center south wing training area to enclose and carpet the primary classroom. Carpeting has been completed in three Radiological Worker training areas. Partitions are also in place for use in the Radiological practical areas and secondary classroom. Sound panels were ordered in September. YSO performed walkthroughs of these areas after the work was completed and noticed a marked improvement in the noise reduction in the area and the ability to provide more productive use of the area. YSO considers these improvements a substantial improvement in the quality of the training facilities; therefore B&W has exceeded YSO expectations.

Performance Measure 4: Replace existing training videos from VHS format to modern media format (DVD, web-based training module, etc.).

Performance Targets:

- a. Complete replacement of 50% of current VHS format training videos to modern format by September 1, 2009. Provide a list of converted training videos to the YSO Training Manager by September 15, 2009.

There were a total of 20 VHS format training videos identified for conversion; 12 were converted and the list provided to YSO on time. YSO has no concerns; this criterion was met.

H. Safeguards and Security

Performance Measure 1: Procure an unclassified video switcher to separate PIDAS video in the Central and Secondary Alarm Station (CAS/SAS) to allow the CAS/SAS to be accredited as an UCNI system without the data diode, to enable future expansion.

Performance Targets:

- a. Procure and install a new unclassified video switcher. (3/31/09)

Not accomplished.

- b. Revise C&A documentation for the CAS/SAS and Classified Video System to achieve provisional accreditation. (5/1/09)

Not accomplished.

- c. Rewire existing cameras to have facility cameras on the classified video switcher and PIDAS cameras on the unclassified video switcher; to eliminate the need for the data diode. (8/15/09)

Not accomplished.

- d. Retire the Digital Automated Video Intrusion Detection (DAVID) system as used for video loss detection. (9/30/09)

While not achieved through a funded “switcher” project, the DAVID system has been retired with the exception of one camera and has been replaced by the VisioWave video switching system.

- e. By September 30, 2009, achieve full accreditation for an UCNI CAS/SAS System and a classified facility camera system. Sanitize and remove all backup tapes from ACREM accountability. (9/30/09)

Not accomplished.

Performance Measure 2: Conduct a business process reengineering effort to streamline the Telecommunications Proposal (TP) process to ensure timely approval of devices in support of the Y-12 mission.

Performance Targets:

- a. Develop a new TP process that uses type approvals to provide umbrella approval of common telecommunications devices, including applicable Site documentation updates. (1/31/09)
- b. Identify the five best candidates for type approvals and develop checklists, requirement matrixes, and other documentation to facilitate type approval. (6/30/09)
- c. Obtain YSO approval for five type telecommunications proposal packages. (7/31/09)
- d. Certify all applicable devices at Y-12 under the new type approvals. (9/30/09)

Y-12 met the goal of the stretch award fee associated with conducting a business process reengineering effort to streamline the Telecommunications Proposal (TP) process to ensure timely approval of devices in support of the Y-12 mission. The TP process was streamlined by implementing type approvals similar to the process that is used for information system security plans for deploying like systems (e.g., user workstations). There are six approved Type TPs: (1) RF Remote Controllers, (2) Infrared Remote Control Devices, (3) Wired Barcode Readers, (4) Satellite TV Dish and Receiver, (5) Selected Cellular Telephones, and (6) GPS units. This stretch award item was met.

Performance Measure 3: Complete installation of Tower 1 as described in the Program Execution Plan Addendum for Area 5 Fort Engagement Towers 1 and 2, the Certified for Construction design package, and approved changes.

Performance Targets:

- Complete foundation utilizing a micro-pile system.
- Fabricate and install structural steel frame including interior stairway and exterior siding.
- Fabricate and install bullet resistant enclosure (BRE) atop the structural framing.
- Install and test electrical systems.
- Complete all of the performance targets listed above and have the tower ready for use by September 30, 2009.

