



Performance Evaluation Report
for
BWXT Y-12, L.L.C.

Contract Number DE-AC05-00OR22800

Evaluation Period: October 1, 2006 through September 30, 2007

The purpose of this Performance Evaluation Report is to provide a final report of the National Nuclear Security Administration (NNSA) evaluation of BWXT Y-12's performance for the period October 1, 2006, through September 30, 2007. 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 BWXT 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. Fiscal Management-Budget) contained within each Performance Objective. Additional details supporting this report are contained in monthly performance evaluation reports provided to BWXT 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: Fiscal Management/Budget; Contractor Human Resource Management; Procurement Management; Internal Controls; Information Technology; Contractor Assurance; Process and Productivity Improvements; and Information Requests. The overall rating for Business Management for FY 2007 is Good. BWXT Y-12 provided timely and quality responses to numerous budget requests and financial reporting requirements. Bargaining unit and management work relationships are cordial; and the programs that the HR Organization has implemented to address future critical skills needs indicate commitment to addressing those needs. BWXT Y-12 continues to be a corporate leader in meeting or exceeding socio-economic goals, and is an active participant in the NNSA Supply Chain Management Initiative. It has been recognized by the Service Center as a leader in the area of OMB Circular A-123. The excellent progression of the A-123 efforts in tandem with the expertise of the Internal Audit Staff provides BWXT Y-12 with a commendable internal control base that continues to serve as a proactive force to prevent fraud, waste, and abuse of government assets. The Information Technology functional area met YSO expectations. Significant accomplishments were achieved in implementing an industry standard refresh rate, maintaining high availability of the networks, and achieving overall metrics. Continued strong attention is necessary to ensure this performance continues while improving the effectiveness and efficiency of deployed IT systems. In the area of Process and Productivity Improvements, significant progress was made this year on reducing cost and improving schedule performance through the combined efforts of the Y-12 Throughput Improvement Plan, Process Improvement Six Sigma and Lean projects, and other productivity improvement initiatives.

However, Contractor Assurance continues to be an area in need of considerable improvement. While shadow assessment results in some functional areas indicate satisfactory performance, BWXT Y-12 has yet to accomplish significant milestones including: demonstrating its integrated CAS functionality, defining a risk matrix, describing how the broader category of risk determinations are made and adjudicated, articulating/demonstrating how risks are accepted at the correct level, how unfunded Corrective Action Plans are reviewed and approved at the appropriate NNSA level, and how the requirements of DOE O 226.1 are implemented and met. Significant progress must be demonstrated to improve this area.

Fiscal Management/Budget

The overall rating for Fiscal Management is “Good.”

This rating reflects adherence to obligational control levels and no over-costed situations, timely input for budget execution needs (reprogramming actions, local financial plans, valid value requests, funds certifications, and ad hoc requests), and responsiveness to budget formulation deliverables and validation reviews, with few exceptions. The submission of an initial “Total Site Budget” with both input and output data, was particularly noteworthy,

Generally BWXT Y-12 continued to meet Service Center timeliness and quality standards for year-end and quarterly financial reporting requirements, responded to ad hoc requests with quick turn around time, and supported various Service Center reviews, with few exceptions. Analysis, justification, and documentation of proposed funding strategies continued to be thorough and well presented.

Shortfalls include: 1) an excessive turnaround time in returning completed Headquarters (HQ) Work Authorizations, 2) inconsistency in methodology used in developing EAC, and 3) reoccurring trend of large uncOSTed balances exceeding acceptable DOE HQ levels for capital equipment and general plant projects. The recent BWXT Y-12 realignment of responsibilities between the Chief Financial Officer (CFO), Chief Operating Officer, and Transformation and Projects should help address these concerns regarding the degree of BWXT Y-12 CFO involvement in funding analyses and associated proposals, and the timeliness and quality of some responses to HQ financial questions.

Contractor HR Management

The overall rating for Contractor Human Resources (HR) Management is “Outstanding.”

BWXT Y-12 has made significant improvements in its Human Resource personnel assignments and processes. The HR organization is achieving success in several corporate areas. Staff augmentation is being accounted for and addressed by HR in a more corporate fashion. Attention is being given to addressing corporate skill mix issues.

After initiation, the recent workforce restructuring was handled very well by HR. Every impacted employee was assigned a HR Specialist who assisted the employee in determining what positions were available and what the individual’s options for employment were. Every employee who personally chose to remain with BWXT Y-12 was offered a position with the company.

BWXT Y-12 continues to make an effort to improve labor/management and HR relationships. Morale within Y-12 also appears much improved among employees. Consequently, grievances and other non productive time matters have been reduced. However, the Atomic Trades and Labor Council’s rejection of the BWXT Y-12 proposal to adopt a four day work week indicates that opportunities for improving relations between management and union members still exist.

The benefits value market study performed by Hewitt provided information that BWXT Y-12 is now within the DOE threshold of 105 percent of its specified competitors for compensation.

The efforts that have been accomplished and are continuing in the HR arena are commendable. However, the statistics cited in the 2008 Comprehensive Incentive Plan (CIP) indicate that BWXT Y-12 may not be achieving its goal of employer of choice. To date, BWXT Y-12 has not presented data to demonstrate that the trends described in the 2008 CIP have been significantly mitigated. An additional area that BWXT Y-12 has not demonstrated improvement is the expansion of a diverse management workforce at all levels.

Procurement Management

The overall rating for Procurement Management is “Good.”

BWXT Y-12 continues to be a leader in DOE for meeting or exceeding all socio-economic goals, except for the service disabled veteran-owned goal. Mentor-protégé arrangements exist with small businesses, and Historically Black Colleges and Universities. BWXT Y-12 continues to actively support Supply Chain Management initiatives with the award of a complex-wide ICPT rental agreement, and support for several NNSA E-Source events which generated costs savings of roughly \$1.3M that will be validated by YSO in FY 2008. Of concern was the quality of subcontractor procurement packages submitted earlier in the year requiring major rework. While corrective actions were taken that somewhat improved the quality of the packages, revisions were still required.

Internal Controls

The overall rating in the area of Internal Controls is “Good.”

The timeliness and accuracy of establishing provisional indirect rates, cost control at obligational control points, audit report results, Federal Managers’ Financial Integrity Act reporting results, and fiscal year closing were satisfactory. Additionally, the Year-end Financial Performance Measures Report prepared by the NNSA Office of Field Financial Management (OFFM) found that performance in this area was “Good.” BWXT Y-12 has performed well in the area of internal controls throughout the year, and has taken rapid and appropriate action to mitigate findings that would be perceived as a detriment to the management systems processes, and procedures that are in place to identify and prevent loss, waste, fraud, and abuse of government assets. Per OFFM, BWXT Y-12 leads the complex in the area of OMB Circular A-123, one of the most important tools for ensuring internal controls are in place and functioning properly.

Information Technology

The overall rating for Information Technology is “Outstanding.”

The objectives for this area are to maintain and support a modern IT infrastructure that allows Y-12 to effectively meet mission objectives; provide timely support to end-users for both installation and ongoing maintenance and technical support for existing IT resources including both hardware and software; and ensure IT funds are appropriately allocated to maximize mission support and to ensure maximum compliance with the NNSA CIO’s direction. BWXT Y-12 made significant accomplishments during FY 2007 including implementation of IT metrics and target goals, roll-out of access controls on classified ports, significant progress towards implementing the “Big Yellow” network, implementation of an industry standard refresh rate, completion of contingency plan testing for all mission critical systems, maintaining high availability on the classified/unclassified networks, receiving a passing score of 32 on the OMB 300 exhibit, completion of major contract transition from SAIC to SCI, a seamless “mega-move” into Jack Case and New Hope, continued diskless conversions of classified machines, timely response to multiple HQ data calls, and a major upgrade to the SAP system. Minor problems were noted in several areas, including delays in Entrust roll-out during the 2nd quarter, failure to meet refresh goals (13 percent short), and a negative trend in unclassified data communications response times. Overall, information technology at Y-12 is much improved relative to FY 2006 while assessment results and IT metric performance are indicative of a mature and well-managed program.

Contractor Assurance

The overall rating for Contractor Assurance is “Satisfactory.”

BWXT Y-12 has a number of the Contractor Assurance elements and shadow assessment results demonstrating satisfactory performance in some functional areas. The low rating is due to BWXT Y-12’s inability to demonstrate its integrated CAS functionality, explain their risk matrix, describe how the broader category of risk determinations are made and adjudicated, articulate/demonstrate how risks are accepted at the correct level, how unfunded Corrective Action Plans (CAPs) are reviewed and approved at the appropriate NNSA level, and how the requirements of DOE O 226.1 are implemented and met. YSO’s review of the BWXT Y-12 FY 2007 1st HALF PERFORMANCE SELF-ASSESSMENT REPORT, APRIL 2007, for the Work Control (Planning and Execution) section indicated the section did not reference or take into account results of BWXT Y-12 management assessments, YSO assessments, reportable occurrences, and critiques completed during the first half of the fiscal year. This

diminishes the value of the BWXT Y-12 self assessments and further brings into question its CAS effectiveness or viability.

Process and Productivity Improvements

The overall rating for Process and Productivity Improvement is “Outstanding.”

Significant progress was made this year in reducing cost and improving schedule performance through the combined efforts of the BWXT Y-12 Throughput Improvement Plan (YTIP), Process Improvement Six Sigma and Lean projects, and other productivity improvement initiatives. BWXT Y-12 did an excellent job managing the YTIP effort, including holding teleconferences, videoconferences, and YTIP Senior Management Team (SMT) meetings. Also, a number of Six Sigma and Lean projects, focused on increasing productivity in critical operations areas, were implemented. Schedule performance was improved substantially over the course of the year in the B61 Life Extension Program, and unit cost reductions were also achieved. A Scope Recovery Plan was developed late in the fiscal year, and once implemented, resulted in broadening the focus of the productivity improvement efforts to the areas which indirectly impact the ability to accomplish the mission. Quarterly briefings were conducted on the Six Sigma/Lean programs, and improvements included establishing a Productivity Improvement Oversight Committee comprised of senior managers.

Regarding open communications with YSO, HQ and the Nuclear Weapons Complex; in general BWXT Y-12 performed well in this area. The annual Defense Programs Planning Meeting presentation was very well coordinated, including a briefing to HQ stakeholders prior to the annual meeting. This proactive meeting was very beneficial in ensuring that the message was well-understood and in surfacing issues that needed to be further reviewed. BWXT Y-12 did an outstanding job coordinating the NA-10 Quarterly Program Reviews, ensuring that the Milestone Reporting Tool was updated, and being prepared to address potential issues. An important emergent issue this year was the Code Blue. BWXT Y-12 has put forth an exceptional effort to coordinate and communicate these activities with YSO, HQ, and the NWC, including weekly reports, videoconferences, and hosting peer review groups. These presentations have been very effective in ensuring a cooperative effort toward solving the issue. BWXT Y-12 also hosted a large number of visits with high-level HQ managers, the DNFSB, members of Congress and their staff, etc, which were very effective in gaining understanding and appreciation of Y-12 mission and current issues. The sequential ribbon-cutting ceremony for the Jack Case Center and New Hope Center was very well orchestrated, and resulted in positive feedback from a number of visitors.

