



Performance Evaluation Report  
for  
Babcock and Wilcox Y-12 Technical Services, L.L.C.

Contract Number DE-AC05-00OR22800

Evaluation Period: October 1, 2007 through September 30, 2008

The purpose of this Performance Evaluation Report is to provide a final report of the National Nuclear Security Administration (NNSA) evaluation of Babcock and Wilcox Y-12. Technical Services, L.L.C (B&W Y-12) performance for the period October 1, 2007, through September 30, 2008. This evaluation uses the guidance, criteria, measures, and process established in the Performance Evaluation Plan (PEP) approved at the beginning of this performance period. At Y-12, the fee pool was divided into three components: Base and Stretch Award Fee Incentives (AFIs), Base and Stretch Performance-Based Incentives (PBIs), and Multi-Site Incentives.

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

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

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

## **I. Business Management**

The Business Management Performance Objective included the following topical areas: General Administrative Management, Procurement Management, Information Technology, and Contractor Assurance. The overall rating for Business Management for FY 2008 is Outstanding.

### **General Administrative Management**

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

This rating reflects effective funds management, timely input for monthly financial plan processing and ad hoc requests, and excellent support for the FY 2010 Budget Formulation and Validation efforts. In addition, the creation and use of the Access database as part of the FY 2009 Work Authorization Directive submission is noted as a significant process improvement. Property Management met or exceeded performance measures. Integrated business operations of the Nuclear Weapons Complex were well supported. Human Resource and Public Affairs generally met expectations. Areas of concern noted (other than the negative observation regarding Estimates at Completion) was the funding proposal associated with the electrical upgrade portion of the Oven Relocation effort. While the electrical upgrades proposal was probably an anomaly, the inconsistency in application of funding guidance indicates a need for future focus in this area. Additionally, hiring practices did not always stay compliant with established procedures. Public Affairs has improved throughout the year, but more attention needed to be focused on long range planning, messaging, coordination and execution of all external communications activities.

### **Procurement Management**

The overall rating for Procurement Management is "Outstanding."

B&W Y-12 met four out of seven of its small business utilization goals. From a cumulative standpoint, the overall targeted small business goal was met. B&W Y-12 demonstrated increasing support of Supply Chain Management. They have successfully made changes to SAP to further pursue NNSA eStore connectivity. For the most part, procurement documents were submitted adequately although the process could have been smoother in some instances.

## **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. During FY08, B&W Y-12 made positive improvements in the program by meeting all IT metrics for eleven consecutive months, responding in a timely manner to an increasingly large number of HQ data calls, exceeding expectations on IT refresh rates, successfully implementing the “Big Yellow” network, and completing the classified diskless conversion effort. In addition, B&W Y-12 made significant advances in the reduction of desktop administrators, deployment of the Windows XP firewall to all users, meeting network availability goals for ten of twelve months, implementation of Cimtrak security software, rollout of network upgrades (1099 Commerce Park and OSTI), implementation of NAC, testing for Office 2007 deployment, development of high quality OMB Exhibit 53/300 submissions, and the successful completion of multiple smaller-scope IT projects. However, during FY08, YSO noted programmatic deficiencies in contingency planning, lack of configuration control for databases, and less than adequate contractor assurance activities. Overall, the B&W Y-12 IT program is well-managed, develops and retains knowledgeable staff, implements pro-active solutions, and quickly addresses any identified issues.

## **Contractor Assurance**

The overall rating for Contractor Assurance is “Good.”

YSO reviewed and approved the B&W Y-12 Contractor Assurance Program Description, Y15-906, revision dated 5/27/2008, on July 1, 2008. YSO has reviewed the Feedback and Improvement Working Group (FIWG) reports issued for the 1st and 2nd quarters of FY08. This is a much improved document than previously submitted to YSO. Lower level assessments are captured in addition to the Management and Independent Assessment results and external assessment results. B&W Y-12's revised metrics were presented to YSO on February 13th. Some of the metrics are still evolving. Evidence indicates that B&W Y-12 Senior Management are reviewing performance and control metrics. B&W Y-12 developed a risk ranking process which defines consequence, probability, and risk notification criteria. They have used this process for multiple activities across the site. This process was shared with DOE-wide organizations at the FY08 ISM Conference in Idaho. B&W Y-12 has risk ranked legacy issues and continues to use the risk ranking in the Issus Management Prioritization Risk Board. B&W Y-12 provided a briefing to YSO on September 16th which stated the legacy issues and risk rankings, and established a regular review cycle. The legacy issues were formally transmitted to YSO on September 29, 2008. B&W Y-12 has actively supported all NNSA LOCAS initiatives. All of the performance targets were evaluated as being met; however, B&W Y-12 issues management system is not meeting its required timelines. YSO also recognizes that this work was accomplished over the entire fiscal year.

## **II. Mission**

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

Overall, B&W Y-12's performance in the Mission area was “Outstanding” in fiscal year 2008. The DSW program completed the B61 base work, W76-1 First Production Unit (FPU), Quality Evaluation (QE)/Joint Test Assembly (JTA) deliverables, container work scope, and achieved the complex-wide goals for dismantlement. However, YSO is concerned with numerous operational events involving primarily the Life Extension Programs (LEP) which have necessitated additional DSW rework and the resulting unplanned cost. Campaigns made significant progress in FY08 in the management and execution of projects as well operating a flexible program that was able to adapt to changing requirements. Non-destructive laser gas sampling was deployed. A high energy imaging system (9 MeV)

was developed and the production microwave received CD-1 approval. B&W Y-12 needs to improve the effectiveness of the readiness campaign business cases and improve the integration with DSW in the deployment of equipment for production use. B&W Y-12 has consistently managed the RTBF and FIRP programs effectively; implemented efficiency initiatives, aggressively pursued and applied resources for high-priority site needs, operated Material Recycle and Recovery (MRR) processes more reliably, and effectively managed nuclear materials. Facility availability, deferred maintenance, demolition, material disposition, and material consolidation and Highly Enriched Uranium Materials Facility (HEUMF) Transition goals were met or exceeded.

The Nuclear Nonproliferation, Naval Reactors, Other Reactors and Research Material Supply programs met or exceeded all customer deliverables including the 2008 "Getting the Job Done" goal for removing SNM from NNSA sites. B&W Y-12 has taken a major role in efforts to develop an alternate fuel for the Reduced Enrichment for Research and Test Reactors (RERTR) program and the shipping campaign that began over 5 years ago to deliver ~ 40 MT of Highly Enriched Uranium (HEU) to Tennessee Valley Authority (TVA) was completed. NR remains concerned that the Y-12 historical evaluation of HEU delivered to NR since program inception was not comprehensive and did not fully address root causes. B&W Y-12 provided outstanding support for Complex Transformation including the development of the Phase 2 Uranium Business Case Analysis and the Supplemental Programmatic Environmental Impact Statement. Excellent support was provided for the Complex Command Center and Integrated Facility Disposition Project; however, additional planning is required to develop a clear comprehensive modernization strategy. Process and Productivity Improvement (PPI) initiatives, including the Y-12 Throughput Improvement Program (YTIP), resulted in \$34M in cost avoidance (forecast). B&W Y-12 far exceeded the targets for increased mapping of key processes and business cases and completion of new projects.

B&W Y-12 execution of project management has been very strong. Project Management objectives have been achieved during the performance period and project management program, processes and system are being effectively implemented. The HEUMF project met the "Getting the Job Done" goal for construction completion in August, 2008. Line item projects supporting transformation, UPF, QE, DU/Binary, Beryllium Capability (BeC) and line items supporting infrastructure upgrades, Steam Plant Life Extension and Potable Water Supply Upgrades, have consistently met performance objectives.

### **Directed Stockpile Work**

The overall rating for DSW is "Good."

All Level 1 and 2 milestones were completed on schedule. All B61 base work was completed on schedule while generating efficiencies throughout the year. The W76-1 FPU was completed 23 days earlier than the NNSA baseline date, all base work was completed on schedule, and a majority of the challenge work scope was achieved. The QE/JTA work scope was completed on schedule while executing key interim surveillance work scope using advanced machining capability. The Dismantlement and Disposition program performed at a high level as evidenced by completing all base and challenge work which contributed to achieving complex wide goals for exceeding scheduled dismantlement quantities at Y-12 and Pantex. Stockpile Services supported completion of all DSW deliverables by sustaining key production processes and supported key maintenance activities through realized efficiencies. The Nuclear Packaging program supported all base container work scope as well as additional, unplanned Pantex dismantlement work scope. Cost and schedule performance indexes ended the year within established thresholds. B&W Y-12 did not develop and deliver plans/schedules for FY 2009 operational deployments and core DSW work scope in a timely manner. This delayed negotiations of the FY 2009 Performance Based Incentives. As expressed in several monthly reports, YSO continues to be concerned with numerous operational events involving primarily the LEPs which necessitated additional DSW rework and the resulting unplanned cost.

### **Campaigns**

The overall rating for Campaigns is "Outstanding."

The overall CPI and SPI was 1.10 and 0.94, respectively. All nine level 2 milestones were completed on schedule. B&W Y-12 provided excellent support to the DSW mission and the transformation program at Y-12. B&W Y-12

improved their execution of projects by deploying equipment on schedule and, in many cases, ahead of schedule. Both the MAOMC equipment and the 5<sup>th</sup> CMM were deployed ahead of the baseline schedule by more than one month and fulfilled critical needs in support of the DSW mission. The NNSA Acquisition Executive (AE) granted approval of the CD-1 package for the Production Microwave project. ADAPT developed a high energy x-ray imaging system that provides the capability to produce digital radiographs. The Enhanced Surveillance Campaign deployed the enhanced laser gas sampling equipment and the hydride test cart for surveillance and PDRD moved eight technologies to the next stage of maturation. Campaigns made significant progress in FY08 in the management and execution of projects as well operating a flexible program that was able to adapt to changing requirements. B&W Y-12 needs to improve the effectiveness of the readiness campaign business cases and improve the integration with DSW in the deployment of equipment for production use.

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

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

B&W Y-12 has consistently managed the RTBF and FIRP programs effectively; implemented efficiency initiatives, aggressively pursued and applied resources for high-priority site needs, operated MRR processes more reliably, and effectively managed nuclear materials. 10 out of 11 RTBF Level 2 Milestones were completed. Facility availability goals for mission critical and mission dependent facilities were exceeded, and the backlog of deferred maintenance in those facilities was significantly reduced. B&W Y-12 exceeded the goal for applying additional maintenance funding investments to high priority activities. All FIRP projects (including FIRP demolition projects) were completed within cost and on schedule in support of NNSA milestones. Activities that support the disposition of 9206, 9201-5, and 9204-4 were completed under budget. FIRP continued to support NNSA small business initiative goals, and all RAMP projects were completed on schedule. Operational availability of MRR processes improved dramatically, which allowed for increased processing of solution and production of a significant quantity of purified metal. This reduced both safety risk in the facility and risk associated with meeting future material requirements. Efficiencies allowed MRR to provide metalworking support to Dismantlement and manage the inventory of low-equity material requiring processing. B&W Y-12 provided excellent management of material resource requirements and storage, and led NNSA initiatives aimed at improving nuclear material management across the Nuclear Weapons Complex. All material consolidation and HEUMF Transition goals were met for the year on or ahead of schedule in support of plans to accelerate the deinventory of 9720-5, remove material from 9201-5 and 9204-4, and implement DBT requirements. All material disposition goals for excess DU, NU, lithium, and miscellaneous classified material and tooling were met.

### **Nuclear Nonproliferation and Reactors**

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

B&W Y-12 exceeded planned deliveries of enriched uranium and shipped more than 19 MT excess enriched uranium for use and disposition. As part of the 19 MT, Y-12 significantly exceeded the NNSA “Getting the Job Done” goal to remove 11 MT SNM by shipping over 15 MT to disposition sites, and completed a shipping campaign that began over 5 years ago to deliver ~ 40 MT HEU to TVA. NR remains concerned that the Y-12 historical evaluation of HEU delivered to NR since program inception was not comprehensive and did not fully address root causes. All the material packed in the 6M2R containers scheduled for shipment was shipped prior to the expiration of the container’s license. This required an extraordinary effort by B&W Y-12 to coordinate and cooperate with many other DOE offices and DOE contractors, and resulted in a significant cost avoidance from not having to repackage materials into the ES-3100. B&W Y-12 initiated work to develop characterize plans for material scheduled for disposition beginning around 2012. B&W Y-12 has taken a major role in efforts to establish a new RERTR fuel alternative that involves the fabrication of U/Mo foils increasing the potential to bring, a large amount of material processing work to Y-12. In support of the Global Threat Reduction Initiative (GTRI) Program, B&W Y-12 personnel were principal contributors on a team deployed on an emerging threat project that repackaged and transferred Iraqi uranium to a commercial company resulting in a significant national security success. B&W Y-12 has expanded its support to the Office of International Material Protection and Cooperation (NA-25) making use of its extensive expertise in the areas of Material Control and Accountability and Physical Security. These

efforts led to increased Y-12 responsibilities on several projects and will likely lead to additional work in FY 2009. B&W Y-12 also expanded its support to the Office of Nonproliferation Research and Development (NA-22) with the placement of an M&O position at headquarters and ongoing work on several projects, including a key project to create spherical uranium test objects that use minimal amounts of material but will mimic a much larger source. While B&W Y-12 has made progress to expand the use of its core competencies and capabilities to support national security work across several programs, there is still considerable capacity and expertise that can be applied to nuclear nonproliferation mission areas.