Performance Measure 4: Develop and implement a process which enables consolidation or elimination of at least thirty-five (35) individual information system security plans for unclassified and classified centrally-managed servers.

Performance Targets:

- a. Develop a plan, coordinated with YSO, for consolidation of centrally-managed unclassified and classified servers – May 30, 2009
- b. Develop an outsource document for security controls common to all centrally-managed unclassified and classified servers and submit for DAA approval – June 30, 2009
- c. Develop a site information system security plan for Domain Controllers and submit for DAA approval – July 31, 2009
- d. Develop site information system security plans for Windows and UNIX and submit for DAA approval – July 31, 2009
- e. Obtain “Approval to Operate” for the domain controller; the first windows systems; and the first UNIX system – September 20, 2009

Elements of this stretch award fee were met with YSO approving the security plans and accrediting the systems in September 2009. YSO noted B&W exceeded the expectations set by this stretch award fee as the new process will reduce or eliminate 47 plans – approximately 50% of the plans on record today. This equates to a ~\$400K cost avoidance. B&W fully met this performance measure.

III. BUSINESS

A. Information Technology

Performance Measure 1: Complete phased transition from a traditional data center environment to a virtual server environment in order to lower operational costs and to support green computing initiatives.

Performance Targets:

- a. Perform options analysis and then standardize on a suite of hardware and software solutions to implement virtualization using commercial software and blade servers (2/28/09).

The options analysis was completed during February and briefed/accepted by YSO on March 3. This milestone is complete.

- b. Replace 25 unclassified servers with the Y-12 blade/virtualization solution (9/30/09).

For FY 2009, B&W Y-12 implemented 43 servers in a blade/virtual environment.

- c. Implement a lifecycle management plan for replacing current unclassified servers with a blade/virtualization solution as part of the Y-12 server refresh process (9/30/09).

Plan and funding are in place for FY10 to continue implementation of blade/virtualization solutions. Consideration is now given to virtual servers as the default priority for new applications when technically feasible. This milestone is complete.

Performance Measure 2: Implement a commercial identity management solution to replace the legacy Universal Computer Access Management Systems (UCAMS) application.

Performance Targets:

- a. Develop a system requirements document to cover the scope of work associated with UCAMS replacement (2/28/09).

Initial CD-0 system requirements document was completed during February then briefed/accepted by YSO on March 3. This milestone is complete.

- b. Perform an options analysis and market survey to select the commercial solution for UCAMS replacement (9/30/09).

Y-12 has selected the Sun Identity Management and Access Management solution as the future UCAMS replacement. This is the same solution currently used by the NNSA Enterprise Secure Network. This milestone is complete.

Performance Measure 3: Implement Single 2-Factor Authentication for Y-12 computing resources by 9/30/09 (excludes stand alone systems and legacy systems unable to support the new architecture).

Performance Targets:

- a. Implement single sign-on using 2-factor authentication for the PDMLink application as a proof of concept (10%).

Implementation of 2-factor authentication in PDMLink was achieved in March. This milestone is completed.

- b. Complete procurement of all servers, software, and RSA tokens necessary to support implementation of two-factor authentication on the classified network. (10%)

All procurements were completed by April. This milestone is completed.

- c. Complete Certification and Accreditation activities necessary to place two-factor authentication into production operation on the Y-12 classified network. (40%, must have completed B)

The certification and accreditation activities were completed in September and the servers were placed into production. This milestone is now completed.

- d. Deploy tokens and register users to enable use of 2-factor authentication.(40%,must complete B and C, fee calculated as follows: nothing for 0 -49% deployed, at 50% fee is calculated by percentage deployed for the total classified user head count)

At the end of FY09, 945 of 1509 classified users (62%) have received tokens and been registered for the Classified Services Network. B&W will continue deployment through December 2009. This milestone is partially completed.

B. Contractor Assurance

Performance Measure: Demonstrate significant and visible progress in the continuing effort to develop comprehensive performance metrics in all PEP/PAM functional areas.