Information Requests

The overall rating for Information Requests is “Good.”

While BWXT Y-12 did meet the majority of deliverables on time, the volume of reportable actions was low this year. Three instances of non-responsiveness to requests for information on several work orders, testing and surveillance program assessment purposes, and responses to OIG draft investigation reports were considered isolated instances. If similar events are experienced in the future, they will likely negatively impact this area’s performance.

II. Mission

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

A major BWXT Y-12 focus for the site this year was in the area of Transformation. BWXT Y-12 provided outstanding support for the various Complex Transformation initiatives including the Supplemental Programmatic Environmental Impact Statement (SPEIS), integrated project teams, risk assessment, functional analyses, enterprise model, independent business case analyses; and development of evaluation criteria, requirements and assumptions. In addition, CD-0 was obtained in late September for a Complex Command Center. With regard to Depleted Uranium/Binary consolidation, BWXT Y-12 made good progress during the year to resolve issues that were

identified at the end of last fiscal year. Other areas that were strongly supported included the Integrated Facility Disposition Project, submitting the annual Ten Year Comprehensive Site Plan, and developing funding/integrated schedules for various modernization initiatives. Areas not well addressed in FY 2007 were a more comprehensive modernization strategy that includes EU transition, alternatives for non-EU production, and disposition of present and future excess facilities, material, and equipment.

Project Management performance showed steady improvement throughout the fiscal year and at the end of the year met expectations. YSO expects this performance improvement trend to continue into FY 2008 with additional emphasis on establishment and increased use of performance metrics to drive improvements in project cost and schedule efficiencies and effectiveness. The majority of projects met or exceeded expectations. UPF successfully achieved CD-1 and proactively implemented the requirements of 413.3A and draft DOE Standard 1189. The Compressed Air Upgrades Project was successfully completed on schedule and significantly under budget, and the Potable Water System Upgrades Project successfully completed CD-2 and CD-3 milestones on schedule and within the project baseline. The QE relocation project exceeded expectations resulting in disassembly and movement of the Octagonal Glovebox ahead of schedule and under budget. The Steam Plant Life Extension Project met expectations and achieved CD-2/3 ahead of schedule. The SIP project met expectations with a very positive IPR in preparation for CD-1. GPP/GPE projects generally met expectations.

Other projects partially met expectations. HEUMF performance partially met expectations for the year with an improving trend. Positive improvements were noted in the areas of Project Management, quality assurance, and job-side contractor assurance. Areas of concern requiring continued improvement were noted in construction safety and integrated project schedule/critical path implementation. HEUMF critical path performance, critical path recovery actions, resolution of testing logic disconnects and baseline schedule configuration control were reversing and required continued management attention. Design issues were noted during an Independent Project Review, and the quality of the CD-3B submittal did not meet expectations on the BeC project. Du/Binary project performance was marginal due to lack of a baselined project schedule and inadequate development of a risk assessment plan which did not adequately define risk mitigation approaches for the project.

Within the Directed Stockpile Work (DSW) Program, at the end of the year BWXT Y-12 was able to make an outstanding recovery to meet the B61 Life Extension Program (LEP) deliveries that were thought to be in jeopardy most of the year. In addition, all base dismantlement and disposition work scope was completed ahead of schedule with four systems completely dismantled during the same year, a first for Y-12. Several new productivity enhancements were made during the year including implementation of real time clocking and implementation of a more efficient disposition method. Production Support was able to minimize impacts to DSW deliverables and manage costs within the control point. Surveillance activities were performed as required for all FY 2007 deliverables accomplished. All container deliverables were also met. For the W76 LEP, BWXT Y-12 made strong efforts to resolve material stream issues that surfaced during the year.

The Campaigns Program continues to provide significant support to the Transformation Program at Y-12; particularly, the Uranium Processing Facility technology development. The Agile Machine project achieved success by producing the first two depleted uranium parts that were within tolerance on all features. ADAPT deployed the first classified wireless system at Y-12, a major accomplishment. BWXT Y-12 also had significant accomplishments with an initial aging assessment of the Reliable Replacement Warhead, deployment of MALOCS on two machine types, and delivery of the new 9 MeV LINAC to an existing vault. At the end of the fiscal year, the overall CPI and SPI for Campaigns were 1.05 and 0.95, respectively. However, from a milestone standpoint, several Level 2 and 3 milestones were missed. In addition, within ADAPT, the Agile Machine project was overspent by more than 50 percent of the project budget. While Campaigns has made notable progress throughout the year in managing projects and communicating better to its stakeholders, comprehensive business (cost/benefit) decisions have not yet been fully demonstrated.

The Readiness in Technical Base and Facilities (RTBF) and Facilities and Infrastructure Recapitalization Program (FIRP) area continued the outstanding performance of the previous year by supporting the DSW mission and balancing the competing needs of old facilities and processes with making the necessary investments in HEUMF and UPF for the future. Ten of eleven Level 2 milestones ended the year with a Headquarter's rating of BLUE with the single exception being the DPP-1 Pit Container development, which was stalled because of issues beyond

BWXT Y-12's control. The two subprograms of Material Recycle and Recovery and Program Readiness had strong management throughout the year to support key DSW needs within the funding limitations. The Storage subprogram made significant progress in disposing of unneeded materials and supporting HEUMF transition, as well as continuing to provide safe, secure storage for nuclear materials. In FIRP, BWXT Y-12 continued a very successful and aggressive demolition program with over 103,000 square feet demolished and completing several major recapitalization projects including another Kathabar replacement and a new air handling unit for Building 9995.

Lastly, in the area of Nuclear Nonproliferation and Naval Reactors, BWXT Y-12 has provided excellent support for NNSA and the DOE complex in the planning and disposition of surplus HEU. BWXT Y-12 met NNSA requirements for HEU deliveries to the 17 MT "Reliable Fuel Supply" down-blending contractor; TVA; Naval Reactors; and foreign and domestic research, test, and medical isotope production reactors. Projects to disposition HEU, including legacy materials such as HEU/Np and HEU/U-233 and low equity HEU materials and forms, were executed during the year. BWXT Y-12 has continued to expand in areas that contribute to the NNSA Defense Nuclear Nonproliferation programs. The participation and quality of support to the HEU Transparency Program is outstanding. All IAEA inspections at Y-12 were conducted well. Activities associated with the successful removal of approximately 9 tons of HEU from IAEA safeguards were noteworthy. Participation and support of the Global Threat Reduction Initiative continues to be very good.

Directed Stockpile Work

The overall rating for DSW is "Outstanding."

The DSW Program is the NNSA program that fulfills the Defense Programs mission to maintain the safety, reliability, and performance of the nuclear weapons stockpile. DSW includes all activities that directly support weapons in the stockpile including production and refurbishment, QE and Surveillance, Dismantlement, and supporting tasks such as nuclear weapon receipts and packaging, DSW Complementary Work, and Stockpile Services (primarily Production Support). The overall rating for DSW is based on BWXT Y-12's ability to overcome major issues and complete the required directive quantities in the B61 Program and to achieve above the base dismantlement quantities for the year. Further, BWXT Y-12's aggressive approach to resolving a material stream issue within the W76 Program reinforced this rating.

Project Management

The overall rating for Project Management is "Good."

Steady improvement in performance was shown throughout the fiscal year. Based on organizational changes, YSO expects this performance improvement trend to continue into the next Fiscal Year with additional emphasis on establishment and increased use of performance metrics to drive improvements in project cost and schedule efficiencies and effectiveness.

Earned value performance met expectations with the majority of the projects finishing within expected CPI/SPI thresholds of .90 – 1.15. CD milestones were achieved and submittal of project documentation supporting CD-s was generally adequate. During the FY CDs were approved by the Acquisition Executive for PWSU, CAUP, SPLE and UPF projects. The approval of CD-1 for the UPF was a major milestone for the Y-12 Site. The Management Assessment Program implemented for projects was satisfactory. Project Management Professional training and PMI certification progress met expectations.

The majority of projects met or exceeded expectations during the FY. UPF successfully achieved CD- 1 and proactively implemented the requirements of 413.3A and draft DOE Standard 1189. Compressed Air Upgrades Project was successfully completed on schedule and significantly under budget. Potable Water System Upgrades Project successfully completed CD-2 and CD-3 milestones on schedule and within the project baseline. QE Relocation Project exceeded expectations resulting in disassembly and movement of the Octagonal Glovebox ahead of schedule and under budget. SPLE performance met expectations and achieved CD-2/3 ahead of schedule. The SIP project met expectations with a very positive independent project review (IPR) in preparation for CD-1. GPP/GPE projects generally met expectations.

However, some projects only partially met expectations. HEUMF performance partially met expectations for the year with an improving trend. Positive improvements were noted in the areas of Project Management, quality assurance and contractor assurance. Areas of concern requiring continued improvement were noted in construction safety and integrated project schedule/critical path implementation. HEUMF Critical path performance, critical path recovery actions, resolution of testing logic disconnects and baseline schedule configuration control remain a concern and require continued management attention. Design issues were noted during an IPR and the quality of the CD-3B submittal did not meet expectations on the BeC project. Du/Binary project performance was marginal due to lack of a baselined project schedule and inadequate development of a risk assessment plan which did not adequately define risk mitigation approaches for the project.

Transformation

The overall rating for Transformation is “Outstanding.”

BWXT Y-12 provided outstanding support for the Complex Transformation initiatives including the Supplemental Programmatic Environmental Impact Statement (SPEIS), integrated project teams, risk assessment, functional analyses, enterprise model, independent business case analyses; and development of evaluation criteria, requirements, and assumptions. BWXT Y-12 participated in multiple team meetings, hosted site visits for the IBC and OSD-CAIG, and provided program, environmental, and cost data to support the SPEIS, requirements and assumptions, and business case analyses. BWXT Y-12 provided outstanding support for the Complex Command Center project that resulted in a CD-0 by the NA-10 Acquisition Executive. BWXT Y-12 provided excellent support for the Integrated Facility Disposition Project (IFDP) that received CD-0 (CD-0) approval in June. BWXT Y-12 is supporting the preparation of the CD-1 package with both full time and part time team membership.

BWXT Y-12 made good progress during the year to resolve issues associated with Depleted Uranium/ Binary (DU/B) consolidation that were identified in an YSO assessment issued at the end of last fiscal year. BWXT Y-12 made several revisions to the DU/B Implementation Plan and prepared a preliminary risk assessment for the project to fully address YSO issues. BWXT Y-12 developed implementation plans for eight strategic objectives identified in the Y-12 Strategic Plan and participated in joint YSO-BWXT Y-12 offsite events to explore four of the objectives in more detail. BWXT Y-12 made excellent progress in refining the cost estimates, funding strategies, and integrated schedules for the various Y-12 Modernization initiatives including the Integrated Modernization Plan, TYSP, Consolidated Manufacturing Complex, facility gap analysis/bridging strategies, and Protected Area Reduction Project.