## **Transformation**

The overall rating for Transformation is “Outstanding.”

B&W Y-12 provided outstanding support for Complex Transformation including the development of the Phase 2 Uranium Business Case Analysis and the Supplemental Programmatic Environmental Impact Statement. The overall effort was highly regarded by HQ management and resolved concerns of the Office of the Secretary of Defense-Cost Analysis Improvement Group. The analysis was the foundation for the Administrator’s decision to select Y-12 as the low-cost, least-risk option for future NNSA uranium operations. The Ten Year Site Plan was submitted on schedule and regarded by HQ as one of the best plans in the complex. B&W Y-12 provided excellent support for the Complex Command Center (CCC) and Integrated Facility Disposition Project (IFDP). Both projects are making progress toward Critical Decision (CD)-1 approval in FY 2009. B&W Y-12 produced several deliverables to document modernization planning initiatives. However, B&W Y-12 did not meet all deliverables and progress to define a comprehensive modernization strategy was very slow.

## **Process & Productivity Improvement**

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

B&W Y-12 far exceeded the targets for increased mapping of key processes and business cases and completion of new projects. The large number of completed projects and the number of organizations participating provide evidence of the increasing effectiveness of the Process and Productivity Improvement (PPI) program. B&W Y-12 made significant progress on the open YTIP actions and provided good support at each of the meetings involving the NNSA Headquarters, YSO, and B&W Y-12. The documented forecasted cost avoidance for FY 2008 (including YTIP) is \$34.2M.

B&W Y-12 was able to plan, execute, and complete productivity reviews for all fifteen B&W Y-12 organizations that were planned for this year. During the productivity reviews, opportunities for 46 “quick wins” were identified and implemented.

## **Project Management**

The overall rating for Project Management is “Outstanding.”

B&W Y-12 has effectively managed project management processes, systems and activities. Implementation of contractor assurance implementation for projects has been enhanced through establishment of a divisional contractor assurance organization and execution of contractor assurance programs is evident in HEUMF. Executing projects within established cost baselines was achieved for the majority of projects. Most projects have successfully managed within the .90-1.15 cost baseline objective established. The Du/Binary project experienced significant cost growth due to overruns for the A-2 wing supply fan refurbishment. Schedule performance has met requirements on the majority of projects. The completion of construction for HEUMF was a significant schedule milestone accomplishment. One project required a change to a Level 1 milestone due to a delay in a critical decision and the Du/Binary schedule has been extended by approximately 5 months. Project safety performance has been excellent and has significantly improved during the year. The integration of safety and security into the design of UPF has been outstanding. Monthly project reports have been timely and provided good analysis of project reporting data. The risk registers have been highly effective tools for communicating risks to senior management. A lack of consistency, adequacy and timeliness has been noted in trend logs and BCP logs in several projects. A need for contingency management improvements within the UPF project has been identified. B&W Y-12 supported many

presentations, briefs, tours and reports. Support during DNFSB and external reviews such as IPRs have been excellent. Integration and coordination with construction subcontractors, B&W Y-12 functional organizations and performance of operational readiness, testing and start up has been excellent. Communications and response to quality issues identified on the HEUMF project requires improvement. Issues resulting from quality surveillances of safety class racks were not communicated to YSO in a timely manner and response to several quality issues raised by YSO has not been timely.

### **III. Operations**

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

#### **Operations Summary**

Major changes to the FY 2008 PEP Operations section included the separation of Maintenance Effectiveness into two functional areas – Maintenance Effectiveness, and Facility and Site Management. Facility and Site Management was established as a separate functional area to ensure management accountability, emphasis, and to recognize the importance of a strong facility and site infrastructure program for supporting the mission accomplishment and boosting morale. Additionally, both the Maintenance Effectiveness, and Facility & Site Management PEP sections included emphasis on accurate self-reporting of S/RID management and metrics, with an integrated assessment section to address work performance and effective and efficient mission accomplishment.

For both Maintenance Effectiveness, and Facility and Site Management, progress was noted throughout the year in the accuracy and completeness of the S/RID compliance and reporting of metrics. Facility & Site Management conducted a number of noteworthy improvements including a Steam Blitz, replacement of four of the non-code compliant electrical panels, and a 2-day cleanup in Building 9212. Maintenance was very successful in reducing the fully burdened labor rate by \$6/hour over the 2007 rate, while still providing effective maintenance support as evidenced by their metrics and the significant decrease in production equipment downtime. F&IS developed an Apprenticeship Program for crafts, the first offered in several years, and the response by the community and applicants was outstanding.

Production was able to meet essentially all mission deliverables for the year, improved production capability including metal producing operations, and adequately addressed a number of challenging technical issues. The improvement in production capability is especially noteworthy given the operational challenge of working in 1940-50's vintage facilities. However, Work Planning and Execution continued to struggle with operational errors throughout the year, many involving procedural non-compliance, TSR violations and Lock Out/Tag Out (LO/TO) violations.

In the area of Training and Qualification, a rating of outstanding was provided to this program which demonstrates the combination of well managed programmatic elements and consistent strong implementation in the field.

#### **Engineering, Safety and Environment Summary**

Engineering supported the HEUMF project construction to ensure that there were no delays in the completion schedule for this essential new facility. Of note, B& W resolved two major issues with the DNFSB (ARF issue and HEUMF fire water supply) were instrumental in continued success of modernization efforts demonstrated leadership in the development and implementation of DOE-STD-1189. However, B&W Y-12 has fallen behind in the area of Vital Safety System monitoring and improvement. This is in part because in general DOE has increased the expectations for all Vital Safety System oversight programs, and B&W has not placed emphasis on that change.

A NNSA assessment revealed several flaws in NCS evaluations related to improper terminology and double contingency principle. These were assessed to be inconsistent with national ANSI/ANS-8 consensus standards and will result in additional implementation costs over the coming year.

EMPO successfully completed the HS-63 Inspection of Emergency Management at the Y-12 NSC, and achieved outstanding results. The results were recognized during opening remarks by the NNSA Administrator at the May 2008 Emergency Management Issue Special Interest Group (EMI SIG) Annual Conference. B&W Y-12 made

significant progress to replace the fire hall and Plant Shift Superintendent (PSS)/Technical Support Center (TSC) with a modern Complex Control Center potentially via an alternatively financed replacement facility.

B&W Y-12 completed and submitted to YSO the Transportation Safety Document (TSD) and Technical Safety Requirements (TSR) for On-Site Transfer of Materials in the SST-E. These documents are necessary to support initial HEUMF load out of the Highly Enriched Uranium Materials Facility (HEUMF). Improvements in Radiological Program are noted such as the incorporation of new iCAM monitors into operations to improve monitoring and a reduction of posted radiologically controlled areas. While there were no reportable personnel contamination events this year there was a slight increase in the number of tracked personnel contaminations up to 27 this year.

Fire Protection performance remained steady. Completions of actions included in the Fire Protection Program Comprehensive Corrective Action Plan improved over the year due to completing incentives on priority actions. Safety efforts at Y-12 were recognized on the national level by the National Safety Council. B&W Y-12 received merit level recognition for the President's E&SH Forum, Employee Team Implementation, Safety Communication Plan, Wellness Program and three Target Zero Divisions. Also, Y-12 received a Million Hours Award (Construction working 2 million hours without a Lost Workday Away Case) and an Occupational Achievement Award for injury rate improvements. B&W Y-12's strong commitment to worker was reflected by significantly improved health and safety trends. The total recordable case accident rate per 200,000 hours of work was significantly below the Bureau of Labor Statistics national average (5.0) at 0.54 and a 67% reduction over FY 2007. Employees achieved 3.2 million cumulative safe hours without a lost-time accident. During a programmatic review of the Chronic Beryllium Disease Prevention Program (CBDPP), three weaknesses were identified related to improvements needed in the CBDPP manual, timely submittal of the CBDPP, and needed improvements in beryllium-related area postings.

On October 19, 2007, YSO received a letter from TDEC accepting the proposed milestones to disposition Y-12 mixed waste on the Oak Ridge Site Treatment Plan. The proposed milestones were developed by B&W Y-12 and formally submitted by YSO. The milestone for the end of FY 08 was the disposition of 50% of the STP inventory. By the end of FY 08, B&W Y-12 had dispositioned 70.1% of the inventory (1,500 of 2,139 items). This noteworthy achievement was completed without any safety, transportation, or regulatory concerns. This achievement is outstanding and greatly exceeded YSO expectations. The B&W Y-12 accomplishments in the Unneeded Materials and Chemicals program were outstanding. Long standing junkyards (e.g., West End Vehicle Yard, 9720-16 Drum Yard) were eliminated. Environmental liabilities due to contaminated vehicles sitting outdoors were eliminated. And excess chemicals which were potential safety and regulatory problems were reused or dispositioned. B&W Y-12 is strongly encouraged to continue funding and implementing this highly successful program. At the beginning of the FY, 144 containers were stored on site greater than one year. At the end of FY 08, 107 containers were stored on site greater than one year. This is a solid improvement. However, DOE order requirement state that all non-legacy LLW be dispositioned within one year. This remains a long term lingering problem for B&W Y-12.

### **Safeguards and Security Summary**

The contractor achieved substantial accomplishments in the S&S Program Management functional area. The contractor effectively managed its vulnerability assessment program necessary to support Site Safeguards and Security development and Design Basis Threat implementation; achieved its 5% saving milestone; obtained YSO and NA-70 approval of the SSSP; performed exceptionally with the planning and conduct of the Nuclear Security Summit; provided solid support to the Highly Enriched Uranium Materials Facility project; and continued to enhance the configuration management process. However work is still required in the area of Annual Operating Plan/Implementation Plan updates.

Major accomplishments in Information Protection included the continued disposition of classified parts with a reduction of 77,000 cubic feet and the destruction of unneeded Accountable Classified Removable Electronic Media (ACREM) – reduction of 13%. Y-12 continued to use detailed oversight checklists and conducted over 932 field self-assessments of Classified Matter Protection and Control (CMPC) related activities. This resulted in substantially improved performance in CMPC, allowing YSO to optimize oversight activities, which is an excellent example of contractor assurance. YSO noted issues during FY08 with three pieces of ACREM that were not in accountability. Corrective actions were taken as a result.

In the Cyber Security area, major improvements were achieved in self-assessments and deficiency closures. Significant accomplishments included technical enhancements to the unclassified network with the continued deployment of two-factor authentication; reduction of desktop administrator privileges; the evaluation and procurement of a proxy device; the implementation of terminal servers; and the deployment of firewalls to all unclassified desktops. Host-based intrusion detection continued to be deployed to key systems throughout FY08. Of key significance this FY, was the improvement in the self-assessment program; the implementation of the “Big Yellow” network which resulted in a cost-avoidance of approximately \$3M annually; and the implementation of the Enterprise Secure Network. YSO identified issues with the implementation of technical solutions to prevent a man-in-the-middle attack; instances of security-significant changes without Site Office approval; and contingency planning.

In Personnel Security, YSO noted improvements in the communications between personnel security functions regarding employee status change; in procedures and desktop guide development; and with the self-assessment checklist which increases performance in contractor assurance. Excellent work was noted with the HSPD-12 effort and Y-12 is on track to meet the December deadline. YSO noted that although there were a number of improvements in the process for clearances and badging, that there are still shortfalls with regard to sub-contractors.

B&W Y-12 maintained an overall high level of performance in the NMC&A functional area. Y-12 successfully implemented the Safeguards First Principles Initiative, closed a 1999 material surveillance finding; obtained approval of a major revision to the NMC&A plan; completed two iterations of the Comprehensive Analysis of Safeguards Strategies (COMPASS) Report; and maintained a robust internal review program. YSO noted continued contractor attention is required in resolving a legacy incident of security concern; reduction of propagation of variance limits for one Material Balance Area (MBA); and enhancements of the hold-up measurement program.

