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National Nuclear Security  
Administration

FY 2013 PER

Babcock & Wilcox Technical  
Services Pantex, LLC  
Performance Evaluation  
Report

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**NNSA Production Office**  
**Pantex Plant**  
**Performance Period:**  
October 2012 – September 2013

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**November 13, 2013**

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**APPROVED FOR PUBLIC RELEASE**

This document has been approved for release to the public by:  
**Name / Title:** Del W. Kellogg, NPO Pantex Classification Officer

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## Executive Summary

This Performance Evaluation Report (PER) provides the assessment of Babcock & Wilcox Technical Services Pantex, LLC (B&W Pantex) performance for the period of October 1, 2012 through September 30, 2013, as evaluated against the objectives defined in the Fiscal Year (FY) 2013 Strategic Performance Evaluation Plan (PEP). The National Nuclear Security Administration (NNSA) Production Office (NPO) took into consideration and consolidated all input provided from NNSA functions both at Headquarters and in the field. The five basic Performance Objectives (POs) in the PEP will be graded using adjectival ratings as described in the Federal Acquisition Regulation (FAR). Comments on the performance of each Contributing Factor (CF) and Site Specific Outcomes (SSO) under each PO identified in the PEP are provided as well.

In addition to the monthly Performance Self-Assessment briefings provided to the NPO throughout the year, B&W Pantex submitted a Performance Self-Assessment Report that covered the entire fiscal year. Pantex has had a challenging year which has been compounded by working through this year's budgetary uncertainty and the pending contract change. While a successor contractor was named in early January and the contract transition was started, a protest to the contract selection halted all transition activities. Not only did B&W Pantex have to absorb an additional workload for the transition, the uncertainty from the delay presented an additional challenging dynamic for the leadership team as well as all of their personnel. Their self-assessment report highlights some of the challenges Pantex had this fiscal year and how these challenges have impacted productivity, schedules, and deliverables. B&W Pantex has categorized these challenges into the broad areas of technical issues, failing and aging infrastructure, acts of nature, impacts from inter-site dependencies and funding constraints. While production decreased marginally, key deliverables to the Department of Defense (DOD) and laboratories were supported. A major focus area for the year at Pantex has been Nuclear Safety Culture survey results. Earlier in the year, HSS and Texas Tech Safety Culture surveys indicate the need for B&W Pantex to improve safety culture and workplace environment issues. In response to these surveys, Pantex identified areas for improvement and is aggressively pursuing the goals of their Safety Culture Improvement Plan. In addition, the contractor did a good job mitigating budget challenges and workforce impacts through a plant-wide hiring freeze and by promoting cost savings efforts. While Authorization Basis and Emergency Management were two areas highlighted as needing improvement earlier in the year, B&W Pantex focused efforts to improve their deficiencies in these areas.

P0-1: Nuclear Weapons Missions (33% of At-risk fee) was rated as VERY GOOD for B&W Pantex during this period. FY 2013 was an anomalous year in relation to multiple challenges that impacted production at the Pantex Plant including sequestration funding impacts, numerous technical and facility issues, and the implementation of the Weapons Response for the W76. Other factors included: replacement of the plant's Enterprise Resource Planning (ERP) System which resulted in a one month pause in operations and a slow and deliberate restart of activities; plant shutdowns resulting from severe weather; and a key non-nuclear component not being delivered to the Pantex Plant. During the rating period, emphasis was placed on strengthening nuclear safety operations and applying conservative decision making. Implementation of this policy, combined with many years of historical lack of infrastructure funding, created numerous multi-program operational pauses. The contractor was continuously forced to adapt to these pauses to meet critical deliverables to DoD and support critical JTA flight and lab tests. The contractor effectively prioritized the workload and partnered with its customers and stakeholders to achieve a 93% delivery against the agreed-to

baseline deliverables; and met 100% of the highest priority deliverables, including the agreed to W76-1 LEP deliveries to the Navy and JTA flight/lab tests. The contractor exceeded expectations by completing the replacement of the plant's ERP system seven months ahead of schedule and \$8.5M under budget.

PO-2: Broader National Security Mission (2% of At-risk fee) performance for B&W Pantex exceeded expectations and was rated as VERY GOOD during this period. All deliverables were on target to exceed cost, scope, and schedule, consistent with NNSA priorities, Program Work Authorizations, Priorities and Deliverables, and Program Execution Plans. B&W Pantex achieved objectives of the Enhanced Surveillance Campaigns by completing projects consistent with the scopes identified in corresponding program plans and the Technology-Enabled Capability Roadmap. Pantex met or exceeded expectations for executing Work for Others (WFO) and Reimbursable Work (RW) within scope, schedule and budget established by program sponsors and partners. Pantex engaged with their program sponsors throughout the life of the projects to ensure quality goals were achieved and potential impacts from facility issues and sequestration were minimized. There were no major issues/concerns reported, and Pantex responded to NPO requests immediately with quality reporting.