Performance Targets:

- a. Establish performance metrics to articulate contractor performance in all PEP/PAM areas for 2009 significantly increasing the emphasis, focus and visibility of efforts. All PEP/PAM areas will be rated as green for performance metrics by the end of the fiscal year.

This performance target was met. All functional areas of the PEP/PAM have metrics displayed on the CAS website. All functional area metrics are rated as green or blue.

- b. Provide additional support to functional areas to assist in the development of meaningful and usable leading indicators to manage performance. Six PEP/PAM areas will be rated as blue for performance metrics by the end of the fiscal year.

This performance target was met. Six of the functional areas are rated as blue – Emergency Management; Radiation Protection; DWS; Project Management; Maintenance Effectiveness; and Facility and Site Management.

- c. Deploy a CAS website proto-type which includes up-to-date PAM/PEP metrics.

This target has been met. B&W deployed the Contractor Assurance Web Site which contains the following information: assessment activity; Issues Management; Lessons Learned; Metrics; Legacy Risks; Requirements Management; and Event Reporting. Work is progressing on the prototype's replacement - PerformanceTrack.

FY 2009 PERFORMANCE BASED INCENTIVES

ESSENTIAL

A. HEUMF

Performance Measure:

In support of the yearly conversion from provisional payment to incremental payment, B&W shall complete and have corporately validated a bottoms-up estimate-to-complete (ETC).

Performance Results:

NNSA has conducted an internal project review and verified the validation of the ETC.

B. UPF

Performance Measures and Results:

1. X-Ray Vault Architectural Floor Plan – Completed.
2. PFHA Document – Partially completed. Not all of the requirements and standards expected in the PFHA were met. 75% of the fee was not earned.
3. Issue revised AIMS equipment specifications – Completed.
4. Issue medium and low voltage on-line diagrams – Completed.
5. Issue Equipment Fact Sheets – Not met. Fact sheets were submitted, however, they were incomplete.
6. Issue 3D Mechanical Equipment Models – Completed.
7. Issue P&ID's – Completed.
8. Issue Architectural Floor Plans – Completed.
9. Issue Preliminary Facility/System Design Descriptions – Completed.

C. Line Item Milestone

Performance Measures:

1. BeC - Meet level 2 milestone for integrated testing complete – This PBI was not achieved, and no fee was earned.
2. QE Relocation - Octagonal glovebox RA – Completed.
3. SIP - Submit a CD-2/3 package – Completed.
4. PWSU - Complete Area O East Tank – Completed.
5. PWSU- Complete Areas F&P – Completed.
6. PWSU - Complete 30 backflow preventer installations and/or air gaps – Completed.
7. SPLE - Complete package boiler fabrication and delivery – Completed.
8. SPLE - Set all four boilers – Completed.
9. SPLE - Erection of stacks – Completed.
10. NFRR - Provide revised final CD – package – Completed.

D. W76-1

Performance Measures and Results:

1. Complete certification in FY09 of X WR Boat Assembly units (previously built in FY 08) on at least a 90-day lead to Pantex. All units built in FY 2008 did not complete timely certification. 17% of the fee was not earned.
2. Complete X additional WR Boat Assembly units on at least a 90 day lead to Pantex. Complete.
3. Additional WR Boat Assembly units. Complete.
4. Complete X additional WR Boat Assembly units through assembly build operations by September 30, 2009. Complete.
5. Complete recertification of X sets of WR Case Parts on at least a 90-day lead to Pantex. Complete.
6. Demonstrate first use for X pins produced on the Small CNC Lathe.
 - Prove-In - Complete.