Performance in the Physical Security functional area was “Satisfactory”. YSO saw accomplishments in the approval of key deviations which allow for resolution of long-standing vault-type room issues and the resolution of legacy Alpha-1 issues. YSO also saw improvements with overall contractor assurance with Y-12 developing self-assessment checklists and conducting over 600 field verifications and other assessments totaling over 3,600, which included performance tests, surveillances, management assessments, and independent assessments. This is a key milestone in contractor assurance. YSO noted continued issues during FY08 in the areas of maintenance planning and documentation. YSO believe B&W Y-12 is close to resolving long term issues associated with False/Nuisance Alarm Rates and the prioritization/integration of maintenance activities.

### **Facility and Site Management**

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

This is a new Functional Area for FY 2008, requiring a major effort by Production Facilities Department (PFD) to develop a Facility Condition Scorecard to status appropriate metrics, and to list and status their SRID compliance. Both the Scorecard metrics and the S/RID compliance demonstrated continuous improvement throughout this year. Significant progress was made in upgrading the facilities this year, including repairs to steam systems, air handling units and supply fans, painting, cleaning, etc. The focused effort to repair outstanding steam system deficiencies (steam blitz) across all of the production facilities was very successful. A two day Clean-Up was conducted in August at Building 9212 and an estimated 346 tons of material was removed and disposed. During this year, good progress was made on replacing four of the non-code compliant electrical panels. Technical Safety Requirement violations showed a slight increase this year to 9. Progress was noted in ensuring a sufficient staff of qualified Shift Technical Advisors and Shift Managers. Cost saving measures were implemented, including moving personnel out of 9204-4 and closing the change house, thus reducing surveillance and maintenance costs, which were used to accelerate cleanup. Facility management is showing positive results from an active involvement of facility personnel in facility conditions and from the improved funding made available this year for facility upkeep.

### **Maintenance Effectiveness**

The overall rating for Maintenance Effectiveness is “Good.”

The Performance Evaluation Plan for Maintenance was completely revised from the previous year, resulting in a major effort by F&IS to identify and report appropriate metrics and SRID compliance. All of the S/RIDs defined in the Maintenance Effectiveness section of the PEP were included in the assessments this year, whereas typically only a 1/3 are assessed in any given year. This substantial increase in S/RID assessments was necessary to get a baseline of S/RID compliance. Overall B&W Y-12 did a very good job accurately reporting their S/RID compliance and Maintenance metrics, and over the year showed improvement in almost all areas tied to productivity and safety performance. B&W Y-12 was very successful in reducing the fully burdened labor rate by \$6/hour over the 2007 rate, while still performing effective maintenance support as evidenced by their metrics and the significant decrease in production equipment downtime. F&IS developed an Apprenticeship Program for crafts, the first offered in several years, and the response by the community and interested applicants was overwhelming. Major accomplishments in the F&IS area include ensuring production facilities and equipment were available, re-routing the electrical power for building 9201-5, the 161-kV Breaker Refurbishment project, support to the energy efficiency goals, and progress in relocating people from Building 9204-1 in preparation for returning that building to ORNL. Planning and execution of work did not meet standards in the areas of Lock Out/Tag Out (LO/TO), Freeze Protection, and ensuring that the hazard identification process addresses all appropriate hazards.

### **Work Planning and Execution**

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

A number of operational errors occurred, increasing in severity and frequency in the latter part of the year, and ranging in scope from performing work not under Automated Job Hazard Analysis controls (without a procedure), using incorrect parts, improper storage, LO/TO discrepancies, incorrect transfer of material, and valves out of position during a key operations following maintenance or system restoration. There were also TSR violations in several areas as a result of poorly planned maintenance post work testing, improper labeling and problems with combustibles in a storage area. The LO/TO problems prompted B&W Y-12 to conduct a management assessment of the program. The LO/TO management assessment was very thorough and self-critical, and identified systemic problems in the training and field implementation areas as well as concerns about the uniformity of implementation. Additionally, B&W Y-12 has taken measures to address the Conduct of Operations performance including management expectations, Operational Performance Improvement training, and procedure compliance reviews which will extend through FY 09. Reduction of the backlog in deficiencies and weaknesses continues to be problematic and has changed little from the beginning of the fiscal year.

On the positive side, the Production Department was able to meet essentially all mission deliverables for the year, returned the West Casting line to service, resolved difficult technical issues including a briquette issue and a Molten Aluminum Nitrate issue, cleaned out tanks, began metal producing operations in the Oxide Conversion Facility and Reduction, and sustained operations in the wet chemistry area. The improvement in production capability is especially noteworthy given the operational challenge of working in a 1940-50's vintage facilities. The Production Department has continued Lean Manufacturing initiatives throughout its organization. Initial Event Information forms have been implemented for documentation of operational anomalies across the manufacturing organization and have been adopted for use more sporadically by other organizations. The manufacturing organization has also implemented a severity rating and event frequency metric that links to the Initial Event Information forms. Additionally, the B&W Y-12 Readiness Program remains a very strong program, and a model program for the complex.

### **Training and Qualification**

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

The Y-12 Training and Qualification program has achieved a level of maturity that is commensurate with a program which is both technically and programmatically sound, and supports safe and secure operations and mission accomplishment. B&W Y-12 has a stable program with a highly organized and thorough self-assessment element. 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, resulting in an Outstanding rating this year.

## **Engineering and Nuclear Safety**

The overall rating for Engineering and Nuclear Safety is “Good.”

At the end of FY 2007, the Nuclear Safety PAM year end was meeting expectations but was trending down. For FY 2008, Engineering was added to this PAM rating. For most of the period, the Engineering and Nuclear Safety rating was evaluated as meeting performance expectations. However, near the end of the period, a downward trend was noted leading to the year end rating above for FY 2008. The Y-12 Engineering Program meets expectations by meeting quality standards while providing engineering product deliverables on-schedule to support the mission accomplishment of the Y12 National Security Complex. B&W engineering supported Y12 operations and project work in a manner that contributed to the Y12 mission accomplishment. There have been no significant deficiencies reported in B&W engineering support or services for FY 2008. Engineering provided significant real-time technical support to restore the Oxide Conversion Facility (OCF) to service following more than one year of shutdown, and additionally provided support to the HEUMF project through start up testing for several plant upgrades and procedure development for system test and acceptance. In Criticality Safety, new NCS metrics were developed to support the 9212 continued safe operation oversight activities. The initiative to reroute 9212 process condensate to C-Wing tanks (instead of presently used basement tanks) is an overall safety improvement consistent with ISMS principles. The aggressive project management of the Inadvertent Accumulation Prevention Program (IAPP) baseline walk-down review process has resulted in the completion of the phase one baseline effort and is considered a notable achievement. In the Safety Basis area, B&W provided revised safety basis documents to support annual updates, modernization, and changes to facilities. Resolution of the Airborne Release Fraction (ARF) issue and the HEUMF fire water supply issue were instrumental in continued success of modernization efforts. B&W worked well with YSO to reach mutually agreeable resolutions. B&W has demonstrated leadership in the development and implementation of DOE-STD-1189.

Engineering did not achieve the expected progress in developing system process and design descriptions. This further delayed improvements to the site’s documentation of operating systems and perpetuates potential latent errors in the knowledge of process systems. Several issues were recorded by the independent Health Safety and Security (HS-64) assessors during the FY 2008 assessment of Engineering. In Criticality Safety, inadequacies in the peer review process resulted in technical defects in NCS analyses, unacceptable fissile operations involving inadvertent transfers and use of an inappropriate container, and highly critical external reviews of NCS analytical documents. Further, the implementation plan for establishing the Double Contingency Principle was noted to be flawed. The potential impact of this spans both the operation of existing nuclear facilities as well as the HEUMF and UPF projects. Also, B&W completed the installation of the Primary Extraction raffinate monitor; however the planned length remaining for testing before placing the monitor into service is of concern to the YSO. This further lengthened the time before any criticality safety benefit has been realized for this project. NCS engineering attention to discrepant field conditions was good, however performance to ensure container labeling and loading consistency of requirements and Large Geometry Exclusion Area designation under a fissile solution was less than adequate. In the Safety Basis area, B&W performed well to develop and submit the required safety basis documents; however, there were some quality issues in several submitted documents. B&W approved three YTIP activities in the safety basis area that targeted process improvements in safety basis requirements for chemically hazardous facilities, streamlining annual update processes, and streamlining the Unreviewed Safety Question Determination. B&W has implement two of these process improvements and has initiated an expert-based USQD pilot for the third.

## **Emergency Management**

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

This rating is based on several contributing factors: Y-12 Emergency Management Program Organization (EMPO) found innovative ways to develop training and exercise activities that enhanced Emergency Response Organization (ERO) response capability, both on-site and off-site. B&W Y-12 initiated improvements on several existing support systems. B&W Y-12 continued with initiatives to replace the Fire Hall and PSS/TSC with a new Complex Command Center. The project now stands ready to achieve CD-1 authorization on schedule. B&W Y-12 also diligently pursued ways to improve interoperability and collaboration with off-site agencies and organizations.

B&W Y-12 continued to maintain a strong presence at the 2008 DOE Emergency Management Issues Special Interest Group Annual Conference and was recognized by the NNSA Administrator during his opening remarks. Additionally, Y-12 continued to foster interoperability with other Oak Ridge Reservation and HQ organizations by providing essential support to the ORNL Full Participation Exercise and HQ No Notice Exercises. Of note, EMPO successfully completed the HS-63 Inspection of Emergency Management at the Y-12 NSC, with outstanding results. In recognition of the positive inspection results and the effective implementation of Contractor Assurance System processes, YSO was able to significantly reduce its direct assessment activities in this area. B&W Y-12 is in a good position to maintain high quality performance into the next fiscal year, based on experienced staff and mature program elements. Challenges for 2009 include their continued completion of enhancements to video surveillance, upgrades to the Public Warning Siren System and the support of the Complex Command Center project, must continue to receive emphasis. Additionally, B&W Y-12 must successfully complete the remaining corrective actions from the HS-63 inspection conducted in October/November 2007.

### **Radiation Protection**

The overall rating for Radiation Protection is “Outstanding.”

The rating is based on continuing improvements in the airborne radioactivity monitoring program, continuing DOE Laboratory Accreditation Program (DOELP) accreditation, continuing support to outside entities, favorable recognition by HSS of the program’s status, disposition of legacy materials, continued reduction (down posting) in radiological areas, continued support to site projects, and helping to minimize project issues by appropriate planning and execution. During the year, B&W Y-12 RADCON implemented the new iCAMs, which have improved the overall air monitoring program and reduced the number of false alarms, leading to increased productivity. The down posting of radiological areas and disposition of legacy materials lowers the overall site risk posture. Re-accreditation in DOELAP re-affirms the excellent monitoring capabilities and provides reliable data against future litigation. Support to outside entities increases our posture as the Uranium Center of Excellence. Support of site projects, including UPF, ensures the best possible design and control and helps to control future radiological work to maintain doses ALARA.

B&W Y-12 will be challenged in 2009 to continue to work with facility organizations to drive radiological performance excellence within those organizations, to minimize personnel contaminations, to become more proactive in self-identifying issues, to continue to pursue cost savings initiatives, to lower overall doses and to continue to develop initiatives that drive performance beyond regulatory requirements. B&W Y-12 RADCON established policies and procedures related to radiological protection, while recognized by HSS as a model program require improvements in the effective flow down of programmatic requirements to facility organizations. This is needed to reduce the number of personnel contaminations, reduce overall doses, and reduce overall costs associated with meeting regulatory requirements.

### **Health and Safety**

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

B&W Y-12 activities are conducted with a high regard for ES&H and regulatory requirements, and are consistent with Y-12 NSC ISM policies and procedures. B&W Y-12 provided excellent support for the HSS assessment activity and represented YSO at a NNSA ISM workshop. B&W Y-12 had seven papers selected for presentation as part of this year’s DOE ISM Conference, which demonstrated the overall strength of the Y-12 program. There were no USDOT Commercial Motor Vehicle recordable accidents, which extends the recordable accident free rating for the Y-12 into its 15th year. The annual safety EXPO was very successful and there is a proactive awareness campaign to promote motor vehicle safety at Y-12. Aviation activities were conducted with a high regard for safety and professionalism. The ES&H President’s Forum has continued to be a strong tool for safety improvement and employee involvement. B&W Y-12 initiated an aggressive Safety Improvement Plan that leverages many existing programs to enhance safety and the overall safety statistics continue to improve, demonstrating the commitment to safety. Emphasis is also being placed on improved safety performance through the use of Human Performance Improvement and Behavior Based Safety. The Fire Protection Program has been implemented and shows signs of improvement. B&W Y-12 has shown strong initiative in the scheduling and completion of Fire Protection Program Comprehensive Corrective Action Plan (FPPCCAP) items for a stretch performance –based incentive (PBI) that

began late in FY-08. Based on little increase in funding FPPCCAP made progress in eliminating high and moderate risk items off of the list and incorporated the post-FPPCCAP items into a format that will allow tracking of new items for future activity scope. A path forward was also agreed upon with YSO for assumed risk items that will provide the means for dispositioning them under the current FPEA schedule. B&W Y12 continues forward on the path toward lifecycle management of chemicals. Improvements for a better business case for running chemically hazardous facilities have moved forward with YTIP-16, which better clarifies the intent of DOE O420.1B. Information garnered from the welding accident was used as a means to improve the job hazard analysis (JHA) process and worker safety. The lessons learned process employed in relation to the welding accident served as an indicator of program maturity.