Campaigns

The overall rating for Campaigns is “Satisfactory.”

The program continues to provide significant support to the modernization program at Y-12 this year; particularly, the Uranium Processing Facility Technology Development. The Agile Machine project achieved success in June by producing the first two depleted uranium parts that were in tolerance on all features. ADAPT deployed and demonstrated the first classified wireless system at Y-12. BWXT also had significant accomplishments with an initial aging assessment of RRW, deployment of MALOCS on two machine types, and delivery of the new 9 MeV LINAC to the existing vault. The IR Debonding technique for increasing disassembly throughput was successfully demonstrated and funding was granted to deploy this piece of equipment in production in late FY08 or early FY09. At the end of the evaluation period, the overall CPI and SPI for Campaigns was 1.05 and 0.95, respectively. These numbers indicate an improvement for CPI but a slight decline in performance for SPI compared to FY 2006. Overall, Campaigns had a carryover of approximately 6% going into FY 2008.

Stockpile Readiness missed two HQ Level 2 milestones. BWXT completed all of the Level 3 milestones for ESC, while ADAPT completed 9 out of 12 milestones and Stockpile Readiness completed 4 out of 8 milestones, assuming the ones pending review are approved. In April, the site office learned that the ADAPT funded Agile Machine project was overspent by more than fifty percent of its project budget. The project was funded for a total of \$1.4M in FY 2007 but had already spent \$2.2M through the end of March.

Nuclear Nonproliferation and Reactors

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

BWXT Y-12 provided excellent support for NNSA and the DOE complex in the planning and disposition of surplus HEU. Its leadership allowed NA-26 to meet its Joule performance metric of down-blending or shipping 103 cumulative metric tons of HEU, despite numerous challenges. BWXT Y-12 ensured that TVA Off-Spec Agreement material deliveries remained on schedule during a Nuclear Fuel Services (NFS) labor strike; in addition to dealing with the operational impact of an HEU fuel spill that occurred at NFS in FY 2006.

BWXT Y-12 met NNSA requirements for HEU deliveries to the 17 MT “Reliable Fuel Supply” down-blending contractor; TVA; Naval Reactors; and foreign and domestic research, test, and medical isotope production reactors. Numerous projects to disposition HEU, including legacy materials such as HEU/Np and HEU/U-233 and low equity HEU materials and forms, were executed during the year.

BWXT Y-12 has continued to expand in areas that contribute to the NNSA Defense Nuclear Nonproliferation programs. BWXT Y-12 also provided superb technical support for the HEU Transparency Program, including participating in special monitoring visits to Russia as team leaders and as specific facility experts. BWXT Y-12 hosted technical training for U.S. monitors in HEU processing, especially related to the analyses of chemical/metallurgical processing activities and monitoring procedures for Russian sites.

All IAEA inspections at the Y-12 Site were conducted successfully, which is very important to demonstrating US commitment to IAEA safeguards. Activities associated with the successful removal of approximately 9 tons of HEU form IAEA safeguards were also noteworthy. Y-12 also supported Global Initiatives for Proliferation Prevention (GIPP) operations by coordinating all projects serviced in the Oak Ridge area. In its coordination capacity, BWXT Y-12 provided good stewardship over GIPP finances, and ensured that program and USG policies were followed. Participation and support of the Global Threat Reduction Initiatives continues to be very good. BWXT Y-12 continues to provide key expertise and project management for complex and sensitive missions to remove radioactive material and equipment from foreign environments.

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

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

The overall rating is based on exceptional performance in supporting the DSW mission and balancing the competing needs of old facilities and processes with making necessary investments in HEUMF and UPF for the future. Ten out of eleven Level 2 milestones ended the year with a BLUE Headquarters rating (the single exception is DPP-1 Pit Container development, which is stalled because of Design Agency problems). Overall PBI performance was excellent.

In the area of MRR, the purified metal production goal was not met, but Wet Chemistry operations were improving and all customer deliverables were met, including the development of a vastly improved Material Disposition Plan. Operations of Facilities funded 46 percent more than the original FY 2007 baseline, improving the level of investment in maintenance in Mission Critical facilities. Program Readiness was able to support all DSW and ES&H sampling, despite a constrained budget and increased workload. The Storage Program is making significant progress in disposing of unneeded materials and supporting HEUMF transition, as well as continuing to provide safe, secure storage for nuclear materials. In FIRP, BWXT Y-12 continued a very successful and aggressive demolition program (over 103,000 square feet), and made notable buy-downs on deferred maintenance baseline. In addition, all baselined projects were completed ahead of schedule and within the baseline budget.

III. Operations

The Operations area included the following topical areas: Safeguards and Security Program Management, Physical Security, Information Protection, Cyber Security, Personnel Security, Nuclear Materials Control and Accountability,

Engineering, Nuclear Safety, Packaging and Transportation, Emergency Management, Radiation Protection, Environmental and Waste Management, Fire Protection, Health and Safety, Quality Assurance, Maintenance, Training and Qualifications, and Work Control Planning and Execution.

Overall performance in the S&S functional areas, with the exception of Physical Security was Satisfactory. Significant accomplishments were achieved in all areas. Continued strong action and senior management attention will be necessary to continue DBT implementation, correct Personnel Security issues, and complete proposed Physical Security actions.

Performance in the S&S Program Management, Information Protection, Cyber Security, Personnel Security, and NMC&A functional areas was "Good."

The contractor achieved substantial accomplishments in the S&S Program Management functional area. Design Basis Threat (DBT) implementation and Technology Deployment continued to be significant strengths, with excellent evaluation, planning, and implementation efforts. Major DBT project milestones were met or exceeded again this fiscal year. In addition, an implementation plan was submitted for meeting the 2005 DBT Policy by the end of FY 2011 in line with the extension approved by the Secretary of Energy. Effective (satisfactory) performance was sustained in all security areas. The Y-12 S&S planning and budget processes were routinely recognized by NA-70 as excellent and models for the NNSA complex. All but one S&S Annual Operating Plan (AOP) milestone was met. BWXT Y-12 was able to achieve a 1.3 percent cost savings that was then applied to under funded items; however, the milestone for generating a cost savings of 5 percent of the annual budget was not met. While the AOP was valuable in managing security activities and the FS-20 budget for the site, the contractor's inability to provide timely updates hindered its effectiveness as a "real time" management tool which was intended.

Major accomplishments in Information Protection included the continued disposition of classified parts and destruction of unneeded ACREM. While Classified Matter Protection and Control (CMPC) issues were identified early involving a classified copier and the "Shred It" truck residue, they were corrected and improved performance was then noted in this area. Detailed oversight checklists were developed and over 800 field self-assessments of CMPC related activities were performed. This resulted in substantially improved performance in CMPC and allowed YSO to optimize oversight activities. Management of classified parts waiver was an issue throughout the period.

In the Cyber Security area, major improvements were achieved in self-assessments and deficiency closures. Significant accomplishments included approval of the first security plan under NNSA Policy (NAP) implementation requirements and approval of the Cyber Security Program Plan (CSPP). System enhancements were accomplished through port controls for classified systems, improved database vulnerability scanning, continued laptop encryption, improved intrusion detection, and the application of two-factor authentication on key internal systems.

In Personnel Security, the contractor continued strong citizenship verification and "Interim HRP" implementation. Progress on the HRP enrollment study resulted in the elimination of 264 individuals from the program due to lack of need for continued HRP certification. The implementation of Phase II of the HSPD-12 initiative continues and the site has done an outstanding job in tracking the status of this program and working with HQ to address program needs and implementation requirements. Over the course of the year, issues were noted in access badging and timely notifications in termination of clearances. Additionally, transition issues were noted late in the period with the integration of personnel security operations between BWXT Y-12 and YSO's new contractor for HRP and clearance processing. BWXT Y-12 has addressed notification of personnel actions, local internal handling processing of badge and visit paperwork, and intra-communications with the new sub-contractor that supports the Y-12 clearance effort.

While performance in the NMC&A functional area for some of the period was below expectations due to issues with accounting accuracy and timeliness, significant improvement was achieved by the end of the year, with substantial progress on corrective actions to address identified issues. Improvements in material surveillance continued with the implementation of new administrative controls, deployment of technology, and physical modifications. The most significant accomplishment was full implementation of the Safeguards First Principles Initiative (SFPI) three months ahead of NA-70 and Y/TIP goals. This enhanced inventory process will result in significant cost avoidance

(e.g., \$5.5M projected through 2010 in one location alone), and allow the reallocation of resources to increase production (due to reduced inventory frequencies).

Performance in the Physical Security functional area was Satisfactory.. Significant accomplishments were seen in the continued installation of physical security enhancements, including vehicle barriers, detection systems, and fences. Progress was also seen in addressing outstanding VTR concerns and issues in one facility; however, these continue to be areas where performance does not meet DOE order requirements. Continued progress needs to be made in these areas to ensure adequate physical security performance.

In order to meet requirements in the Engineering and ES&H areas, continued improvements in delivering design inputs and in controlling design changes are needed, as well as ensuring quality of submittals from subcontractors and nuclear criticality safety. Nuclear Safety (Authorization Basis and Nuclear Criticality Safety) is meeting requirements. BWXT Y-12 implemented Building 9212 10 CFR 830 compliant safety basis documents and continues to improve in performing Unreviewed Safety Question determinations. Several events with hold up and 9212 spills impacted ratings this year. BWXT Y-12 took strong and positive recovery actions, but will still need sustained management attention to ensure continued effectiveness of corrective actions coming out of the Dollinger Filter event. BWXT Y-12 training and exercise performance remained strong. BWXT Y-12 has initiated plans to replace the fire hall and Plant Shift Superintendent (PSS) / Technical Support Center (TSC) with a modern Complex Control Center. Improvements in Radiological Program are noted but three reportable personnel contamination events occurred this year. Fire Protection performance remained steady. Completions of actions included in the Fire Protection Program Comprehensive Corrective Action Plan slowed due to reduced funding allocations. A new baseline plan has been delivered that reprioritizes the work, and BWXT Y-12 needs to become more efficient in completing these actions. Excellent progress was noted in waste management activities in the successful disposition of ~156,000 ft³ of LLW and material to the Nevada Test Site (NTS) and 1,538 ft³ of MLLW to NTS this FY (this was the first shipment of MLLW to NTS). A project has been initiated to disposition obsolete facilities (Integrated Facilities Disposition Project). BWXT Y-12 successfully implemented 10 CFR 851 and BWXT Y-12's support for the Unneeded Chemicals and Materials initiative resulting in a significant reduction in legacy chemicals in its Development facilities.

In the Operations Management areas, Quality Assurance was rated Good. No significant issues involving form, fit or function were identified by YSO during routine product acceptance oversight activities during FY 2007. The Quality Assurance Organization has provided the additional support necessary throughout the year to support product delivery schedules while verifying that a quality product is delivered. All required deliverables were provided to YSO on time, and all actions associated with the Quality Improvement Initiative Plan were completed ahead of schedule.