- EE - Complete.
 - First Use - Complete.
7. Special Process 1
 - Specimen testing - Complete.
 - Submit data package - Complete.
 8. Special Process 2
 - Complete Qualification - Complete. Working closure.
 9. Demonstrate first use of the new Vibration Test Stand.
 - EE - Complete.
 - First Use - Complete.
 10. Award the procurement contracts for all ovens (X) and the manifolds (for all ovens) for the Oven Consolidation B2 - B2E Project.
 - Ovens - Complete.
 - Manifolds - Complete.
 11. Demonstrate first use of Digital Radiography on the 2 MeV LINAC.
 - EE - Complete.
 - First use - Complete.
 12. Backfill and Crimp
 - Installation and engineering test and checkout. - Complete.
 - Procurement/receipt of components. - Complete.
 13. Air Bearing
 - EE - Complete.
 - First Use - Complete.

E. Dismantlement and Disposition

Performance Measures and Results:

1. Complete the following dismantlements by September 30, 2009. X retired W68 units; X retired W70 units utilizing IR Debonding. Complete.
2. Complete Phase I activities utilizing the multi-axis orbital machining center on X B83 units by September 30, 2009. The operational upset that occurred was at least partially the result of a combination of inadequate initial operational procedures (subsequently compounded further in the operations by changing the process without adequate hazard evaluation), a violation of some fundamental ISMS and CONOPS standards and expectations, and human error. A penalty of \$83K is assessed against the effected performance measure.
3. Complete the disposition of 25,000 ft³ by September 30, 2009. Complete.
4. Complete the removal of X interim storage containers with dismantled components from 9204-2E by September 20, 2009. Complete.

F. Stockpile Systems

Performance Measures and Results:

2. W78 JTA 5 - Complete.
3. W88 JTA 1,2,3,4 Components - Complete.
4. W88 LLCE - Complete.
5. W87 JTA 4 - Complete.
6. Issue initial raw surveillance data on B61 CE-3 unit (04-17-09). - Complete.
7. Issue initial raw surveillance data on B61 REST-4 unit (05-01-09). - Complete.
8. Issue initial raw surveillance data on B61 REST-5 unit (05-29-09). - Complete.
9. Issue QER on B61 CE-3 unit (06-30-09). - Complete.
10. Issue QER on B61 REST-4 unit (08-14-09). - Complete.
11. Issue QER on B61 REST-5 unit (09-15-09). - Complete.
12. Complete Quality Evaluation Phase 1 on nine total units. - Complete.
13. Complete Quality Evaluation Phase 2 on ten total units. - Complete.
14. Complete Quality Evaluation Phase 3 on seven total units. -Complete.

15. Issue four Quality Evaluation Reports (QER). - Complete.
16. Complete Non-Destructive Evaluation Screening on 23 total units. - Complete.
17. Complete sampling on five units. - Complete.
18. Generate raw data on five units samples. - Complete.
19. Complete pressing operation or initial machining cuts utilizing a B83 JTA in GB03 glove box (February 20, 2009). - Complete.
20. Heat treating a production part utilizing the Solution Heat Treat Furnace provided by the DU Binary project (March 31, 2009). This PBI was not achieved, and no fee was earned.
21. Form and heat treat set of parts with concurrent site Engineering Evaluation (July 2, 2009). This PBI was not achieved, and no fee was earned.
22. Delivery of the Gas Mass Spectrometer by (August 17, 2009). - Complete.

G. HEUMF Transition

Performance Measures:

1. Load 400 Rackable Can Storage Boxes in 9720-5
2. Consolidate suspect Pu contaminated items in drums
3. Consolidate 120 items of legacy HEU metal components
4. Complete construction of cage for perimeter vaults and complete movement of material from specified perimeter vaults.
5. Relocate of process 400 containers of material currently not acceptable for HEUMF
6. Complete processing of remaining SP-100 fuel
7. Consolidate and/or process remaining HEU/Mo items.
8. Stage 500 drums in 9720-5
9. Transfer to ORNL 2 wooden boxes of non-HFIR related fuel
10. Complete all mods and ops required to use SST-D
11. Load an additional 40 RCSBs in 9720-5

Performance Results:

Loading of RCSBs, staging of drums, VTR loading, SST-E startup, and consolidation, relocation, and disposition of materials were completed on schedule.