To improve the rating, B&W Y-12 needs to continue to make improvements in the beryllium control program and self-identify and correct issues prior to identification by YSO. They need to identify and implement cost savings measures without compromising safety and health and they need to be proactive in implementing new and innovative technologies to improve the overall program. Continued emphasis is required concerning proper operation of commercial motor vehicles and procedural compliance regarding on-site transfer of materials, especially materials designated "Safety Basis Materials of Concern (SBMOCs). Progress must continue on FPPCCAP and FPEAs preparation. B&W Y-12 should continue to emphasize the reduction of hazardous chemical inventories and make outlined changes to the chemical management program that lead to the lifecycle management of chemicals.

### **Environmental and Waste Management**

The overall rating for Environmental and Waste Management is "Outstanding."

The strong upward trend in performance is due to select accomplishments during the FY but primarily due to significant accomplishments during the month of September. Noteworthy accomplishments include dealing effectively with the excess contaminated water from the flood of 9201-1; the 51 container reduction in the legacy waste inventory; greatly exceeding the FY 08 Site Treatment Plan milestone (70% actual inventory reduction versus a 50% reduction milestone); submitting a timely and complete NPDES permit application; and the successful disposition of several UMC projects. Overall, FY 2008 was a very successful year for B&W Y-12.

### **Quality Assurance**

An aggregate evaluation of surveys and assessments conducted this year indicates the QA program is effectively implemented. The Specification Exception Reports (SXR) metrics show First Submission Efficiency remained high with a slight dip due to material issues, SXR/unit submitted was below 10 for the whole fiscal year and Inspections Performed fell in the second half of the year due to LEP transitions. Most areas such as Physical Testing, Material Movement, Quality Engineering, General Manufacturing, Dimension Inspection, Container Refurbishment, and Production Engineering did not report any product certification audit discrepancies, whereas Assembly and Inspection have noted a negative trend. The reduction in ORMC Laboratory backlog of active systems/equipment has been decreased with target goals met throughout the fiscal year such that 31-60 days backlog (target <35%) was below 20%, 61-90 days backlog (target <5%) averaged 3%, and backlog >90 days backlog was at 0%.

The following required documents were submitted to YSO for review and approval on time; Quality Assurance Program (Y60-101PD), Weapons Quality Assurance Program (Y60-WP-001), Management Self Assessment Report, and the annual Report on Quality Management System and Weapons Activity Metrics. There were nine Incoming Material Reports (IMRs) written against material sent out of Y-12 which all were associated with the shipping container program. Procurement Quality Assurance increased oversight on the program that resulted in a decrease in IMRs the last quarter of the FY. The last quarter of FY2008, B&W Y-12 issued five Quality Assurance Defect Reports (QADRs) against certification records which were attributable to the start of the new LEP products. Instrumentation improved for FY 2008 as evidenced by the installation of the Moore M48 Coordinate Measuring Machine (CMM) and the M32 Coordinate Measuring Machine (CMM) and other improvements.

Several findings were identified through B&W Y-12 QA assessments in the following areas: ISMS Continuing Core Expectation (CCE) 6 and 3, Field Calibration and Rad Con Calibration. A number of external assessments on

Analytical Chemistry Organization (ACO) were completed by the Nuclear Operations Group, The American Industrial Hygiene Association, DOE Laboratory Accreditation Program, State of Utah Biennial Reaccreditation, American Industrial Hygiene Association Reaccreditation, Primary Standards Laboratory technical survey. The National Voluntary Laboratory Accreditation Program (NVLAP) assessment was completed on ORMC and retained accreditation. Finally, a QAS 2.0 survey on the W76-1 Program was conducted by NNSA Quality Assurance and covered 16 of the QC-1 elements which concluded that weapon QA elements are in place and that there is adequate evidence that W76-1 parts and assemblies meet specifications and design intent.

## **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. S&S Program management and planning must ensure the assets protected at the Y-12 National Security Complex are provided adequate graded protection against theft, diversion, and sabotage of special nuclear material and classified or sensitive information.

B&W Y-12 met budget milestones on operating costs, capital project variances, and carryover. Contractor cost savings of \$6M annually were realized by implementing the Safeguards First Principles Initiative alone - which met the AOP milestone to achieve a 5 percent savings. Other drivers for this rating include the approval of the Y-12 Site Safeguards and Security Plan; the overall positive feedback from the NA-70 pre-Office of Independent Oversight; the implementation of the performance assurance program and excellent communications with YSO to increase shadow assessments; the outstanding success of the Nuclear Security Summit; robust policy issuance; HEUMF support; Incident of Security Concern program performance; detailed, critical accomplishments in the areas of vulnerability analysis and Design Basis Threat (DBT) implementation; the robust configuration management processes; and overall positive results from YSO assessments.

The contractor was very successful at responding to DBT requirements and changes. On February 27, 2008, YSO concurred with the DBT IP and requested HQ approval. During FY 2008, YSO consistently noted the DBT/VA program at Y-12 is well managed and effectively generates analysis necessary to support SSSP approval and DBT implementation. B&W Y-12 also has a mature security technology deployment program that includes funding from DOE and NNSA for first deployments with lessons learned shared with other Sites.

While many positive improvements were noted during FY08, the timeliness of AOP updates remained an issue in FY08 as noted in FY07 year-end performance analysis matrix. This affected the effectiveness of the AOP as a “real time” management tool.

## **Physical Security**

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

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. Physical Security must ensure all barriers, alarms, sensors, and storage configurations perform in a manner to deter and detect attempts to steal or divert special nuclear material or classified/sensitive matter with high probability of detection and reliability.

Issues identified during FY08 include inadequate documentation of emergency alarm system repairs/maintenance, inadequate documentation of emergency repairs and failure to include all Critical System Elements in the Preventive Maintenance program. Additional issues include the initial difficulty in implementing the Non-Special Nuclear Material Protected Area Vault Type Room (VTR) deviation (NNSA-YSO-08-191). One other outstanding item is that the new Visio-Wave security camera switcher system was not installed on schedule. Positive actions noted in FY08 include; approval of variances (190 and 191) that allow resolution of long-standing VTR issues, resolution of the protection of classified matter at the Alpha-1 facility by installation of a security system and approval of a variance, transitioning the Central and Secondary Alarm Station operating systems to a new, faster and more user friendly computer system, replacement of the Central Alarm Station (CAS) Uninterruptable Power Supply (UPS), completion of the project to fully automate access control at portal 5, replacement of 50% of the PIDAS microwave sensors, development of an implementation plan to bring security systems into full compliance with DOE M 470.4-2 preventive maintenance requirements, progress in developing an acceptable False Alarm Rate/Nuisance Alarm Rate (FAR/NAR) calculation methodology and development of draft security systems metrics. Overall B&W Y-12's Physical Security Program matured significantly in FY08.

## **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. B&W Y-12 must ensure that protection requirements for classified and sensitive matter, in any form, are effectively implemented.

B&W Y-12 exhibited strong performance in Classified Matter Protection and Control self-assessments with 932 field verifications conducted in 125 facilities; the destruction of over 1,300 pieces of Accountable Classified Removable Electronic Media (ACREM) (reducing the inventory by 13 %); 100% ACREM accountability assessment with no problems; implementation of a compliant and effective ACREM accountability and CREM tracking system, and overall strong and consistent performance in all other information protection-related programs (i.e., Classification, Special Access Programs, Operations Security, Technical Security Countermeasures, and Counterintelligence). During FY 2008, four deficiencies were resolved and closed, including a long-standing destruction of classified issue. B&W Y-12’s strong contractor assurance program, including the development and use of assessment checklists, in this area resulted in an effective program as demonstrated by the results of Y-12 Site Office Evaluations.

In February, YSO discovered two pieces of accountable classified electronic removable media (ACREM) in a server in a computer room. Because of this discovery, B&W Y-12 conducted a critique on February 13, 2008, to determine the facts surrounding this issue. YSO observed the critique and noted no issues. The critique resulted in a number of corrective actions, one of which was a 100% assessment of all ACREM cabinets and data centers to determine if any additional media located in a Secret Restricted Data (SRD) system were unmarked

## **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. B&W Y-12 closed 8 deficiencies this year. Of key note this year was B&W Y-12’s implementation of a Big Yellow network yielding a cost avoidance of over \$3M annually; the scope reduction in the OIO inspection; the successful completion of actions to allow connections to the Enterprise Secure Network (ESN); and the overall positive performance in a recent Headquarters Emissions Security and Protected Transmission System review. In addition, Y-12’s planning also paid off at the end of the FY when Y-12 received an additional \$1.5M for cyber security and ESN upgrades.

B&W Y-12’s work in implementing technical solutions to reduce risk with the implementation of desktop firewalls; intrusion prevention system; host-based intrusion detection; two-factor authentication; implementation of terminal servers for remote access; the reduction of desktop administrators; and the implementation of diskless greatly strengthened the protection of unclassified and classified data. In addition, Y-12 enhanced the Cyber Security program by updating key programmatic documentation such as the Y-12 site-wide risk assessment, the certification and accreditation approach, and the cyber security architecture. YSO saw strong risk-based fiscal management, an increase in the conduct of self-assessments, completion of milestones in the NAP implementation plans, and overall timely submission of Headquarters deliverables.

During FY08, YSO noted issues in regard to reporting security-significant changes to YSO; failure to implement a technical correction to prevent a specific man in the middle attack; separation of duties; database and system configuration management; contingency planning; and a non-comprehensive NAP implementation plan.

### **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. This area includes access authorization, Human Reliability Program, and control of visits. All of which must be implemented in a manner to ensure only authorized individuals are granted access to classified or sensitive information.

The contractor sustained good performance and improvement throughout the year. In the first Quarter, B&W Y-12 had an Incident of Security Concern. YSO noted that the B&W Y-12 Visitor Control failed to execute and/or maintain a record copy of the Visitor General Employee Training Overview brochure per their procedure. B&W Y-12 addressed the issue and the procedure is now being followed. A summary review of the past year notes improvements in the area of communications between personnel security functions regarding notifications for employees and sub-contractors status change, which was previously identified via past Incidents of Security Concerns in FY 2007 and addressed through a number of Corrective Action Plans. These improvements include strengthened and formal communications, implementation of procedure changes, development of desk top guides by both B&W Y-12 Personnel Security (visitor control and badging) and PSI/NetGain (clearance processing), and self-assessment checklist. Management attention must continue in this area to ensure effective communication. Also noted as positive performance is the continued exceptional work accomplished regarding the HSPD-12 effort and work with HQ and the new GSA contractor in the effort to implement the start of phase II. The site is on track to meet the 31 December 2008 badge deadline. In the third Quarter, B&W Y-12 continued to mature their self-assessment program and completed assessments in the areas of compliance with HSPD-12 requirements, Drug and Alcohol Collection Technician proficiency in support of HRP, and the closeout of Foreign National visits. B&W Y-12 Personnel Security fully implemented efforts to integrate and support the WSI-OR Protective Forces for daily operations and planning in an HSPD-12 enrollment approach that saved time and reduced overtime. YSO identified that although a number of improvements in the process and procedures regarding clearances and badging are in place, there are still shortfall areas, specifically with B&W Y-12 subcontractors. The 2008 Security Symposium conducted by B&W Y-12 in August was a major positive step in an effort to address subcontractor responsibilities and provide education and information.

### **Nuclear Materials Control and Accountability (NMC&A)**

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

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. This program must ensure all special nuclear material is controlled and accounted in manner to deter, detect, and prevent diversion or theft.

B&W Y-12 maintained an overall high level of program performance, successfully implemented the safeguards-effective and operationally efficient Safeguards First Principles Initiative (SFPI), completed two iterations of the Comprehensive Analysis of Safeguards Strategies (COMPASS) Report on program effectiveness (which is an effective self assessment or performance assurance tool), continued progress toward reducing uncertainty associated control limits, closed a 1999 Material Surveillance Finding, continued a robust internal review and assessment program, maintained an experienced/qualified NMC&A program management/staff, and obtained approval of a major revision of the NMC&A Plan. During September there were two incidents of security concern. One was resolved, and the resolution of the other is expected in early FY2009. Suggestions for improvement include; resolution of the legacy IOSC, reduction of Propagation of Variance (POV) limits for MBA 77, demonstration of significant advances in efficiency or effectiveness, such as significant progress on Dynamic Material Control & Accountability System (DYMCAS) replacement strategy, enhancement of the Hold-up Measurement Program, and HEUMF NMC&A program execution, while all other positive program attributes are maintained or improved. Overall, B&W Y-12's performance in this area was exceptional, especially when considering the operational efficiencies associated with SFPI, i.e. greater than \$5M in annual savings and 17,000 operations hours, while maintaining high protection effectiveness.