Maintenance was rated Satisfactory, with an upward trend noted at the end of the year. The FI&S organization went through a major reorganization in the latter part of the year which resulted in both streamlining and realigning the organization, with the goal of increasing productivity and reducing costs. Initial results are promising, but additional time is needed to determine the full benefit and effectiveness of this reorganization. Accomplishments for FY 2007 include the completion of all scheduled building outages, the development of Model work packages, Dispatch Work, and the formalization of the Preventive Maintenance Program. Work continued in improving proactive maintenance strategies and work control. Although the Maintenance Functional Area has matured from a programmatic view, additional emphasis is needed in the implementation of maintenance work in the field. Increased focus is needed on providing planning documents that meet requirements upon submittal, and improving the FI&S Contractor Assurance systems.

The area of Training and Qualifications was rated Outstanding for the year. The Y-12 Training and Qualification program has achieved a level of maturity that will support both current and future missions and also support safe and secure operations. There have been no significant training related programmatic deficiencies, although there have been some instances where various organizations did not meet their training requirements. BWXT Y-12 performance in the area of Work Planning and Execution (WPE) was rated "Satisfactory" for FY 2007.

Performance trended negatively for the first quarter of the fiscal year and leveled off during the last three quarters. While Operational Readiness performance continued to achieve deliverables, operational/work control problems impacted the overall rating. In most cases, the administrative programs and procedures were adequate but implementation was not. The reportable occurrences and non-reportable precursor events were attributed to poor

operational rigor and formality was problematic. The degree of success in this functional area continues to rely on the contractor's ability to change long-standing cultural practices and tendencies in the work force.

Safeguards and Security (S&S) Program Management

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

The objective of this area is to ensure all S&S Program Management elements are implemented in the execution of a S&S program in accordance with DOE Order 470.4; DOE Manual 470.4-1; S&S applicable CFRs; DOE/NNSA directives, orders, and policies; YSO directives and policies; and Y-12 policies and procedures.

The contractor performed effectively in S&S Program Management subareas. Efforts to enhance S&S program management effectiveness were substantial. Overall performance improved throughout the year due to the significant management attention and commitment to improving overall BWXT Y-12 S&S. Efforts to improve the S&S Annual Operating Plan (AOP) format, content, and change process resulted in an improved model for FY 2007 and FY 2008. Contractor implementation of the 2007 AOP was acceptable, with all but one performance measure met. However, the failure to provide timely updates to the AOP throughout the year hindered its effectiveness as a "real time" management tool, which was its intent. Throughout the year, the contractor performed very well in the area of budget formulation and execution, including effective communication and information exchanges. The generation of the FY 2008 AOP was exceptional and recognized by HQ as a model for the complex. Budget milestones on operating cost, capital project variances, and carryover were met. Contractor cost savings of \$500K was realized by implementing a new process for deployment of razor wire. Additional savings of \$180K were achieved by developing/installing an access rate control system to slow down the passage of personnel through rotogates. These initiatives totaled 1.3 percent of FY 2007 BWXT Y-12 S&S funding; however, the AOP milestone was to achieve a 5 percent savings. BWXT Y-12 was, however, also the driving force in realizing \$3.7M from a six-sigma project for continued Interim HRP and Physical Security initiatives to reduce overtime (allowing additional DBT projects to be accelerated and fielded in FY 2007).

The contractor was very successful at responding to Design Basis Threat (DBT) requirements and changes. In September 2006, NA-70 validated YSO's certification of compliance with the May 2003 DBT. NA-70 concurred with YSO approval of the Y-12 DBT Implementation Plan (IP) in June 2007. Performance of security projects and upgrades ended the year on schedule per the DBT IP and applicable Project Execution Plan (PEP) Addendums. The Vulnerability Analysis team was very active developing implementation plans for various DBT policies, developing the SSSP, conducting risk assessments for deviation requests, developing and implementing security upgrades, and supporting other major projects such as HEUMF.

The contractor leads the NNSA complex in deploying new technologies to address protection requirements. Examples of deployed technologies are vehicle detection, SNM measurements, and access delay. Development and/or testing of technologies associated with sniper detection and response, fiber optic detection systems, secure wireless technologies, command and control, and tactical entry assistance are examples of work being led by the contractor. The contractor's efforts will result in cost avoidance of millions of dollars by reducing the need for security police officers. Technology deployment projects were well managed with most meeting or exceeding funding and schedule goals.

The development and maintenance of security plans were slow to improve initially; however, by year's end YSO approved the 9720-5 MAA and 9215 MAA Security Plans, while the plans for 9204-2E and 9212 were submitted and are under review by YSO. Though S&S Division performance on timeliness of CAP submittals was acceptable, the aggregate BWXT Y-12 performance failed to meet requirements.

Physical Security

The overall rating in the area of Physical Security is "Satisfactory."

The objective of this area is to ensure Physical Security program requirements are implemented at Y-12 in accordance with S&S applicable CFRs; DOE Order 470.4, DOE Manual 470.4-2, and other applicable DOE/NNSA directives, orders, and policies; YSO directives and policies, and Y-12 policies and procedures.

Performance in this area was generally in accordance with DOE requirements with the notable exception of VTR concerns and deficiencies with one facility. Significant accomplishments were seen in the continued installation of physical security enhancements such as vehicle barriers, additional vehicle detection system capability, new fences, and fingerprint identification and PINs at the protected area portals. Positive efforts were noted in the contractor's establishment of procedures and accountability for continuity of operations. While not resolved, progress was also seen in addressing outstanding VTR deficiencies. Reviews of requirements, physical condition and system deployment, and performance testing resolved some shortfalls without additional modifications. Scheduled work was completed on one east end VTR, with the remainder scheduled for completion by December 2007. Additionally, efforts to address the remaining VTRs continue in the form of requests for deviations for equivalent protection. If approval conditions are met, a significant amount of progress will be gained in addressing VTR concerns in the next year. Additionally, a path forward was developed for resolving the issues in one facility through a new protection approach utilizing publicly available equipment and processes. This will be the first implementation of this type of strategy on-site.

Information Protection

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

The objective of this area is to ensure Information Security program requirements are implemented in the execution of an S&S program in accordance with S&S applicable CFRs; DOE Order 470.4, DOE Manual 470.4-4, and other applicable DOE/NNSA directives, orders, and policies; YSO directives and policies; and BWXT Y-12 policies and procedures.

The contractor performed effectively in information protection this year. YSO saw excellent performance in self-assessments with the conduct of 100 percent reviews of classified parts marking, accountable classified removable electronic media, destruction devices, and reproduction equipment. In addition, the contractor furthered Contractor Assurance implementation in the CMPC area by conducting over 800 field verifications in over 150 facilities and with the execution and results of shadow assessments. Positive progress in classified parts disposition continued with reductions in 9 facilities and 55 off-site shipments and with CMPC initiatives, such as the document marking standard. In addition, there was overall positive performance in the areas of OPSEC, Classification, and TSCM. During FY 2007, YSO identified continued issues with the implementation of the classified parts waiver, noting that certain measures were not being implemented as approved, and changes to other measures were prematurely implemented. YSO also identified the contractor's use of a "Shred-It" truck which did not meet DOE specifications for unclassified data. This last deficiency resulted in the process being shut down until materials could be appropriately destroyed.

Cyber Security

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

The objective of this area is to ensure Cyber Security program requirements are implemented in the execution of a S&S program in accordance with DOE Orders 470.4, DOE Order 205.1, DOE M 205.3-1, DOE M 471.2-2A; NNSA Cyber Security Policies (NAPS) 14.1-A - 14.11A, 14.12 - 14.16; applicable CFRs; DOE/NNSA cyber directives, orders, and policies; YSO directives and policies; and BWXT Y-12 policies and procedures.

Program evaluations and assessments typically found the implementation of the cyber security sub-topical areas to meet requirements. The contractor closed 9 deficiencies, including a long-standing issue from the 2001 OA inspection regarding downloading. Work in implementing port controls for classified cyber systems greatly strengthened the protection of classified data. In addition, the Cyber Security Program was enhanced by updating key programmatic documentation such as the Y-12 site-wide risk assessment, the certification and accreditation process, the cyber security architecture, and obtaining approval of the NAP 14.2B-based Cyber Security Program Plan. The contractor identified, tested, and deployed a database vulnerability scanning tool and completed scanning of databases in all environments. In addition, strengthened intrusion detection capabilities were noted through the deployment of 30 additional host-based sensors and two-factor authentication was implemented for privileged users on 30 key internal systems. The contractor trained all system administrators, developed and conducted training for

all desktop administrators, and developed and deployed targeted training on social engineering to address the human factor. The contractor also worked toward NAP implementation, obtaining approval for the Unclassified Services Network Plan, the first under the NAP Implementation Plan, supporting the Integrated Cyber Security and Diskless Initiatives, and improving the timeliness and quality of cyber plan submissions. There was generally strong risk-based fiscal management, an increase in the conduct of self-assessments, and timely submission of Headquarters data calls. The contractor also obtained PTS approval for the classified network in the Jack Case Complex.

Personnel Security

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

The objective of this area is to ensure Personnel Security Program requirements are implemented in accordance with S&S applicable CFRs (including 10 CFR 712); DOE Order 470.1, DOE Manual 470.4-5, and other applicable DOE/NNSA directives, orders, and policies; YSO directives and policies; and BWXT Y-12 policies and procedures.

Overall the contractor performed effectively in this area for most of the year; however, deficiencies surfaced late in the period causing some concern with current and continued performance. Positive accomplishments continued to be seen in the outstanding work in citizenship verification, continued “Interim HRP” implementation, control of classified visits, and unclassified foreign visits and assignments. Continued exceptional work was accomplished in the HSPD-12 effort including efforts to implement the start of Phase II. A local challenge will be enrollment of over 6,500 personnel by the October 2008 established deadline. Progress continued on the HRP enrollment study, which resulted in the removal of 264 individuals (not needed to be HRP certified) from the program based on information provided by direct supervisors reviewing the individuals work and a determination by VA team review.

Since November 2006, there were three Incidents of Security Concern regarding issues with access authorization from both a clearance and a badging perspective. Late in the year, other issues were noted with the timeliness of clearance termination processing and notification to the NNSA Service Center and two badging deficiencies for visitors to the site. In addition, transition issues were noted with the integration of personnel security operations between BWXT Y-12 and YSO’s new contractor for HRP and clearance processing.

Nuclear Materials Control and Accountability (NMC&A)

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

The objective of this area is to ensure NMC&A Program requirements are implemented in the execution of an S&S Program in accordance with DOE Orders 470.4; DOE Manuals 470.4-6; S&S applicable CFRs; DOE/NNSA directives, orders, and policies; YSO directives and policies; and Y-12 policies and procedures.