H. Deleted

I. Phase I Transformation (East End PPA)

Performance Measures:

1. Complete Conceptual Design of East End Parking
2. Obtain State/EPA approval of CERCLA Site Reuse
3. Complete D&D of Bldg. 9766.

Performance Results:

Conceptual design and ROM cost estimate for east end parking have been completed. State/ EPA approval of CERCLA site reuse was not required.

J. Material Recycle and Recovery

Performance Measure and Results:

Material production shortfalls resulted in a reduction in fee earned.

OPERATIONS – ESSENTIAL

A. Facility and Site Management 9212

Performance Measures:

1. Replace next 4 prioritized deficient electrical panels
2. Identify corroded sprinkler heads on System 8
3. Replace corroded sprinkler heads on System 8

Performance Results:

Performance Targets 1 and 3 were successfully completed. No fee was earned for Performance Target 2.

BUSINESS - ESSENTIAL

A. Complementary Work

Performance Measures:

- a. Expand the CW customer base by a minimum of 2
- b. Enhance Y-12's ability to increase CW portfolio
- c. Develop new partnership with 3 universities
- d. Establish sustained presence in Huntsville, AL region
- e. Perform Nuclear Forensics/Attribution documented tasks
- f. Significantly expand reach of N/RTC through DHS cert
- g. Process and package U3O8 oxide for shipment

Performance Results:

All PBI milestones for Complementary Work for Others were met by 9/30/09.

MISSION - STRETCH

A.(S) Utility Isolations and Risk Reduction

Performance Measures:

1. Complete reroute of steam line at 9201-5
2. Complete reroute of brine line at 9201-5
3. Disposition 100% of special materials items in inventory
4. Segregate and package for disposition 100% of chems
5. Disposition 25% of chemicals
6. Accelerate activities to reduce haz cat to less than 3

Performance Results:

Steam line re-route and brine line construction mobilization were completed on schedule. Other work scope was deleted from PBI since it was funded by ARRA.

B.(S) Facility Deactivation

Performance Measures:

1. 9201-5 - Complete 40% of activities - haz cat 3
2. Reduce 9204-4 below haz cat 3

Performance Results:

B-4 deactivation work scope was completed and the safety basis cancelled. A-5 material removal was completed on schedule. An exemption request was processed to downgrade the hazard category for the DU complex.

OPERATIONS - STRETCH

A.(S) Downgrade MAA existing warehouses

Performance Measures:

1. Complete review and analysis of CAT II and IV plans

2. Complete MAA decertification implementation plan
3. Complete B&W and WSI coordinated PA Protection Strategy
4. Issue required specification documents

Performance Results:

Each performance target was met.

B.(S) Energy Efficiency

Performance Measures and Results:

1. Supply listed engineering drawings – Not completed within timeframe established by PBI. Lost fee – \$82,200.
2. Submit info for Section C of DOE Super ESPC IDIQ Contract Delivery Order RFP - Completed.
3. Submit comments for final Tri-Party Agreement – Completed.
4. Baseline Meters – Completed.

C.(S) Phase 2 Transformation - West End

Performance Measures:

1. Integrated Security Area Transition Strategy
2. Interim Security Area Implementation Plan
3. Compliance related deviation requests
4. Dispose classified items to support site footprint

Performance Results:

All performance targets successfully completed.

D.(S) Maintenance - 9204-1 Turnover

Performance Measure and Results:

Develop and deliver to YSO Turnover checklist approved by B&W and ORNL POCs - Completed.

E.(S) 9212 Ventilation

Performance Measure and Results:

1. Repair Supply Fans SF 107 and 108 and return to svc – Completed.
2. Develop PEP for Miller-Pickens fan replacement – Completed.
3. Complete Engineering Design and procurement package – Completed.