## FY 2008 STRETCH AWARD FEE INCENTIVES

### I. MISSION

#### A. DSW

1. **Performance Measure:** Support On-Going Code Blue Activities.

##### **Performance Targets:**

- a. Execute Code Blue experimental studies in the areas of solvent chemistry, grinding, drying and trigger determination in accordance with the established W76-1 Recovery Plan Critical Path Schedule.
- b. Support the March 2008 NNSA Path-Forward decision with Code Blue activities as required to resolve remaining technical issues
- c. Plan and execute Code Blue activities to minimize impacts to FPU and WR production.
- d. Ensure appropriate resources are dedicated to this activity.
- e. Conduct thorough and well-coordinated communication with all stakeholders, including daily meetings, video and teleconferences, written reports, briefings, and presentations as requested and necessary.
- f. Maintain configuration control (scope, cost, schedule) in accordance with approved NNSA baseline plans established by the federal Program Manager.

**Performance Results:** Code Blue was resolved expeditiously by B&W Y-12 in the first half of FY 2008. The contractor had positioned the W76-1 program to move forward in a timely fashion with the build of the First Production Unit (FPU) in the third quarter of FY 2008; however, the NNSA down-select decision was delayed until early May. Code Blue work on an Alternate Material was also performed in an expeditious manner and was ready for execution in early CY 2008. With the exception of an issue with configuration control at the conclusion of Code Blue, B&W Y-12's performance was outstanding.

2. **Performance Measure:** Programmatic Closeout of the B61 ALT 357 (CR 08-74)

##### **Performance Targets:**

- a. With existing resources, accomplish full and complete closeout activities for the B61 ALT 357 as required by the Development & Production Manual, Technical Business Practices, and any other requirements as specified by the Federal Program Manager.

**Performance Results:** B&W Y-12 did an excellent job of generating efficiency gains in the B61 ALT 357 program which freed up resources from which this award fee stretch was permissible. Those efficiencies allowed B&W Y-12 to disposition a majority of the production tooling; disposition 100% of the Manufacturing procedures and about 50% of the Product Certification procedures; and disposition about 50% of the components. Closeout work that remains to be completed (records scans and loading of data captured electronically) had to be carried forward into FY 2009 since the production work did not complete in August as planned. The only issue identified during the closeout work was the unavailability of a schedule (and monitoring/reporting against the scheduled work) for this work task. Although requested several times by YSO, no schedule or monitoring was provided.

#### B. Readiness in Technical Base and Facilities/Facilities and Infrastructure Recapitalization Program

1. **Performance Measure:** Demonstrate substantial improvement in performance with regard to Material Recycle and Recovery operations

##### **Performance Targets:**

- a. Significantly increase the runtime of wet chemistry, reduction, and the oxide conversion facility.

Operations of enriched uranium processes improved significantly in FY08. Since the most recent restart of Oxide Conversion Facility (OCF) operations, the production plan was exceeded with the production of 414 kg of purified metal. This was a major achievement considering the difficulty in maintaining consistent operations that was experienced in previous years and the first part of FY08. A significant quantity of material was allocated to meet Strategic Reserve requirements. The Strategic Reserve material and improved operations led to decreased risk associated with supplying purified metal to DSW.

The improved operability of wet chemistry systems allowed a large volume of safe bottles to be processed. Many safe bottle locations were left empty, which allows space for additional backlog material to be relocated to MRR areas for processing.

- b. Demonstrate safe and timely recovery of production activities from unplanned events and excursions.

The increased operational reliability of MRR processes demonstrated that B&W Y-12 is more effectively responding to process upsets. One example was the quick response to issues with the Intermediate Evaporator gamma monitor. The restart of OCF allowed purified metal reduction to resume. The processing of backlog material and production of purified metal also served as evidence of improved effectiveness in responding to problems.

2. **Performance Measure:** Demonstrate substantial increased support in preparing surplus facilities for demolition and/or transition to Environmental Management. (CR 08-47)

**Performance Targets:**

- a. By September 26, 2008, issue the following for internal B&W Y-12 review: 9201-5 Brine Line Reroute 100% design package as well as 9201-5 Steam Line Reroute 60% design package.

The Brine Line reroute 100% design package was issued on September 11, 2008. In addition to completing the performance measure, final comments were incorporated and the design was certified for construction on September 23, 2008. The 100% design package for the steam line reroute was issued on September 24, 2008, exceeding the 60% design goal. Both of these designs were completed significantly ahead of schedule.

- b. Through efficiencies and productivity gains, accomplish additional work scope estimated to be valued at \$100K within the original Legacy Pool baseline funding.

Through efficiencies the Legacy Pool, 35 drums of excess material in 9201-5E were sampled, analyzed, and characterized to prepare them for removal from the facility. The cost for this activity was estimated at \$100K, and was completed for \$95K. There were additional efficiencies in the Legacy Pool that resulted in an underrun of \$2.5M.

- c. Develop inventory of non-SNM classified material and HMIS inventories in 9201-5 and 9204-4, to include area location, approximate material volume, proposed disposition path, and approximate disposition cost.

The inventory of non-SNM material and HMIS inventories in 9201-5 and 9204-4 were completed. Removal of these materials began, and goals for FY 2008 were exceeded.

- d. Complete 60% of the utility isolation design required to support the demolition of Buildings 9720-19, 9720-19A, and 9720-19B (Rubber Shop facilities).

The 60% design package for utility isolation for the rubber shop facilities was completed in early September, meeting the target.

- 3. Performance Measure:** Demonstrate substantial increased support for FIRP demolition and recapitalization activities (new scope added on July 15 and NOT covered by the PBI). (CR 08-80)

**Performance Targets:**

- a. For the \$1.3M in new work scope associated with the Roofing Asset Management Program and the moves from Building 9709 complete a significant portion of the work by September 30, 2008. (Progress judged by end-of-year costing performance [% of available BA expended] and percentage of work completed.)

This additional scope was added in the fourth quarter of FY 2008. Of the \$1.3M in additional FIRP funding, \$400K was allocated to Kansas City. Approximately \$400K was used to complete all of the additional RAMP scope that was identified, and all of the remaining funding was used for moves from Building 9709. The fraction of available Budget Authority expended was nearly 100%. All of the additional RAMP scope was completed, 100% of the well shop relocation was completed, and 50% of the power operations relocation was completed.

- 4. Performance Measure:** Demonstrate progress toward turnover of 9204-1 to ORNL. (CR 08-89)

**Performance Targets:**

- a. Relocate the occupants out of 9204-1 by September 30, 2008 in preparation for turnover to ORNL in FY09.

All personnel were moved out of 9204-1 during August and September.

- b. Relocate the maintenance shops out of 9204-1 by September 30, 2008 in preparation for turnover to ORNL in FY 09.

All maintenance shops were relocated to 9737 or 9201-3 during August and September.

In addition to the personnel and maintenance shop moves, approximately 80% of all excess equipment and waste materials were removed from the facility.

**C. Process and Productivity Improvement (CR 08-43)**

- 1. Performance Measure:** Establish a productivity baseline for all B&W Y-12 organizations as one of the activities entailed in developing and implementing an integrated and expanded site-wide program.

**Performance Targets:**

- a. Implement and complete productivity reviews for all B&W Y-12 organizations.  
b. Identify "quick win" productivity activities that will be completed by various functional organizations prior to Sep 30, 2008.

**Performance Results:** B&W Y-12 was able to plan, execute, and complete productivity reviews for all fifteen B&W Y-12 organizations that were planned for this year. Each organization received a written report and presentation during the productivity review to inform management of potential opportunities for improvements. During the productivity reviews, opportunities for quick wins were identified. Quick wins are defined as projects that could be completed by the end of FY 2008 that would provide immediate return to the organization. A total of 46 quick wins were implemented from June through September, 2008. B&W Y-12 did an excellent job of completing the stretch award fee incentive.

**D. Nuclear Nonproliferation and Complementary Work (CRs 08-52, 08-69 and 70)**

- 1. Performance Measure:** Develop a process to cast high quality uranium aluminum alloy test materials for use as surrogate sources for SNM by September 30, 2008.

**Performance Targets:**

- a. Cast a minimum of one high quality spherical test object.
- b. Sample the as cast material for impurities as well as homogeneity of uranium and aluminum.

A test sphere was successfully cast and sampled completing this stretch award fee goal.

- 2. Performance Measure: Increase Technology Transfer and Partnership activities.**

**Performance Target:**

- a. Execute in fourth quarter FY-08 two partnership agreements that support technology, transformation, and complementary work activities including licensing agreements or in-kind Cooperative Research and Development Agreements (CRADAs), Memorandums of Agreement (MOA) or Memorandums of Understanding (MOU), and collaborative initiatives via Plant Directed Research & Development (PDRD).

Y-12 exceeded this performance measure, having completed a new license agreement (Adaptive Methods), two new Memoranda of Understanding (MOUs), the Enterprise Center and Kent State, and two amended licenses for time extensions (AMETEK).

- 3. Performance Measure: Increase the number of scheduled Nuclear & Radiological Field Training Center training events.**

**Performance Target:**

- a. Obtain a minimum of 12 FY-09 training event commitments\* by the end of FY-08. \*Written documentation (e-mail) from customers indicating the week(s) desired/reserved for training in FY-09 will suffice as a commitment.

The Radiological/Nuclear Field Training Center (RNFTC) received commitments for 17 FY 2009 training events from the following: Indiana, Ohio, Florida, C-CMRF Reserve Component (6 events), C-BIRF, AFRAT (2 events), DTRA, Canada, Mississippi, EPA and Minnesota.

- 4. Performance Measure: Enhance Y-12 manufacturing (machining/fabrication) capabilities through new Complementary Work.**

**Performance Targets:**

- a. Obtain at least one manufacturing (machine fabrication related) project during fourth quarter of FY-08.

A manufacturing project was obtained in support of the Oak Ridge National Laboratory (ORNL). A Spallation Neutron Source TOPAZ Detector Array Tank Rapid Prototype was produced to support design modification for manufacturability.

- b. Provide at least two cost estimates in response to separate customer requests to perform manufacturing (machining/fabrication related) work in FY-08.

Two cost estimates were provided in response to customer manufacturing requests: one was for the ORNL Spallation Neutron Source TOPAZ Detector Array Tank Design Analysis for Manufacturability and the second was for a Major Tool and Manufacturing USST-DEV-31 Ring Set.

**5. Performance Measure: Expand the performance testing work performed by the Technology Application Center.**

**Performance Target:**

- a. Expand the work performed for the Defense Threat Reduction Agency (DTRA) beyond testing: to include training, exercise, and technical support by obtaining a funded project in 4<sup>th</sup> quarter of FY-08.

Y-12 submitted a revised scope of work to DTRA adding additional areas of work beyond testing. DTRA issued two task orders for estimates in August for exercise support, conduct of operations (ConOps) and tactics, training, and procedure task. Estimates were forwarded to DTRA in August, and Y-12 received \$746K in funding in September to perform this additional scope.

**6. Performance Measure: Expand the Physical Protection and Risk Management work.**

**Performance Target:**

- a. Develop a WFO relationship with the Department of Homeland Security (DHS) Science & Technology organization by obtaining Y-12's first ever project in the fourth quarter of FY-08.

Y-12 received a project in August to perform an assessment on the National Biological and Countermeasures Center (NBACC) located on Ft. Detrick, Maryland.

**7. Performance Measure: Expand work with the Southeast Regional Research Initiative (SERRI).**

**Performance Target:**

- a. Obtain two new Y-12 tasks/projects for SERRI through ORNL during 4<sup>th</sup> quarter FY-08.

In partnership with Mississippi State University, Y-12 submitted a proposal in June 2008 to develop an alternative transportation security analysis model. Y-12 also submitted a proposal in July 2008 for Phase II of Policy Constraints for Fusion Centers. Although Y-12 expects notification of win for both of these projects, this notification has not been received.

**8. Performance Measure: Develop a process to machine small diameter (e.g., 1/8") rods of high quality uranium to be used as certified reference materials for national resources.**

**Performance Targets:**

- a. Machine a minimum of one high quality, uranium rod to be used for certification reference materials.

During September, Y-12 completed fabrication of a high-quality uranium rod to be used for certification reference materials.

- b. Sample the as-cast material for impurities as well as homogeneity of uranium.

The as-cast material was sampled and deemed to be homogeneous to the satisfaction of the New Brunswick Laboratory (NBL).