The accounting program continued to be maintained for accountable material located in 10 Category I MBAs, 2 Category II MBAs, 3 Category III MBAs, and 25 Category IV MBAs in which there are over 150,000 transactions per month that affect the NMC&A Program, including internal transfers between these MBAs and external transfers throughout the DOE/NRC and international facilities. There were three occurrences during FY 2007 that involved failure to conduct timely and accurate clocking. These occurrences, combined with specific metrics, indicated shortfalls in the accuracy of the accounting system (DYMCAS) required to meet the DOE accuracy requirements. Multiple initiatives were implemented to address both timeliness and accuracy of data input to DYMCAS. Corrective actions included installation of additional hardware, implementation of data collection forms, and more specific training. Metrics were developed to track progress, and an improving trend was evident.

The Safeguards First Principles Initiative (SFPI) was successfully piloted and implemented (3 months ahead of YTIP and NA-70 schedules) enhancing the inventory process (item and process monitoring), extending inventory frequencies, resulting in significant cost avoidance (e.g., \$5.5M projected through 2010 in one location alone), and facilitating reallocation of resources to increase production. Process Monitoring was the system used to perform material balances, or mini-inventories, around process steps instead of the broader MBA level, with the intent of detecting theft or diversion of actively processed SNM materials. Process Monitoring is being performed in all major SNM processing areas. Item Monitoring is the process of locating a statistical sample of discrete items and

verifying the pertinent information to enhance existing systems for detection of any attempt of theft or diversion of SNM. Item Monitoring was implemented in five SNM Processing and Storage areas in FY 2007.

Improvements in the Material Surveillance Program were achieved through integration of administrative and engineered (e.g., technology deployment of Machine Locking/Alarming System (MALOCS) and material surveillance alarm box (MSAB)) controls that provided efficient and effective safeguards of nuclear material as well as increased production by reducing the resource demand to comply with the strict Two-Person-Rule.

Engineering

The overall rating for Engineering is “Good.”

In the area of Vital Safety Systems (VSS), BWXT Y-12 continues to maintain and improve a well managed VSS program with maintenance improvements and continuing upgrades to the VSS Program documentation, training, and qualification programs. A year long effort to update the Criticality Accident Alarm System (CAAS) System Design Description, which included updating a large number of system drawings and comprehensive system and facility walkdowns to validate the changes, was successfully completed. BWXT Y-12 has implemented improvements in the tracking of VSS status in the pilot program developed to monitor VSS status. Configuration Management has also been extended to Safeguards and Security (S&S) systems with the upgrading of selected system drawings and training of S&S System Engineers. Investigations of incidents last year which involved process and facility systems other than the VSS demonstrated a need to upgrade the performance of other engineers to that of the VSS SE. BWXT Y-12 was prompt to develop and begin to implement the corrective action. In addition to the quality assurance procedure noted above and the training of S&S System Engineers, a new training and qualification program which defines the responsibilities and authorities of four levels of System Engineers for all types of Y-12 systems, not just VSS, has been developed and is being implemented. One area which needed improvement is that of the quality of design output from subcontractors.

Nuclear Safety

The overall rating for Nuclear Safety is “Good.”

Overall, the Nuclear Criticality Safety Program continues to meet expectations. Documentation regarding the Immediate Evacuation Zone was critically reviewed by the CSSG and was found to have several technical, interpretive, and editorial deficiencies. Spills and holdup issues at 9212 were noted this past year, and efforts are underway to develop a set of metrics to monitor this aspect of NCS. The delay in completing the IAPP walk-downs failed to meet BWXT Y-12 commitments, but now appears to be headed on the right track with the assignment of a dedicated project engineer. The 1158 self assessment review, along with a review of the UHSP and IAPP, found several issues. Concern exists over meeting double contingency principle requirements for the new DOE Order 420.1B and documenting this acceptably in the NCS evaluations to meet new guidelines issued in DOE Standard 3007-2007. Efforts by NCS engineering to implement this Standard are noteworthy and reflect positively. The plant NCS committee strengthened its charter and added two experienced NCS engineers to its permanent membership. The contractor has been successful in establishing a set of NCS metrics, and shows acceptable progress in improving them as needed. Review of primary extraction raffinate sampling logs by NCS engineering is considered a good practice. There are many other similar examples of excellent NCS Engineering on-the-floor support that are reflected positively in the rating. EUO made their first shipment of RCRA residue materials to NTS this period which is an important milestone. This is an achievement that should remove approximately 700 residue cans from Y-12. The raffinate monitor installation and improvements in casting operations and other PBI initiatives were accomplished this period.

BWXT Y-12 continued to provide safety basis documents supporting both annual updates and changes to facilities, and supporting implementation of the 9212 SAR and TSR. However, the customer service satisfaction survey should be finalized as a tool for continued improvement. Identifying and applying lessons learned from the HEUMF project to the UPF project should be formalized. While SACs are identified in safety basis documents, verification of field implementation requires greater emphasis. Annual updates are upgrading the documentation of SACs, as outlined in Change Notice 3 of DOE-STD-3009-94. Two major achievements this year are the implementation of the 10 CFR 830 (compliant safety basis at 9212) and issuance of the Safety Design Strategy for the UPF project.

Improvement in the timeliness of USQDs associated with PISAs was also noted. BWXT Y-12 independent reviews of revised safety bases are leading to quality improvement, resulting in less comment resolution and fewer conditions of approvals. BWXT Y-12 has taken positive steps in risk reduction, including the safety basis revisions supporting QE relocation and the BEC project.

Packaging and Transportation

The overall rating for Y-12 NSC Packaging & Transportation is “Outstanding.”

Activities are conducted with a high regard for ES&H and regulatory requirements.

In February 2007, concerns were identified concerning an unusually high number of occurrences, which led to the designation of a “downward trend” in the PAM report covering March 2007. However, BWXT Y-12 took positive steps to improve performance in the identified areas, and no change in overall performance rating was made. Furthermore, YSO assessments conducted in FY 2007 provide indication that the Packaging & Transportation Program is robust and continually improving. Furthermore, the results of the July 2007 Office of Aviation Management Audit provide additional underpinnings of the Outstanding rating.

BWXT Y-12 has had zero U.S. DOT reportable motor carrier accidents or hazardous materials incidents for 7 years. The contractor’s transportation personnel are involved in day-to-day activities and have been instrumental in implementing an effective program. They consistently practice the Y-12 NSC ISM policies and procedures in their activities.

Emergency Management

The overall rating for Y-12 NSC Emergency Management Program is “Outstanding.”

This rating is based on:

- Development of program initiatives, such as web-based ERO Annual Refresher training and more formalized self-assessment tools;
- Installation of upgrades to existing systems, such as the K-1650 Emergency Power Generator and EMInS.;
- Sharing EMInS system capabilities and other program resources with off-site stakeholders;
- Initiation of future system upgrades, such as enhanced video surveillance capabilities;
- Performance of training and exercise activities that enhance ERO response capability, both onsite and offsite;
- Coordination of all multi-agency planning associated with the Y-12 Annual Full-Participation Exercise;
- Initiation of creative plans to replace the existing Y-12 Fire Hall and PSS/TSC with a modern Complex Control Center;
- Selection of the BWXT Y-12 Emergency Management Program by NA-41 to be a good candidate for the Emergency Management Accreditation Pilot.

YSO assessments conducted in FY 2007 show that the Emergency Management Program is robust and continually improving.

Radiation Protection

The overall rating for Radiation Protection is “Outstanding.”

The blue rating is based on continuing improvements in the BWXT Y-12 RADCON Program related to the dosimetry program, down posting of radiological areas, the response to the Building 9204-2E fire event, improvements in the Air Monitoring Program brought about by the procurement of the next generation of CAMs, RADCON support to projects and initiatives (UPF, military and civilian emergency response training, Agile machine), work planning improvements, and that RADCON remains proactive in correcting identified issues in a timely manner. BWXT Y-12’s willingness to address and correct issues as soon as they are identified demonstrates a strong commitment to ISM continuous improvement. The down arrow relates to the adverse trend in radiologically related events during this review period, including three reportable personnel contaminations, 24

trackable personnel contaminations, repeated failures to demonstrate adequate personnel monitoring, and the failure of the BWXT Y-12 internal audit process to adequately document radiological control performance issues that are routinely documented by YSO.

Environmental and Waste Management

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

This ends a downward trend in recent months. The end in the downward trend is due to the excellent performance in managing and shipping LLW and material to the NTS, the recovery efforts from the improper MLLW shipment to Energy Solutions, the reduction in the inventory of legacy and non-legacy LLW, and the excellent compliance record with the NPDES and other environmental permits. To obtain a higher rating, BWXT Y-12 must improve this current level of performance, eliminate the storage of non-legacy LLW greater than one year, and continue to reduce the legacy LLW inventory. Additionally, BWXT Y-12 needs to pioneer innovative ways to streamline the disposal of and reduce the quantity of legacy wastes and develop more efficient environmental and waste management processes and programs.

Fire Protection

The overall rating for Fire Protection is “Outstanding.”

The rating is partly based on the following efficiency improvements: bar code tracking and trending for equipment; FPEA restructure of schedule using, baseline information as the basis; and the progress made on restructuring the FPPCCAP scope, and understanding which incorporated all FPEA issues.

Health and Safety

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

BWXT Y-12 reacquired the blue rating at the end of the year due to positive review of the CBDPP by a NNSA/DOE advisory review and preparation of a corrective action plan that addresses weaknesses and deficiencies in CBDPP implementation. BWXT Y-12 continues to conduct self assessments to support overall continual improvement. They participate in external meetings/training to ensure the most current information is available for use and support professional development of the staff. BWXT Y-12 reconstituted the Chemical Management Working Group (CMWG) and continues to make progress in the Unneeded Materials and Chemicals (UMC) effort. There continues to be clear indications that continual improvements in safety are being actively pursued in HPI and utilization of lessons learned, but this must translate to demonstrated performance results, indicating continued reduction in injuries and hazards associated with plant operations. Implementation of 10 CFR 851 was a significant accomplishment in FY 2007.

The Safety Program received numerous awards from the National Safety Council and the application of HPI is a positive step for continued improvement. The end of the fiscal year numbers related to the legacy chemical dispositioning effort within the Technology Development organization demonstrates real progress in diminishing the overall inventory. OHS was relocated without disruption to basic occupational medical services. Overall safety statistics are slightly above the CY 2006 rates, but are improving in most areas. BWXT Y-12 was proactive in response to the temporary spike in LPT abnormal results and has submitted a corrective action plan for Beryllium improvements that should fully address concerns. There are uncertainties associated with the accuracy of the HMIS system as related to site wide inventories, the lack of a formal classified inventory tracking system, and the inventory of legacy chemicals. Reaction to the current Chemical Management Program assessment report should result in substantial improvements in the lifecycle Chemical Management Program.

Quality Assurance

The overall rating for Quality Assurance is “Good.”