**E. Campaigns (CRs 08-76 and 08-77)**

- 1. Performance Measure: Complete three milestones for the Infrared (IR) Debonding project to represent the completion of designing, fabricating, testing, and delivering a nuclear safety significant SSC in less than seven months from the award of the contract to a vendor.**

**Performance Target:**

- Initiate the factory acceptance test (FAT) of the equipment by 9/30/08.
- Complete the FAT by 9/30/08.
- Receive vendor delivery of the IR Debonding unit by 9/30/2008.

B&W Y-12 made a strong effort to incentivize the vendor to complete the fabrication of the unit ahead of schedule; however, quality issues arose with the vendor in July and B&W Y-12 was not able to complete any of the performance targets.

- 2. Performance Measure: Implement Non-Destructive capability on the Laser Gas Sampling Equipment for the Life Extension Program (LEP).**

**Performance Target:**

- Complete the Engineering Evaluation (EE ) for LEP Non-Destructive Laser Gas Sampling operations by August 29, 2008.

Although B&W Y-12 negotiated a method with LANL to remove the condition on the Quality Engineering Release (QER), the EE for non-destructive laser gas sampling operations was not completed in August. Two of the three planned LEP EE evolutions were completed and a viable process was demonstrated to the design agency. The EE was completed in early September.

- 3. Performance Measure: For the Leak Test Station Upgrades for one unit, complete Readiness activities**

**Performance Target:**

- Complete the operational checklist by September 30, 2008.

B&W Y-12 completed the readiness activities for the Leak Test Station upgrades project with a signed copy of the operation checklist submitted to YSO in September. This performance target was completed.

- 4. Performance Measure: Accelerate installation of the Triton Mass Spectrometer for Directed Stockpile Work.**

**Performance Target:**

- Complete the walkdown of the area with YSO showing that the installation tasks have been finished by September 30, 2008.

B&W Y-12 successfully installed the Lithium Mass Spectrometer. YSO verified the operation of the equipment in the plant laboratory on a walk-down in September. This performance target was completed ahead of schedule.

- 5. Performance Measure: Complete the characterization analysis of a special casting part for UPF.**

**Performance Target:**

- a. Complete the characterization analysis of a special casting part by September 30, 2008. The characterization will consist of:
  - Parting the casting and visual examination
  - Metallographic analysis of casting by polished-section microscopy
  - Chemical analysis of casting
  - A minimum of three samples will be analyzed and a final report will be issued explaining the results.

B&W Y-12 made three unsuccessful attempts to complete a special casting in September. None of the performance targets were completed in FY08.

## F. Projects

**Performance Measure:** Submit for approval Critical Decisions for projects that support Y-12 transformation objectives. (CR 08-87)

### Performance Targets:

- a. Submission and approval of CD-0 for the Nuclear Facility Risk Reduction Project to the Acquisition Executive by September 30, 2008.

Performance exceeded expectations. This stretch goal was achieved in a timely manner with documentation provided for critical decision approval.

- b. Submission and approval of CD-1 for the Complex Command Center to the Acquisition Executive by September 30, 2008.

Performance exceeded expectations. This stretch goal was achieved in quality manner.

## II. OPERATIONS

### A. Engineering and Nuclear Safety

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

### Performance Targets:

- a. Perform actions required to reduce the hazard category for any category 3 nuclear facility to less than 3 such that the safety basis can be eliminated.

No actions were taken by the contractor.

### B. Safeguards and Security

1. **Performance Measure:** Site security planning activities fully support DOE and NNSA planning, programming, budgeting, and evaluation requirements.

### Performance Targets:

- a. Generate a cost savings of 5% of the Base Program while maintaining 100% of obligations.

2. **Performance Measure:** Implement the concept of “least privilege” for unclassified desktop administrators at the Y-12 National Security Complex.

**Performance Targets:**

- a. Implement the practice of “least privilege” with implementation reaching at least 2,500 of 5,000 unclassified devices to ensure users operate with the minimum privileges necessary by September 25, 2008.

**C. Integrated Facilities Disposition Project (CR 08-60)**

1. **Performance Measure:** Support accelerated disposition of surplus facilities.

**Performance Target:**

- a. Draft a Memorandum of Agreement (MOA) and conduct negotiations with ORO to define a mutually acceptable scope associated with the transfer of Building 9201-5 to Environmental Management.
- b. Obtain ORO written agreement on the MOA.

B&W Y-12 did draft a memorandum of agreement for the transfer of 9201-5. However, they did not obtain the written concurrence of the Oak Ridge Office. The YSO expectation was that both items must be completed to satisfy this incentive.

**D. Waste Operations (CR 08-61, CR 08-75)**

1. **Performance Measure:** Support waste disposition activities.

**Performance Targets:**

- a. Complete disposition of contaminated haul road dumpsters.
- b. Complete disposition of 12 contaminated 40-foot sealands located on the west end of Y-12.
- c. Disposition the inventory of low level waste containers stored on site >1 year. (Currently, this inventory is ~165 containers.)

B&W Y-12 successfully dispositioned all the contaminated dumpsters located off the Haul Road. In addition, the 12 contaminated sealand containers were successfully dispositioned. Lastly, the inventory of low level waste stored on site greater than 1 year was reduced to 107 containers. The performance exceeded expectations.

**E. Facility Management (CR 08-62)**

1. **Performance Measure: Perform vital system restorations in production facilities through efficiencies gained in close management of facility budgets.**

- a. 9212 - Replacement of two electrical panels in E Wing. This would be the 5th and 6th electrical panels replaced in the long-term project to reduce the electrical risk hazard for 9212.

One of the high priority safety initiatives at Y-12 has been the replacement of non-code compliant electrical panels. A total of 30 electrical panels are scheduled for replacement as funding becomes available. Materials for 11 of the 30 panels were procured, design work was completed for three additional panels, and maintenance planning packages were completed. Progress continued to be made in a difficult and long-standing area needing resolution, with 4 of the top 11 high risk panels having been replaced this year. YSO concurs that this performance measure was met.

- b. 9212 – Conduct of “clean-up” day for general facility habitability, including coordination with waste management organization to arrange for coordinated, accelerated waste disposition.

As part of a late FY Stretch Award Fee measure, a two day Clean-Up was conducted on August 6 - 7 at 9212 to improve housekeeping. The effort involved teamwork of both salaried and union personnel to address office, process, and common areas of the facility. The following waste was removed and disposed of:

- 8 Truck Loads and 1 Tractor Trailer of Materials to be processed as Excess
- 2 Truck Loads of Modular Furniture to the Central Training Facility (CTF) for reuse
- 4 Truck Loads (10-15 cubic yards per truck) of Materials to the Landfill
- 2 Truck Loads to the 90-Day Yard for processing
- 9 Truck Loads of construction tools and materials
- 1 Truck Load of Recyclables to the Recycle Center for recycling
- 4 Truck Loads of classified materials to Burn House for disposal (approximately 120 cubic feet)
- 61 non contaminated gas cylinders and 10 rad contaminated gas cylinders
- 2 Flat bed trucks of scrap metal for recycle
- 53 B25 boxes (mostly from MAA) including 16 of Low level Radwaste (LLRW), Combustibles, 28 of LLRW Scrap Metal, 9 of scrap metal.

YSO concurs that this performance measure was met.

## **2. Performance Measure: 9212 Clean-up additional scope. (CR 08-92)**

### **Performance Targets:**

- a. Remove 2 supply fans in E-Wing and place in Sea Land container and any associated maintenance debris remaining from maintenance work.

An effort was completed in August to remove computer equipment and two large supply fans from the E-wing basement. YSO concurs that this performance measure was met.

- b. Disassemble and segregate computer equipment for disposal.

An effort was completed in August to remove computer equipment and two large supply fans from the E-wing basement. YSO concurs that this performance measure was met.

- c. If space is remaining in the Sea Land container, dispose of contaminated piping and cabinetry.

The remaining space in the sealand container was filled with a fire cabinet, file cabinet, sump pump, two supply fan motors, a piece of roofing duct work and an 8 drawer safe. YSO concurs that this performance target was met.

- d. Fill two additional B-25 boxes and remove boxes from the MAA.

Two additional B25 boxes were filled with miscellaneous metals/material and were removed from the MAA on September 17, 2008. YSO concurs that this performance target was met.

## **F. Environmental and Waste Management (CR 08-84)**

### **1. Performance Measure: Disposition excess and unsightly material.**

#### **Performance Targets:**

- a. Consistent with the latest revision of the "Site Plan for Management and Disposition of Unneeded Materials and Chemicals at Y-12," P1,PJ-900000-A056, disposition those items/areas identified as priorities for FY 2008 and agreed upon by YSO. (Disposition excess scrap metal, components, and other debris stored around and east of building 9811-4. Cut back weeds and other vegetation growing in area. This is new scope not covered by the existing PBI.)

Status: B&W Y-12 successfully cleaned up the excess UMCs located east of 9811-4. In addition, the weeds and vegetation were removed from the area. The performance exceeded expectations.

### III. BUSINESS

#### A. Human Capital

##### 1. **Stretch Performance Measure: Align and implement succession planning, identify gaps and incorporate into workforce plans.**

###### **Performance Targets:**

- a. Complete succession plans for Productions, Facilities, Infrastructure and Services (FI&S), Engineering and Quality.

Talent Management's strategy for succession planning uses a phased approach. B&W Y-12 has completed the identification of key positions for Facilities, Infrastructure & Services (FI&S), Production, and Safeguards, Security & Emergency Services (SS&ES) organizations; and, conducted meetings with directors for Quality, Business Services, Uranium Center of Excellence and the Chief Financial Officer's organizations to initiate the analysis process for those organizations. However, the Quality organization was not completed.

B&W Y-12 is now in the second phase, which includes identifying a software solution for the actual management and tracking of positions. The alternatives include software that is currently being used (SAP, LINKS) and other third-party packages. Software implementation will include training of users and data loading.

The final phase of implementation will include:

- develop competency models for key positions
- identify top talent (high potentials)
- develop fast-track for high-potential
- implement individual development plans.

- b. Identify and monitor critical skills positions and incorporate into functional workforce plans.

A reconciliation of critical skill positions was completed for all organizations. A total of 1,876 positions were identified as critical skills. This information will be maintained in SAP and is being used in workforce planning.

The primary focus of recruiting efforts for professional positions designated as critical skills continues to be fire protection, nuclear criticality safety, mechanical engineering with glovebox design experience and CADD designers. Nine machinists (two with clearances) have accepted positions and are awaiting report to work dates. For bargaining unit positions identified as critical skills, the locally availability is sufficient to meet our needs.

The new Apprenticeship Program previously discussed is part of these efforts to assure critical skills are maintained and developed for the future.

While the reconciliation of the critical skills positions was successfully completed, the succession plans were not. The replacement of the Manager of Talent Management appears to have disrupted progress in succession planning, although the new manager is performing well.

## **B. Information Technology**

1. **Performance Measure:** Implement an UCNI high "Big Yellow" unclassified network for the Y-12 National Security Complex.

### **Performance Targets:**

- a. Implement an approved UCNI high network by June 16, 2008.

The Big Yellow project was incentivized to eliminate the Y-12 Unclassified Controlled Nuclear Information (UCNI) network and allow UCNI to be processed on the existing unclassified network. The project was completed on June 16. This was an intensive IT project that involved multiple security disciplines to achieve success. The following tasks were completed for the project:

- Published User Awareness articles on Y-Source
- Implemented encryptors for off-site links
- Updated cyber security and information security policies
- Rolled out Entrust to all Y-12 employees
- Developed Big Yellow training
- Completed Virtual Private Network (VPN) upgrades for remote access
- Implemented Terminal Services for remote access
- Developed and refined email filters for outbound traffic
- Moved Integrated Work Management System (IWMS) master equipment and functional location list to the unclassified network

Subsequent to implementation, B&W Y-12 has worked to refine email filters, migrate existing data from the legacy yellow network to the Big Yellow network, and retired legacy yellow network hardware. B&W Y-12 is also working to merge existing cyber security awareness training with Big Yellow training.

## **C. Requirements Management (CR 08-45)**

1. **Performance Measure:** Automate the procedure development, review, approval, issuance, cancellation and archiving process.

### **Performance Targets:**

- a. Automate the Procedure Modification Request (PMR) Process.
- b. Reduce number of company level procedures.
- c. Place Production (Manufacturing) Divisions procedures on the Web.
- d. Review and update the Requirements Compliance Assurance Matrix Database.

## **D. Property Management (CR 08-48)**

1. **Performance Measure:** Establish a process to implement a 50% decrease in the excess process cycle time. (Current process time is 33.99 average calendar days.)

### **Performance Targets:**

- a. Identify "quick win" process improvement activities that can be completed by responsible functional organizations prior to September 30, 2008 that will create an overall 50% decrease in process cycle time.

A multi-departmental team reviewed the excess process and identified several areas for potential decrease in cycle time of the excess process.

- Set up zones for pickup over a week's time, allowing for better scheduling for resources. Five zones are identified.
- Advertise the intent to pick up 2 weeks in advance of pickup to allow site employees to prepare excess requests.
- Develop color-coded charts and post onto YSource to help employees identify their zone.
- Coordinate with excess requestors to confirm availability and schedule pickup.
- Provide barcode scanners to RadCon personnel and to pick-up personnel to allow electronic scanning and system upload at task completion.

- b. Validate weekly, the decrease in process cycle time for forty-five (45) days.

Based on the validation which showed the process cycle time decreasing during certain weeks and increasing in other weeks, a Yellow Belt project improvement plan was completed on September 30, 2008. Processes were identified and are presently being executed which should improve the excess property cycle time to 14 days. Efficiencies have been identified in FI&S and ES&H. FI&S has established a dedicated team to excess property. ES&H has identified efficiencies to reduce the RADCON survey time from an average of 14 days to 3-7 days.

## **F. Records Management (CR 08-49)**

- 1. Performance Measure:** Implement an enterprise Electronic Records Management System for the Y-12 National Security Complex.

### **Performance Targets:**

- a. Implement the new system in at least eight business processes in fourth quarter of FY-08 using the Versatile ERMS to manage records by September 30, 2008. Of the eight business processes, two processes have to be in the Category 3 (difficult) area.

Twenty business processes were involved in the implementation of Versatile ERMS. The scale for defining level of difficulty in implementation was: 1) limited type of records and minimal folder structure; 2) types of records, detailed file structure, and using existing functionality; and 3) types of records, detailed file structure, and new or customized functionality required.

- Category 3 processes were identified in the Environmental Compliance Document Management Center (ECDMC) and Training Records.
- The remaining processes include:
  - Environmental Compliance Document Management Center (EC DMC)
  - Policy and Operational Compliance (POC)
  - SAP Document Management System
  - Policy and Operational Compliance (POC)
  - Training Management and Delivery
  - Treasury Services
  - Contract and Special Initiatives
  - Accounts Payable
  - Chief Financial Officer

Financial Performance Assessment  
Audit Response Center  
Information Services  
Tax Administration  
Payroll  
Pension & Benefits  
Accounts Receivable  
General Ledger Accounting  
SAP Costing  
General Accounting  
Safety – Managerial Reporting

## **G. Apprenticeship Program**

**Performance Measure: Continue activities for implementing the Apprenticeship program.**

### **Performance Targets:**

- a. Complete the standards development for applicable craft disciplines by September 30, 2008.

An apprenticeship program was created with 50 openings, consisting of four air conditioning & refrigeration workers, three carpenters, two boilermakers, twenty-six electricians, two insulators, two ironworker/riggers, four painters, five pipefitters, and two welders. Of the total 2,610 external candidates who applied for the new Apprenticeship Program, approximately 176 external candidates were interviewed.

- b. Complete the initial personnel hiring to establish the program by September 30, 2008 for those apprenticeship programs that begin before October 1, 2008.

The Human Capital Staffing Organization worked directly with Diversity to ensure the selection of candidates was valid and legal. Five internal and ten external candidates were offered positions in the new Apprenticeship Program which began in September. An additional 36 candidates will come on-board during the weeks of October 6, October 20, and November 3.

## FY 2008 PERFORMANCE BASED INCENTIVES

### MISSION - BASE

#### A. B61-7/11 ALT 357 – Classified

**Performance Measure 1: Deliver XXX B61Mod 7 and Mod 11 units by their PCD Date.**  
**Performance Measure 2: Deliver YYY B61Mod 7 and Mod 11 units by their PCD Date**  
**Performance Measure 3: Deliver ZZZ B61Mod 7 and Mod 11 units by their PCD Date**

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

#### B. W76 LEP – Classified

**Performance Measure 1: Complete FPU Boat Assembly**  
**Performance Measure 2: Complete WR Boat Assemblies per PCD**  
**Performance Measure 3: Complete Recertification of planned WR Case Parts**  
**Performance Measure 4: Complete disassembly of planned W76 Mod 0 units**

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

#### C.1 Dismantlements/Disposition – Classified

Performance Measure 1:

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

#### C.2 Stockpile Packaging

Performance Measure 1:

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

#### D. Quality Evaluation

**Performance Measure 1: Complete 12 Phase 1 Evaluations**  
**Performance Measure 2: Complete 13 Phase 2 Evaluations**  
**Performance Measure 3: Complete 13 Phase 3 Evaluations**  
**Performance Measure 4: Issue 14 QE Reports**  
**Performance Measure 5: Complete NDE Screening on 37 Units**

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

#### E. Joint Test Assemblies

**Performance Measure 1: W78 JTA 6 with Midcase**  
**Performance Measure 2: W88 JTA 1,2,3,4**  
**Performance Measure 3: W88 LLCE**  
**Performance Measure 4: W87 JTA 4**

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

#### F. HEUMF Transition

**Performance Measure 1: Execute actions for transition of HEU inventories to HEUMF**

Performance Results: All performance targets for this measure were completed on time or ahead of schedule

**G. SSTs Offloading**

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

**H. Defense Programs Low Equity Nuclear Materials Disposition**

**Performance Measure 1: Disposition nuclear material to optimize safe, secure storage**

Performance Results: All performance targets for this measure were completed on schedule.

**Performance Measure 2: Dispose of classified items; reduce inventories of unneeded nuclear and non-nuclear materials.**

Performance Results: All targets for this measure were completed on schedule.

**I. NNSA EU Customer Deliverables and Recoveries**

**Performance Measure: Process, package and prepare for shipment enriched uranium materials in support of GTRI.**

Performance Results: B&W Y-12 completed nine of the ten PBI measures. This effort resulted in over 19 MT excess enriched uranium being removed from Y-12. B&W Y-12 produced 6 of the required 12 U-Mo foils.

**J. Material Recycle and Recovery**

**Performance Measure : Manage the recycle and recovery of material by operating Wet Chemistry, Oxide Conversion Facility, Reduction and Lithium Operations Processes.**

Performance Results: All measures for this PBI, which included production of purified metal, lithium chloride, and UO<sub>3</sub>, were all completed on schedule.

**K. Enhanced Surveillance**

**Performance Measure 1: Complete an annual Enhanced Surveillance stockpile aging assessment report by April 30, 2008.**

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

**Performance Measure 2: Develop improved predictive capabilities for CSAs to support assessments and certifications by September 30, 2008.**

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

**Performance Measure 3: Down select the most promising embedded sensor technologies for future stockpile applications by September 15, 2008.**

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

**L. ADAPT**

**Performance Measure 1: Complete the evaluation of microwave for special casting needs by July 31,**

2008.

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

**Performance Measure 2: Support the DICONDE project to develop and demonstrate archival and retrieval of digital radiography data by September 15, 2008.**

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

**Performance Measure 3: Complete the equipment specification for the Advanced Integrated Machining System (AIMS) by June 30, 2008.**

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

**Performance Measure 4: Capture a digital radiograph demonstrating image quality using the lens-coupled HEDR system by September 30, 2008.**

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

**M. Stockpile Readiness**

**Performance Measure 1: Complete the IR Debonding test deliverables listed in the PIP by December 3, 2007.**

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

**Performance Measure 2: Complete the software SQA initial testing on the Leak Test Station project by September 30, 2008.**

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

**Performance Measure 3: Complete system and user testing and SQA on the Backfill and Crimp Station project by September 30, 2008.**

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

**Performance Measure 4: Complete phase II system testing on the DRIFT Station Upgrades project by September 30, 2008.**

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

**Performance Measure 5: Complete data packages for Material Manufacturing Parts for Run A, Run B, and Run A1 by September 30, 2008.**

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

**N. Increased NN Support**

**Performance Measure: Receive a total of \$2.5M in additional FY08 new funding over the FY07 new funding levels.**

Performance Results: B&W Y-12 received sufficient new funding to satisfy this PBI.

**O. FIRP**

**Performance Measure: Accomplish high priority facility upgrades.**

Performance Results: All targets for this performance measure were completed on schedule.

**P. Complementary Work for Others**

Performance Results: B&W Y-12 received \$32.3M towards the Complementary Work PBI goal of \$36M for FY 2008.

**Q. HEUMF Multi-Year**

Performance Results: The EAC for HEUMF indicates that the project will be completed within the established cost and schedule baseline, and the annual PBI requirement has been satisfied.

**R. Uranium Processing Facility**

Performance Results:

During the year the UPF project successfully completed the following PBI's:

Issue revision 0 of Design criteria by January 31, 2008

Issue security Design Strategy by December 31, 2007

Develop and issue MACCS2/WAKE Comparison Test Report and provide recommendation for which software is best for UPF by December 31, 2007

Issue the UPF Soil Structural Interaction Analysis Report by August 6, 2008

Issue Revision 0 Process Flow Diagrams by June 23, 2008

Issue preliminary System Design Descriptions by September 25, 2008

Issue initial Interface Control Documents for use by September 25, 2008

Issue the Process BOA contract – consent for award and award of this contract (stretch)

UPF completed the soil structure interaction analysis, the system design documents, the interface control documents, and the 30% process and instrumentation drawings. The YSO evaluation will be completed the first part of October 2008. The project also completed the stretch goal to award the Process Basic Order Agreement contract.

**S. QE Relocation**

Performance Results:

Octagonal glovebox turnover – satisfactorily completed.

Complete implementation of SAR/TSR changes/revisions – missed.

**T. Potable Water Systems Upgrades Project**

Performance Results:

1.a. Complete Area O final design package by February 13, 2008 (50%) – Successfully completed in a timely manner.

1.b. Complete procurement for sprinkler system modifications in Areas F&P that are tied to compliance with TDEC public safety requirements by Sept. 30, 2008 (50%) – This scope of work is on schedule. On June 26, B&W Y-12 provided verification that all materials have been received and inspected for pipe and sprinkler system modifications for the planned zones for Areas F & P. Procurement verification of Zones 1, 3, 4, and 5 are complete.

**U. Steam Plant Life Extension Project (SPLE)**

Performance Results:

Steam Plant Life Extension (SPLE) Project, complete design of new package boilers plant by 8/19/2008:

During the month of August B&W Y-12 submitted the new package boiler plant design on August 14, 2008, ahead of schedule. YSO validated completion of the 100% design comment response acceptance and recommended full award on September 30, 2008.

**V. BeC Project**

Performance Results:

**Glovebox Shipments from Vendor (See 1a and 1b below)**

**BeC – PBI 1.V.1a – Receive first FBL shipment by 6/25/08**

The project met the 90% fee criteria for delivery of first FBL shipment by 08/01/08. The B&W Y12 reported completion date was 07/24/08. YSO reviewed project documentation and assessed site conditions as part of the PBI verification process. This PBI was approved by YSO.

**BeC – PBI 1.V.1b - Receive first VTL shipment by 07/03/08**

The project met the 90% fee criteria for delivery of first VTL shipment by 08/05/08. The B&W Y12 reported completion date was 07/25/08. YSO reviewed project documentation and assessed site conditions as part of the PBI verification process. This PBI was approved in by YSO.

**BeC – PBI 1.V.2 – Structural Steel Platform**

The project met the schedule component for this performance measure. The B&W Y-12 reported completion date was 06/23/08. YSO reviewed project documentation and assessed site conditions as part of the PBI verification process. This PBI was approved by YSO.

**W. Du/Binary**

Performance Results: Not completed.

**X. Operational Deployment**

B61 Operational Deployment

**Performance Measure 1: Complete inspection using 9 MeV Linac**

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

**Performance Measure 2: Inspect 15 units on the EB Weld NDE**

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

**Performance Measure 3: Complete weld using North EB Welder**

Performance Results: Planned work under this measure was not completed.

Dismantlement Lathe First Use

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

DSW Operational Deployment

**Performance Measure 1: Complete machining using CNC machine**

Performance Results: Planned work under this measure was not completed.

**Performance Measure 2: Inspect parts on 3 Coordinate Measuring Machines (CMMs)**

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

**Performance Measure 3: Complete inspection using B2 X-Ray**

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

**Performance Measure 4: Inspect parts on 5th CMM**

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

Multi-Axis Orbital Measuring Center (MAOMC) Operational Deployment

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

**OPERATIONS - BASE**

**A. DBT Implementation**

1. **Fence 5** - By March 31, 2008, (a) Install personnel and vehicle barriers. (b) Install alarm sensors and verify annunciation of alarm signal at CAS and SAS. (c) Complete security readiness, including testing, maintenance training (as necessary), transition, and final turnover to system owner(s).

Project completed on 3/20/08 and PBI verified on 4/8/08.

2. **Portal 24 Upgrades** - By April 18, 2008, (a) Construct civil items including curbing, bar gate, barrier foundations, and detector foundations. (b) Install new barriers (including hydraulic tubing to barriers), detectors, and cameras. (c) Complete security readiness, including testing, maintenance training (as necessary), transition, and final turnover to system owner(s).