No significant issues involving form, fit or function were identified by YSO during routine product acceptance oversight activities during FY 2007. There was a significant deficiency identified by YSO involving segregation of nonconforming materials. All required deliverables in the PEP were submitted to YSO on time and met requirements. All actions associated with Quality Improvement Initiative Plan (QIIP) were complete one month ahead of schedule. The Quality Assurance organization consistently provided the additional support necessary throughout the year to enable product delivery schedules, while verifying that a quality product was delivered. Overall, the QA Program has been effectively implemented during FY 2007; however, improvements have not been made in corrective actions submittals, validation and verification rates, reduction of equipment calibration backlogs, and the critique process.

Maintenance

The overall rating for Maintenance is “Satisfactory.”

The FI&S organization went through a major reorganization in the latter part of the year which resulted in both streamlining and realigning the organization, with the goal of increasing productivity and reducing costs. Initial results are promising, but additional time is needed to determine the benefit and effectiveness of this reorganization. Accomplishments for FY 2007 include the completion of all scheduled building outages. This is a major effort which substantially improves the efficiency of maintenance performance in these facilities. The total work completed vs scheduled was always greater than 95 percent, greater than 75 percent of the annual Preventive Maintenance actions were completed, and the backlog was reduced. Also, Model Work Packages continue to be developed and used, which results in productivity improvements. Another initiative developed was the use of Dispatch Work, which continues to save time and money in executing simple maintenance jobs. The Preventive Maintenance Program was formalized, and 12 predictive maintenance analyses on facility and process equipment were performed.

Although the Maintenance Functional Area has matured from a programmatic view (e.g., paperwork, procedures), it continues to suffer in the implementation of maintenance work. Interruptions were noted in facilities directly related to maintenance issues. This is shown in the Critical Work Equipment Breakdown Daily Status, Monthly Metrics, the Facility & Production Availability Report, and the PM to CM ratio. Submission wise, increased focus is needed on providing planning documents that meet requirements upon the first submittal. Contractor Assurance by FI&S could be improved by increasing the number of performance-based management assessments, proactively identifying weaknesses and developing timely corrective actions, working off existing issues, and strengthening the metrics reporting.

Training and Qualifications

The overall rating for Training & Qualification is “Outstanding.”

The Y-12 Training and Qualification program has achieved a level of maturity that is commensurate with a workable, adequate program, which will support both current and future missions and also support safe and secure operations. The other demonstrated element of a fully effective training program is the successful implementation of the program in the operating and support organizations. During FY 2007, the implementation of the program did not reach the level of success that the programmatic element achieved as shown by the seven implementation shortfalls identified.

The current organizational structure assigns the programmatic element of the training program to the Training Management & Delivery and Production Training organizations, while responsibility for the implementation element is assigned to the facility operations and support organizations. BWXT Y-12 Management has demonstrated that these responsibilities are clearly assigned to their respective organizations, but interaction between Training and the operating facilities is necessary to prevent implementation issues.

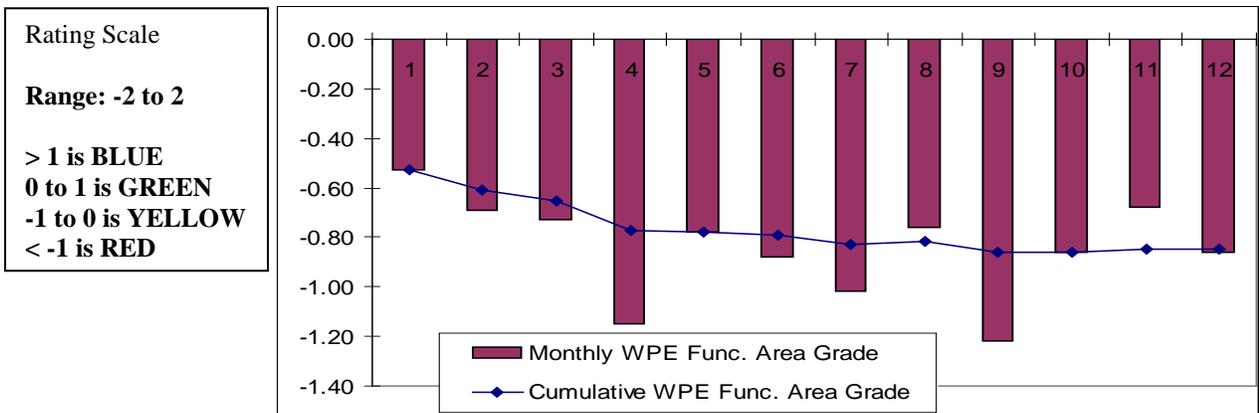
In summary, BWXT Y-12 has a stable program with a highly organized and thorough self-assessment elements built in to identify implementation issues. This has been demonstrated in the field. Also, there have been no significant training related programmatic deficiencies that would have an impact on the safety, security, or operation of any Y-12 facility, personnel, or the environment. The overall performance in the programmatic and implementation

elements has steadily and satisfactorily improved over the last three years. BWXT Y-12 maintains a very low % of training deficiencies. Initiatives to improve cost-effectiveness included converting 114 modules to web-based.

Work Control (Planning and Execution)

The overall rating for Work Planning and Execution is “Satisfactory.”.

Performance trended negatively for the first quarter of the fiscal year and leveled off near -0.85 during the last three quarters. While Operational Readiness performance continued to exceed expectations, operational/work control problems impacted the overall rating. Startup/restart is a mature program with well developed procedures and processes. The contractor performs independent evaluations of the readiness assessments to ensure continued compliance with the program. Another effort this year was to improve integration of readiness reviews in project execution plans. Also BWXT Y-12 hosted the 7th annual readiness workshop. Regarding work planning and execution, in most cases the administrative programs and procedures are adequate but poorly implemented. BWXT Y-12 has a number of improvement initiatives including Operational Performance Improvement, Enhanced Floor Surveillance & Behavior Based Safety, Operational Decision Making training, Oral Boards for Shift Technical Advisors and Shift Managers. A major issue this year was the chip fire which occurred in March in one of Y-12’s manufacturing facilities. Also, YSO sent a letter to BWXT Y-12 with regards to conduct of operations issues in the 9212 facility. BWXT Y-12 made substantial progress in improving the safety in building 9201-5, including capping the leaking brine lines in the E wind tunnel, “bubble-wrapping” 7 machines to control contamination, filling 15 B25 boxes of combustible waste, repairing steam leaks, and drafting a risk-based shutdown plan.



FY 2007 PERFORMANCE BASED INCENTIVES

MISSION - BASE

B61-7/11 ALT 357

Performance Measure: The completion of B61 hardware and other technical support according to the baseline plan.

Performance Results: All planned work under this incentive was completed.

W76 LEP

Performance Measure: Completion of selected hardware and to perform selected tests.

Performance Results: Planned work was completed as agreed to.

Dismantlements and Dispositions

Performance Measure: Completion of all base dismantlement work schedule.

Performance Results: All base work was completed as planned.

Disposition

Performance Measure: Disposition of retired weapon parts at the Nevada Test Site.

Performance Results: All base work completed as planned.

Quality Evaluation

Performance Measures: Completion of ten (10) Phase 1's, eight (8) Phase 2's; ten (10) Phase 3's; ten (10) QE Reports; and thirty-eight (38) NDE screening units by the end of FY 2007.

Performance Results: Contractor completed all the baselined QE work.

JTAs

Performance Measures: On time production and shipment of JTA's and other high priority weapons hardware according to the incentive plan table.

Performance Results: Overall performance was good as evidenced by the on-schedule delivery of all JTA's and related products.

Nuclear Packaging

Performance Measure: Provide containers as directed to fully support the Secondary Shipment Directive.

Performance Results: Requirements were fully met by Nuclear Packaging.

Comprehensive Materials Disposition and Consolidation:

Y-12 packaged, discarded and shipped for disposal 627 cans of RCRA process residues as Mixed Low Level Waste to the Nevada Test Site. Organics disposition also began from 9206 with 39 safe bottles of HEU organics solutions processed and 26 bottles discarded for disposal. This project assists Y-12 in meeting goals in the Tennessee

Department of Environment and Conservation Site Treatment Plan for the disposal of materials with both radioactive and hazardous constituents.

Classified Parts Disposition

100 percent of shipments in FY 2007 were completed (20 total).

NNSA EU Customer Deliverables and EU Recoveries:

BWXT Y-12 demonstrated an outstanding effort to initiate shipments to the NNSA down-blending contractor, after the June 29, 2007, NNSA contract award to a commercial processor for 17 MT HEU to be down-blended to LEU and reserved as a Reliable Fuel Supply. In less than two months, a Shipper/Receiver Agreement (SRA) was completed and ~ 3 MT HEU was delivered in August and September to the NNSA HEU down-blending contractor. BWXT Y-12 not only completed the performance based incentive, but worked very hard to utilize the Office of Secure Transportation vehicles that were made available on short notice, and to coordinate the shipments with the NNSA down-blending contractor.

BWXT Y-12 completed required shipments of HEU to support the TVA Off-Specification Fuel Program. More than 750 shipping containers of surplus HEU were delivered to TVA's commercial processor. BWXT Y-12 processed the remaining inventory of Floor Sweepings and Dross material for shipment to TVA and those materials are ready to be delivered to the contractor. BWXT Y-12 completed the installation and startup of a new glove box shear in the BWXT Y-12 shipping and receiving warehouse, and subsequent processing of more than 1 MTU of off-spec metal. BWXT Y-12 fell short in achieving the performance based incentive to prepare the remaining surplus unalloyed metal for delivery to the TVA processor by 9/30/07 due to delay in the operations of the glove box shear; however, the material was not needed by the TVA Off-Specification Fuel Program due to operational delay at the commercial processing facility. The delay did not result in a negative impact to TVA or BWXT Y-12 and BWXT Y-12 was able to satisfy the FY 2007 TVA HEU delivery requirements.

BWXT Y-12 completed processing of the inventory of HEU/Np legacy material. The material has been a concern for many years and BWXT Y-12 successfully converted the HEU/Np to a stable oxide, characterized the oxide, and has packaged the material for off-site shipment. Although the original plan to complete the activity by March 2007 was not met, the delay did not result in negative impact to BWXT Y-12 or the receiving site. Completing this work scope is a significant achievement and was a significant challenge. BWXT Y-12 also completed the repackaging of a legacy HEU/²³³U inventory for off-site shipment. In addition, ~2.3 MTU of Super Kukla fuel (U-Mo metal) was packaged for off-site shipment.

In support of the Global Nuclear Threat Reduction Initiative (GTRI) and Foreign Research Reactor Return Programs, BWXT Y-12 completed two GTRI recovery missions. Material was repatriated from Canada and South Korea. Y-12 put forth a significant effort to remove all remaining HEU from South Korea in a short time period. Representatives from BWXT Y-12 drafted contract modifications, developed project execution plans, amended the ES-3100 shipping package for air transport for TRIGA fuel, and traveled to Korea to retrieve U.S. origin HEU scrap. Lessons learned were identified to improve the process for expedited recovery missions. The improvements highlighted include the need for the BWXT Y-12 GTRI Program to place additional emphasis on communications, including formal transmittal and acceptance from the foreign organization of the project execution plans; the need to build more flexibility into the process (e.g., de-cladding project plans, packaging content and configuration, and safety analysis); and the need to improve communications with Y-12 Site Office.