Project completed on 4/17/08 and PBI verified on 5/6/08.

3. **Post 5 Reconfiguration** - By September 2, 2008, (a) Install traffic control arms, vehicle barriers, and badge reader(s) to allow automated vehicle entry through Post 5. Traffic control must be operable from two separate locations. Install controls to the hardened booth at Post 23 and CAS. (b) Install cameras for monitoring Post 5 vehicle access points. (c) Complete security readiness, including testing, maintenance training (as necessary), transition, and final turnover to system owner(s).

Project completed on 8/22/08 and PBI verified on 9/9/08.

4. **Fences 6 and 7 Vehicle Barriers** - By September 30, 2008, (a) Submit the PEP Addendum for construction project. (b) Complete site preparation. (c) Install personnel and vehicle delay barriers. (d) Install alarm sensors and verify annunciation at CAS and SAS. (e) Modify entry doors. (f) Complete transition/turnover and readiness activities. (g) Place Fences 6 and 7 Vehicle Barriers into operation.

Fence 6 was completed and demonstrated to YSO on 8/27/08. Alarm scope was removed from the project resulting in failure to meet the PBI for this milestone. Fence 7 was completed on 9/23/08 and YSO observed the performance test. PBI verified on 10/7/08.

5. **Vault Recovery Assistance (B)** - By September 10, 2008, (a) Submit the PEP Addendum for construction project. (b) Complete equipment procurement. (c) Modify entry door. (d) Upgrade alarm systems. (e) Door is VTR-certified and in use.

Project completed on 8/15/08 and PBI verified 9/16/08.

6. **Area 5 Fort Engagement** - By July 31, 2008, (a) Submit the PEP Addendum for the design project. (b) Complete Title I and II design packages.

Project completed on 7/16/08 and YSO verified PBI on 8/5/08.

7. **Environmental Protection** - By September 30, 2008, (a) Complete Title I and II design packages.

(b) Submit the PEP Addendum for the construction project. (c) Install chemical protection booth(s), and complete required facility modifications.

Project completed on 9/27/08 and demonstrated to YSO on 9/30/08. PBI was verified on 10/7/08.

8. **Vehicle Arresting System (VAS)** - By September 30, 2008, (a) Process Vaseline Change Proposal to Vehicle Protection PEP Addendum. (b) Prepare design package for installation. (c) Install VAS per the BCP, PEP Addendum, and design package. d. Complete transition/turnover and readiness activities. e. Place VAS into operation.

Project completed on 9/24/08 and demonstrated to YSO on 9/25/08. PBI verified on 10/7/08.

9. **Portal 8 Protected Area Access Title I Design** - By September 30, 2008, (a) Submit the PEP Addendum for the Title I design. (b) Complete SRD and Title I design package for Portal 8 access control. (c) Select technologies for personnel and vehicle access control.

All completed design work was reviewed with YSO on 9/29/08. Future Title II design should consider west end transformation and new GSP requirements. PBI was verified on 10/7/08.

10. **Access Delay Readiness** - By March 31, 2008, (a) Verify that the Access Delay system is operational. (b) Complete material loading for two (2) shelves.

Project completed on 3/25/08 and PBI verified on 4/8/08.

11. **Exterior Fighting Positions (Phase I)** - By September 30, 2008, (a) Submit the PEP Addendum for the Exterior Fighting Positions (Phase I) project. (b) Complete Title I and II design packages. (c) Complete equipment procurement. (d) Install the Exterior Fighting Position components, and complete required facility modifications as described in the PEP Addendum for only one of two walls. (e) Install protected positions to deploy mobile Dillon Aero weapons platforms to cover the East and West Area 5 access portals. (f) Complete transition/turnover and readiness activities.

Project completed on 9/16/08 and demonstrated to YSO on 9/23/08. PBI verified on 10/7/08.

12. **Exterior PA Barriers (Vehicle and Pedestrian)** - By April 30, 2008, (a) Submit the PEP Addendum for the Exterior PA Barriers project. (b) Complete Title I and II design packages.

Project completed on 4/22/08 and PBI verified on 5/20/08.

## **B. Cyber Security**

1. **Two-Factor Authentication** - Install a two-factor authentication capability for select classified Microsoft Windows Servers.

Two-factor was installed as required.

2. **Host-Based Intrusion Detection System** - Deploy host-based IDS on key systems (classified and unclassified).

Host-based intrusion detection was installed as required.

## **C. Diskless Conversion**

**Base PBI: Complete diskless conversion of desktop computers and pilot digital numerical controlled (DNC) machines or request HQ-approved waiver for all workstations, DNC machines, and off-site classified workstations not converted by September 28, 2008**

Summary: All tasks completed by 9/28/08. All applicable classified systems have either been converted, decommissioned, or have an approved waiver in place.	
Task	Status
1) Develop baseline conversion list	Complete
2) Complete infrastructure refinement activities	Complete
3) Plan and coordinate diskless thick client deployments	Complete. Approximately 120 thick clients were deployed or re-deployed and approximately 258 systems were decommissioned during FY08. There are no workstations remaining to convert, waiver, or sanitize.
4) Deploy Ardence Secure version 4.1	Complete. 112 thick clients have been converted to the newer 4.1 version.
5) Complete DNC pilot design	Complete
6) Complete DNC pilot deployment	Complete. The first DNC pilot workstation was provisionally certified on 9/23.
7) Complete waiver submittals	Complete. Twenty-three (23) waivers covering 120 devices have been submitted to HQ via YSO and approved by the Diskless Workstation Task Force (DWTF). Per YSO direction, the CD/DVD-ROM drives of all classified thick clients have been disabled by default.

#### D. Engineering Improvements

##### 1. Configuration Management and Technical Basis Improvements

Performance Results: Satisfactorily completed.

##### 2. System Engineering Improvements

Performance Results: Satisfactorily completed.

#### E. Security Systems Preventive Maintenance

(MAR)  <u>ISS-SS-6/28/2007-87906, 156867</u>  ISSUE: B&W Y-12 failed to provide operating instructions to WSI CAS operators.	Vehicle Arresting System – CAS operating procedures  Veritel System – CAS operating procedures	Field validation of closure is complete. A request is being submitted seeking YSO closure  B&W Y-12 Target Closure Date: 10/16/08
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<p><u>(MAR)</u></p> <p><u>ISS-SS-6/29/2007-69382.</u> <u>157260</u></p> <p>ISSUE: Preventive and Corrective maintenance was not done in accordance with DOE requirements.</p>	<p>Comprehensive plan to address maintenance: testing, corrective, post-work checks, and configuration management, to refinement in MELs and updated SSCs. Combines six findings (to include Nov 07 PIR on SNM Monitor)</p>	<p>B&amp;W Y-12 Security Systems is processing a request for a due date extension for YSO approval.</p> <p>B&amp;W Y-12 Target Closure Date: 10/15/2008</p>
<p>SSIMS</p> <p>06JUN27-YSO-0578-SPEC-PMS.9-001</p> <p>ISSUE: VTRs do not meet DOE requirements.</p>	<p>VTR performance test resolution</p>	<p>The Protected Area Special Nuclear Material Vault Type Room (VTR) Deviation (NNSA-YSO-08-190) was approved by NNSA headquarters in September 2008. B&amp;W Y-12 will develop conditions of approval packages for each VTR for approval by the Y-12 Site Office.</p>

**F. Unneeded Materials and Chemicals**

Eight specific performance measures were incentivized. B&W Y-12 successfully completed 7 of 8 measures. This should result in earning the full performance fee. See section 1.1.a., Performance Target g. above for details. The one performance measure not fully completed was the disposition of more than 1700 shipping containers at the 9720-16 drum yard. Safety concerns led to a temporary cessation of work and likely prevented the disposition of all shipping containers. Nonetheless, B&W Y-12 performed admirably to complete 7 of 8 measures in this PBI.

## FY 2008 STRETCH PERFORMANCE BASED INCENTIVES

### MISSION – STRETCH

#### **A. B61-7/11 ALT 357**

Performance Measure 1: Deliver XXX B61Mod 7 and Mod 11 Shelf Life units

Performance Measure 2: Deliver YYY B61Mod 7 and Mod 11 Operational Suitability Test (OST) units

Performance Measure 3: Deliver ZZZ B61Mod 7 and Mod 11 OST units

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

#### **B. W76 LEP**

Performance Measure 1: Complete additional WR Boat Assemblies above PCD

Performance Results: Did not meet the full quantities contained in the PBI; however, quantity produced will maintain schedule for 90 day lead to Pantex.

Performance Measure 2: Complete recertification of additional WR Case Parts above PCD

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

#### **C. Dismantlement**

Performance Measure:

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

#### **D. Stockpile Readiness**

- a. Performance Measure: Complete the transition of the IR Debonding equipment to the production organization by September 30, 2008.

Performance Results: The performance criterion was not achieved. This stretch milestone was established before the completion of an approved baseline schedule for the project and due to the long lead time on the procurement of the equipment, B&W Y-12 was not able to complete the deliverable.

#### **E. 9212 Risk Reduction**

Measure 1: Reduce the backlog of material at risk in 9212.

Performance Results: Target 1.b. – Emptying of safe bottle dollies bi-monthly, was not met. The other targets for this PBI, which were to reduce U-235 in safe bottles by 30% and process 50 organic safe bottles, were completed on time.

#### **F. Defense Programs Low Equity Nuclear Materials Disposition**

Performance Measure: Relocate lithium/discard combustibles/disposal of materials.

Performance Results: All targets for this measure were completed.

#### **G. HEUMF Transition**

Performance Measure 1: Execute actions for transition of HEU inventories to HEUMF

Performance Results: The target for this measure, to load 100 additional RCSBs, was accomplished on schedule.

#### **H. Further Increase NN**

Performance Measure: Receive a total of \$2.5M in additional FY08 new funding beyond the initial PBI goal.

Performance Results: Sufficient new funding beyond the initial PBI goal was not obtained and therefore this stretch PBI was not achieved.

#### **I. Operational Deployment**

##### MAOMC

Performance Measure 1:

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

##### JTA Operational Deployment

Performance Measure 1: Demonstrate 1st Use of Wire Feed EDM

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

Performance Measure 2: Demonstrate 1st Use of Chucker Lathe

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

Performance Measure 3: Demonstrate 1st Use of Solution Heat Treat Furnace

Performance Results: This activity was not completed.

#### **J. Packaging**

1. Deliver shipping fixtures to Pantex.
2. Deliver 30 Type A packages to Pantex.
3. Deliver remaining DT-20 containers

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

#### **K. DSW Operational Standards Deployment**

1. Complete calibration using M-32
2. Complete calibration using M-48

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

#### **L. NNSA EU Customer Deliverables, Disposition and Recoveries**

Performance Measure: Process an additional 500 kgU of enriched uranium material beyond the baseline quantity of 2500 kgU for NNSA customers and ship an additional 2.0 MTU beyond the baseline quantity of 4.0 MTU to support NNSA's down-blending contractor.

Performance Results: B&W Y-12 completed and exceeded the stretch PBI.

## **OPERATIONS - STRETCH**

### **A. Cyber Security**

1. Deploy existing firewalls on agreed-to desktop systems

Firewalls were deployed as required.

2. Research, evaluate, and plan deployment of Intrusion Prevention Systems (IPS) at the Y-12 National Security Complex to enhance current network monitoring capabilities.

The Intrusion Prevention System was implemented as required.

3. Research, evaluate, and plan deployment of a tool/appliance to evaluate and monitor secure socket layer (SSL) traffic.

SSL was evaluated, a plan to deploy was developed, and the appliance was procured as required.

### **B. DBT Implementation**

**MOTOMESH™ Deployment** - By September 30, 2008, (a) Submit the Program Execution Plan (PEP) Addenda for installation of the MOTOMESH™ and Ridge Monitoring projects. (b) Complete MOTOMESH™ and Ridge Monitoring equipment procurement. (c) Install MOTOMESH™ and Ridge Monitoring system components in designated locations.

Project completed on 9/29/08 and demonstrated to YSO on 9/30/08. PBI verified on 10/7/08.

### **C. Engineering**

Develop System Design Description

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

### **D. Security Systems Improvements**

Replace 50% of the Microwave Sensors in PIDAS.

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

### **E. Criticality Safety and Containers**

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

### **F. 9212 Access Controls**

Performance Results: Work planned under this measure was not completed.

### **G. Facility Categorization – Deleted during the year.**

### **H. Facility Deactivation (stretch, multi-year):**

Performance Measure: Complete activities to reduce facilities below hazard category 3.

Performance Results: FY 2008 performance targets for this measure were completed on schedule.

**J. FPPCCAP**

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

**BUSINESS – STRETCH**

**A. Indirect Cost Reduction**

Performance Results: The Service Center has validated the completeness of this PBI.