BWXT Y-12 satisfied foreign research reactors contract obligations by completing deliveries to Argentina, Canada, France, and Korea totaling approximately 1,000 kg of LEU.

U-Mo foil production process development activities were completed. BWXT Y-12 developed the process for and fabricated 12 depleted uranium foils and 6 enriched uranium foils to specification in support of the NNSA Reduced Enrichment for Research and Test Reactor (RERTR) Program. Activities have begun on the development of a coating process for the U-Mo foils using Niobium and Zirconium materials to provide a dispersion barrier between the U-Mo and the aluminum cladding material.

Approximately 90 kg of ceramic grade U₃O₈ were produced for the HFIR/NIST Research Reactors, exceeding the work scope requirements for the year.

Material Recycle and Recovery

Dismantlement support was completed; safe bottle reduction was partially complete (15 of 50 bottles) as was metal production (only 3 percent); the UO₃ goal was not met; and the Lithium production goal is still under evaluation by YSO.

Uranium Production Facility

Performance Measure: Complete and issue the UPF Integrated Management Plan by 2/15/2007.

Performance Result: BWXT Y-12 developed, issued and began implementing the IMP by the required date. This is a first of its kind document for the complex.

Performance Measure: Successfully execute the FY-07 UPF Technology Plan milestones:

- a. Complete an update/revision to the UPF Technology Development Plan by 11/30/2006.
- b. All UPF Technology Plan milestones will be completed by 9/30/2007.

Performance Results: The intent for a revised Technology Development Plan was to ensure that development was meeting the needs of the project. The plan issued identified all of the milestones and requirements. The milestones identified, if completed, would exceed the needs of the project. BWXT Y-12 completed 28 of 33 milestones identified in the plan, providing the project team with needed criteria for future development of specifications and supported the longer term needs.

FIRP Utility Upgrade LI Projects

Performance Measure: Compressed Air Upgrade Project

- a. Testing of the new compressed air system (air compressors, dryers, and associated equipment)
- b. CD-4 Approve Start of Operations and Project Close-out.

Performance Results: Both were accomplished with excellence. The two punch list items were completed in August 2007. Project financial close-out was expected to be achieved in October 2007 and the Pro2Serve Request for Equitable Adjustment award has been transferred to BWXT Y-12 legal for resolution. The project was successfully completed on schedule and significantly under budget. This was an outstanding accomplishment for Project Management at BWXT Y-12.

Performance Measure: Potable Water System Upgrade Project (PWSU) - complete CD-3 document package.

Performance Results: The PWSU project completed full CD-2 Approve Performance Baseline in December 2006, and a Complete CD-3 document package was submitted to YSO for review in June 2007, on schedule and within the cost baseline. The CD packages were developed adequately, and all independent reviews (independent cost estimate and independent project review) determined the project to have an exceptionally developed estimate package. To obtain CD-3 approval the project required intense discussions with the Defense Nuclear Safety Board (DNFSB) to resolve concerns related to safety significant water supply and the need to modify design in support of the HEUMF and UPF projects. The project was not required to be modified. Although the project was behind schedule for submitting the Acquisition Plan and Request for Proposal for YSO and Albuquerque Service Center review, YSO was able to get the Albuquerque Service Center review waived. The project provided the Subcontractor Consent Report to YSO in a timely manner. The YSO and AL SC reviews resulted in a one month delay of the scheduled date to award the design/construction contract. This impacted the project and required a Base Line Change proposal to extend the project schedule past the planned completion date. On August 23, the Head of Contracting Authority, Albuquerque Service Center approved the Subcontractor Consent Report. The design/build contract was awarded on August 27. The project plans to prepare a baseline change request to recover the five weeks delay in obtaining procurement approval. Although the total Operating Modifications subcontract cost was within the project estimate, the design portion of the proposal was higher than estimated. For higher than planned estimated design cost, the

project plans to utilize under runs of Title II Design funds, and construction planning tasks will be rescheduled for Title III. This rescheduling is not expected to increase the project schedule date. On August 29, the Safety Basis Supplement draft was completed and presented to YSO technical staff.

HEUMF

Be Capability Project

Performance Measure: Submit the BWXT Y-12-Y12 approved Preliminary Documented Safety Analysis for the BeC Project to YSO for approval by July 27, 2007.

Performance Result: The Preliminary Documented Safety Analysis was completed and submitted to the YSO on June 26, 2007, one month ahead of the scheduled date.

QE Relocation

Performance Measure: Relocate the Octagonal Glovebox from 9204-4 to the 9204-2E facility, along with its additional press, new airlock, and new hood by 9/6/07.

Performance Result: The Octagonal Glovebox and the additional ring press, airlock and hood were relocated to 9204-2E on August 29, 2007, one week ahead of schedule.

FIRP Recapitalization and Disposition Projects

Performance Results: All projects were completed within the cost and schedule baseline. Over 103,000 square feet of excess facilities were eliminated and deferred maintenance goals for individual projects were exceeded.

Increase Support to NNSA Defense Nuclear Nonproliferation:

Performance Measure: The performance metric associated with this PBI included five separate measures. The measures were designed as incentives to expand participation in the number of program areas and to increasing the over all support provided to the NNSA Defense Nuclear Nonproliferation missions areas. The incentives involved the acceptance of proposals by the various DNN programs, the receipt of funding for the acquired work, and taking a lead in role in at least one multi-site task.

Performance Results: All of the measures for this PBI were met or exceeded.

Advanced Design and Production Technologies (ADAPT)

Performance Measures and Results:

- a. Complete testing of initial multi-module digital radiography imaging prototype in a high energy environment and provide recommendations for production system design by 8/15/07.

Successfully Completed.

- b. Complete evaluation of infrared (IR) heating for pre-and post-heat treatment for components and provide the technical design specifications necessary for IR heating in a production process environment by 9/10/07.

Successfully Completed.

- c. Complete dimensional inspection analysis of a WR component produced on the Agile machine in a production area by 9/15/07.

Was not Completed.

- d. Demonstrate chip management with production-like material on the Agile machine by 12/01/06.
Was not Completed.
- e. Identify and evaluate equipment for converting a typical UNH waste stream to a stable, storable form and provide recommendations to UPF by 8/30/07.
Successfully Completed.
- f. Evaluate midstream characterization equipment and issue a report with recommendations for its potential use a diagnostic tool to identify unacceptable material before part fabrication by 8/30/07.
Was not Completed.
- g. Demonstrate MALOCS for two additional machine types and six units to improve process efficiency by 8/30/07.
Successfully Completed.
- h. Issue report comparing properties between alternate metal strengthening techniques and existing processes and provide process selection recommendation by 9/28/07.
Successfully Completed.
- i. Complete the evaluation of microwave for special casting needs by 8/30/07.
Was not Completed.
- j. Complete development of an optimized coating, liner, or containment vessel to minimize SDOR waste and provide technical design specifications for SDOR implementation in a production area by 8/30/07.
Successfully Completed.
- k. Complete flow sheet verification and provide technical design specifications for the primary extraction centrifugal contactors in a production environment by 8/30/07.
Successfully Completed.
- l. Optimize bulk metal oxidation operating parameters and provide technical design specifications for use in a production operating environment by 8/30/07.
Successfully Completed.
- m. Support DICONDE project to develop and demonstrate archiving and retrieval of digital radiography data by 9/14/07.
Successfully Completed.

Enhanced Surveillance Campaign (ESC)

Performance Measures and Results:

- a. Complete an Enhanced Surveillance stockpile aging assessment report to support the annual assessment process by January 31, 2007.
Successfully Completed.

- b. Complete aging and lifetime assessments to support W76-1 LEP certification by April 30, 2007.
Successfully Completed.
- c. Provide initial assessment to support RRW-1 design options for sufficient longevity of materials and components by July 1, 2007.
Successfully Completed.
- d. Assess viability of advanced imaging diagnostics for CSAs in support of stockpile transformation and surveillance by September 1, 2007.
Successfully Completed.

Stockpile Readiness Campaign (SRC)

Performance Measures and Results:

- a. Complete the Readiness Review activities necessary to make the Agile Machine Tool operational in a production area by 6/30/07.
Successfully Completed.
- b. Install and complete pre-operation testing of the Solution Heat Quench Furnace by 9/30/07.
Was not Completed.
- c. Install and complete pre-operational testing of the Homogenization Furnace by 8/30/07.
Was not Completed.
- d. Complete the Readiness review activities necessary to make the CNC machine operational in a production area by 6/30/07.
Was not Completed.
- e. Complete the Readiness Review activities necessary to make the 5th CMM operational in a production area by 3/30/07.
Was not Completed.
- f. Complete test and checkout of the 9 MeV Linac by 8/15/07.
Successfully Completed.
- g. Fabricate test parts as part of the advanced Casting Technology Insertion Testworks project in accordance with the project plan.
Successfully Completed.
- h. Complete readiness activities for EB Weld Inspection for operational deployment in a production area by 6/15/07.
Was not Completed.

Complementary WFO

Performance Results: BWXT Y-12 met Target “a” at 100 percent, but did not meet 100 percent of Target “b”. They met 75 percent of Target “b's” performance measure. BWXT Y-12 needed to bring in \$33M in complementary work funding to meet the 100 percent measure. They brought in \$28.6M, meeting the 75 percent measure. Several reasons for not meeting the 100 percent measure include: (1) trying to find the right target mix with customer requirements and Y-12 mission work, (2) not having the right personnel with the right experience, background, and knowledge of how to do business development and (3) lack of the Manager of NSPO's focus on complementary work - a lot of his time was spent on Corporate business.

OPERATIONS - BASE

Readiness Improvements

Performance Measures:

- a. Deploy metrics to gauge level of operational readiness of startups and restarts.

Partially Completed. The requirement to define operations, activities, and facilities in Authorization Agreements was not met.

- b. Demonstrate improvement in level of operational readiness via metric.

Successfully completed.

- c. Define and deploy standardized cost collection method.

Successfully completed.

- d. Define operations, activities, and facilities in Authorization Agreements.

Was not Completed.

Criticality Safety and Container Improvements

Performance Measures:

- a. Implement a plant level DOE Standard 1158 self-assessment program to remedy issues associated with the previous NCS engineering organization implementation.
- b. Perform cleanout activities of the out of service carbon burners.
- c. Upgrade the Plant NCS Committee.
- d. Develop upgraded site UHSP.
- e. Develop and implement bronze wool filtering system for casting.
- f. Design and install NCS credited HEPA filtration devices on E-Wing DVS.
- g. Install and operate PX raffinate monitor.
- h. Continue the NCS simulation training for fissile material workers.
- i. Perform NDA survey of 9206 floor.
- j. Support for SC State University mentor protégé agreement.

Performance Results:

While all items were successfully completed, it is understood from finance representatives that the large PBI (i.e., 40 percent available fee) for the Raffinate Monitor is problematic because of funding issues relative to the inappropriate re-direction of money by the contractor. Language included in the final PBI allowed for the design and installation without readiness for operation (i.e., actually being turned over to operations to be placed into service), so this matter is a sensitive issue.

Engineering Improvements

Configuration Management and Technical Basis Improvements

Performance Measures:

- a. BWXT Y-12 will update the CAAS System Design Description reflecting configuration determined by field verification and/or system testing using a graded approach (i.e. focusing on safety function system aspects).

Completed and approved by YSO in September.

- b. Revise the TBIS Procedure to reflect drawing hierarchy developed in FY 2006 and revise each VSS TBIS to implement.

Completed and submitted for YSO review in September.

System/Process Engineer Improvements

Performance Measures and Results:

- a. Engineers continue initiatives to improve overall system and process engineer performance. Scope includes developing VSS performance and condition monitoring feedback to aid in avoiding unplanned shutdown from safety system component failures.

Completed in September and approved by YSO in October.

- b. Develop tailored walkdown guidance for System Engineers of non-VSS safety systems by March 31, 2007. Guidance will reflect experience from VSS walkdowns and operational experience to improve system vigilance.

Completed and approved by YSO in March.

- c. Deliver training developed in 2.1 by August 31, 2007 to all System Engineers.

Completed and approved by YSO in September.

- d. Develop pilot VSS performance and condition monitoring feedback method and test on two systems for 3 months to improve monitoring.

Completed in September and approved by YSO in October. (Note that the method was actually tested on five VSS for six months exceeding the requirement.)

- e. Train S&S System Engineers in accordance with established System Engineers baseline requirements by May 31, 2007.

Completed in May and forwarded and approved by YSO in July.

- f. Extend delivery of product training to include all Product Engineers by August 31, 2007.

Completed and approved by YSO in September.

COE QA Integration Improvements

Performance Measures: Evaluate and revise process for handling shop fabricator communications with engineering.

Performance Result: Completed and approved by YSO in January.

CAAS Immediate Evacuation Zone Reduction Implementation

Performance Measure: Develop project execution plan to implement CAAS Immediate Evacuation Zone boundary reductions as described by the technical basis developed in the FY 2006 PEP initiative.

Performance Result: Completed and approved by YSO in May.

Other Engineering Status

As of September 30, 2007 all Engineering PBIs for FY 2007 have been completed and either approved or forwarded to YSO for approval.

Maintenance

Performance Measures and Results:

- a. Implement proactive maintenance strategy for PPTF Systems.
Measure was Partially Met.
- b. Implement proactive maintenance strategy for EUSP Systems.
Measure was Partially Met.
- c. Perform PAMs Analysis on target processes for 6 HEUMF Systems.
Successfully Completed.
- d. Implement FY 2006 RCM analysis proactive maintenance recommendations.
Measure was Partially Met.

Work Control

Performance Measures and Results:

- a. Improve Work Control.
Successfully Completed.
- b. Critical Equipment.
Measure was Partially Met.

Cyber Security

Performance Measures and Results:

- a. Network Address Translation (NAT) - Performance Measure: Implement NAT and alternative access methods.

The NAT was implemented at the firewall. YSO conducted an assessment of the implementation and found it was implemented as required.

- b. Two-Factor Authentication - Install two-factor authentication capability for thirty (30) centrally-managed servers.

YSO confirmed this was implemented as required.

- c. Host-based Intrusion Detection Systems (IDS) - Deploy host-based IDS on thirty (30) key systems.

YSO confirmed this was implemented as required.

DBT Implementation – 07 Milestones

Performance Measures and Results:

- a. Fence 4 - By August 8, 2007, install path delay barriers as described in the PEP Addendum.

Date of actual completion, 7/11/07, and approved by YSO on 8/7/07.

- b. Vehicle Detection System (Phase III) -

- By February 28, 2007, submit the PEP Addendum for approval.

Date of actual completion, 11/30/06. PBI Award Fee verified and approved by YSO on 3/19/07.

- By April 4, 2007, complete the Title I and II design package.

Date of actual completion, 3/29/07. PBI Award Fee verified and approved by YSO on 5/01/07.

- By September 13, 2007, complete demolition and site preparation, install vehicle barriers, and install alarm sensors and verify annunciation at the Secondary Alarm Station.

Date of actual completion, 8/28/07. PBI Award Fee verified and approved by YSO on 9/18/07.

- c. Posts 5/13/17 Reconfiguration

- By December 4, 2006, complete the Title I and II design packages,
- By September 25, 2007, complete modifications as described in the PEP Addendum.

Post 13—Date of actual completion of construction activities, 8/20/07. Date of actual completion, 9/4/07.

Post 17— Date of actual completion, 6/25/07. Successful demonstration to YSO of PBI completion, 9/10/07. PBI Award Fee verified and approved by YSO on 10/02/07.

- d. Vehicle Protection

- By May 31, 2007, develop the PEP Addendum.

Date of actual completion, 5/24/07. PBI Award Fee verified and approved by YSO on 7/10/07.

- By September 30, 2007, install vehicle protection positions as described in the PEP Addendum.

Date of actual completion, 9/24/07. Successfully demonstrated PBI completion to YSO on 9/26/07. PBI Completion Form submitted to YSO on 10/04/07 for verification and approval. YSO approval is expected since the PBI expectations were exceeded. Two additional positions were completed.

- e. Fence 5 (Phase I)

- By May 31, 2007, complete the Title I and II design package.

Date of actual completion, 5/16/07. PBI Award Fee verified and approved by YSO on 7/10/07.

- By September 30, 2007, complete demolition and site preparation; install barriers and razor wire; and install alarm sensors and verify annunciation of alarm signal at the Secondary Alarm Station.

Date of actual completion, 9/26/07. Successfully demonstrated PBI completion to YSO on 9/27/07. PBI Completion Form submitted to YSO on 10/02/07 for verification and approval. YSO approval is expected.

f. Vault Recovery Assistance

- By May 31, 2007, develop the PEP Addendum.

Date of actual completion, 5/24/07. PBI Award Fee verified and approved by YSO, 7/10/07.

- By September 30, 2007, complete the Title I and II design packages per the PEP Addendum baseline schedule.

Date of actual completion, 09/11/07. PBI Completion Form to YSO, 10/04/07 for verification and approval. YSO approval is expected.

g. Portal 24 Upgrades

- By 9/30/07, remove existing barriers, traffic control devices, road sensors, hydraulic pump system (including removal and disposal of system hydraulic fluids), and associated concrete foundations.

PBI Change Request submitted to YSO on 8/9/07 to clarify FY 2007 scope. YSO approved revised PBI Change Request on 9/25/07.

- Complete demolition and site preparation.

Date of actual completion, 9/26/07. Successfully demonstrated PBI completion to YSO on 9/26/07. PBI Completion Form submitted to YSO on 9/27/07 for verification and approval. YSO approval is expected.

Security System Upgrades

Performance Measure: Implement fingerprint biometric and PIN identification equipment integrated with the Lenel Access Control System at PA Portals 1, 8, 10, 14, and 33.

Performance Result: PBI Closure form submitted to BWXT Y-12 Contracts on September 17. Verification of system operation occurred in an YSO walk down on September 26.

BUSINESS - BASE

General Management – Six Sigma

Performance Measure: Complete 10 Process Improvement Projects

Performance Result: This PBI was partially completed. One of the 10 PIPs did not meet the criteria. Payment was approved for 9 PIPs.

MISSION – STRETCH

B61-7/11 ALT 357

Performance Measure: Completion of B61 hardware and other technical support according to the baseline plan.

Performance Result: All planned work under this incentive was completed.

W76 LEP

Performance Measure: Completion of selected hardware and to perform selected tests.

Performance Result: Planned work was completed as agreed to.

Comprehensive Materials Disposition

Partial completion of the stretch objectives included smearing of Pu items and loading an additional 75 RCSBs

JTAs

Performance Measure: On time production and shipment of JTA's and other high priority weapons hardware according to the incentive plan table.

Performance Result: Overall performance was good as evidenced by the on-schedule delivery of all JTA's and related product.

Dismantlements

Performance Measure: Complete additional dismantlements.

Performance Result: The required dismantlements were achieved.

Off-site disposition

Performance Measure: Complete additional off-site disposition.

Performance Result: The required disposition was completed.

OPERATIONS - STRETCH

NMC&A

Performance Measures and Results:

- a. Develop an approved MC&A plan that defines and describes how Y-12 will perform MC&A functions under the new requirements.

Successfully Completed.

- b. Develop a crosswalk of new site implementation requirements in the newly developed MC&A Plan to the current DOE order with appropriate deviations as required.

Successfully Completed.

- c. Revise and implement Y20-NM procedures to reflect the requirements as documented in the revised MC&A Plan.

Successfully Completed.

Material Surveillance (Alarm Boxes)

Successfully Completed.

S&S Technology Deployment

Performance Measures and Results:

- a. Access Delay
 - By August 24, 2007, install the remaining Access Delay vault security features and verify annunciation of the alarm signal at the Central Alarm Station.

Date of actual completion, 8/30/07. Fee verified and approved by YSO on 9/25/07.
 - By September 13, 2007, complete startup testing per the approved Engineering Startup Test Plan.

Date of actual completion, 9/13/07. Successfully demonstrated PBI completion to YSO on 9/20/07. PBI Award Fee verified and approved by YSO on 10/02/07.
- b. Tactical Entry Assistance Item deleted per YSO Fee Board approval.
- c. Sniper Detection System By July 27, 2007, complete the Title I and II design package.

Date of actual completion, 7/23/07. Fee verified and approved by YSO on 9/12/07.
- d. Command and Control
 - By February 28, 2007, develop the PEP Addendum.

Date of actual completion, 2/21/07. Fee verified and approved by YSO on 3/19/07.
 - By September 14, 2007, complete the Title I and II design packages.

Date of actual completion, 9/12/07. Fee verified and approved on 10/02/07.
 - By September 14, 2007, obtain approval for the Telecommunications Proposal (TP).

Date of actual completion, 8/21/07. PBI Completion Form submitted to YSO on 9/13/07 for verification and approval.

Security System Upgrades

Performance Measure: Completion of integrated system testing and operation of new system in CAS and SAS.

Impact: The PBI was not completed..

9212 Risk Reduction

The 9212 Risk Reduction PBI was partially met due to problems in wet chemistry. Only the residue cans were completed.

9201-5E Cleanup

The 9201-5 Risk Reduction PBI was very successful with the capping of the brine line, the sealing of contaminated equipment, and eliminating contaminated trash in certain areas.

9206 Deactivation

Performance Measure: Process 25 safe bottles of excess combustible organics to a safe storage form suitable for off-site shipment or on-site interim storage and remove from Building 9206.

Performance Result: A total of 26 safe bottles were processed to a safe storage form and removed from Building 9206 by September 4, 2007. The bottles were then transferred and discarded to the waste operations MBA into several drums for eventual disposal.

9215 HVAC Fire Damper

One of 4 performance measures was completed.