PO-3: Science, Technology & Engineering (ST&E) Mission (2% of At-risk fee) was rated as VERY GOOD for B&W Pantex. During the rating period, B&W Pantex exceeded expectations by successfully executing research to enable, support, and advance national security missions, and to advance the frontiers of ST&E in accordance with their budget profile, scope, cost, schedule, and risk while achieving the expected level of quality. Programs in this area include Plant Directed Research and Development (PDRD) and support to projects such as the Weapons Operations Center of Excellence and the High Explosive Center of Excellence.

PO-4: The Security, Infrastructure, Environmental Stewardship and Institutional Management (53% of At-risk fee) performance objective was rated as EXCELLENT for B&W Pantex during this period. This Performance Objective encompasses most of the mission support areas to include Security, Safety (nuclear and non-nuclear), Business, Information Technology, Facility and Infrastructure, Environment & Health, Projects, Quality Assurance, and Contractor Assurance. The mission support functions performed well and significant emphasis was spent addressing Nuclear Safety Culture and matters involving a proper workplace environment. B&W Pantex exhibited an overall strong performance in Safeguards and Security although significant attention is still needed in the Emergency Management area. Line Item management and results for the year proved very positive. Business, Information Management and the Legal functional areas exceeded expectations. In particular, B&W Pantex did a very good job managing through all the fiscal constraints and challenges during the year, including the budget sequestration. Environmental, Safety, Health and Quality Assurance were all effective programs. While B&W Pantex did implement a Contractor Assurance System (CAS) and the structure of CAS reporting improved throughout the year, more attention is needed to convey the significance of the plant's organizational system health. Deficiencies in the Engineering and Nuclear Safety area were highlighted earlier in the reporting period, but the B&W Pantex focused on developing a plan to produce measurable improvement. Additional work in this area remains in process. B&W Pantex submitted the Comprehensive Environmental Response Compensation & Liability Act (CERCLA) report with exceptional quality and ahead of schedule. Overall, the functions in PO4 had a challenging but successful year.

PO-5: Contractor Leadership (10% of At-risk fee) was rated VERY GOOD for B&W Pantex. Throughout FY 2013, Pantex demonstrated continual leadership supporting the current NNSA mission direction and responded appropriately to arising issues. During this rating period, B&W Pantex achieved an overall dismantlement rate of 88% of the adjusted baseline; however, they only achieved 58% of B83-0 dismantlement schedule. The contractor met most Level 2 maintenance milestones for the W76-0, W87, W88,

W78, B61, B83, and W80 stockpile systems in accordance with directive documents and within site budget allotments. Pantex met the rebaselined W76-1 quantities and 88% of the dismantlement rebaselined scope. Several factors contributed to rebaselining of scope, including: high mast lighting shut-down, fire penetration seal replacement, and replacement of the plant's Enterprise Resource Planning (ERP) System. The contractor did meet all Level 2 surveillance milestones for the W76-1, W76-0, W87, W88, W78, B61, and B83 stockpile systems in accordance with published directive documents and within site budget allotments.

Pantex leadership reacted well to many challenges over the past year including the impacts of a delayed contract transition. B&W Pantex effectively collaborated with others, such as the Y-12 National Security Complex. The Pantex Renewable Energy Project strengthened private industry relationships by facilitating the commitment to perform critical mission work in the most environmentally sensitive manner. B&W Pantex Safeguards and Security Program displayed an overall strong performance with some areas of improvement identified within specific topics/sub-topics. Protection program management and administration functions well and assures the mission of the S&S Program is effectively executed. Contractor managers provide the leadership necessary to assure the mission of the S&S Program is effectively executed and that outcomes are used for continuous learning and improving. B&W Pantex continued pursuing improvements in their self-assessment process in all areas by establishing self-assessments, workplace surveillances, surveys, and management walkthroughs throughout the plant.

However, leadership challenges remain. For example, during this rating period, the performance of many of the B&W Pantex Emergency Management program management elements was assessed as below expectations and the contractor was less than fully successful in implementing fire protection inspection, testing, and maintenance programs for Balance of Plant facilities.

A more detailed breakdown of each of the Performance Objective areas is as follows:

### Performance Objective 1: Nuclear Weapons Mission

## I Narrative Summary

FY 2013 was an anomalous year for B&W Pantex and the contractor faced multiple challenges inside and outside their control which affected overall performance. NNSA accommodated the technical issues outside of their control (i.e., Nuclear Explosives Safety (NES) concerns, Issue G, inclement weather, and sequestration funding) by issuing baseline changes to directive documents. Due to these challenges, Pantex did not meet the W76-1 or the dismantlement rebaselined quantities as directed. B&W Pantex also did not meet the W80 Surveillance Program requirement to complete three Stockpile Lab Test (SLT) dismantlement and inspections (D&I's), despite NNSA delivering additional funding as requested. Contrarily, B&W Pantex did exceed expectations by completing the following objectives: implementing the Enterprise Resource Planning System (ERP) seven months ahead of schedule and \$8.5M under budget; completing early storage program requirements despite budget delays; and finalizing 70% more weapons dismantlement and disposition (WDD) program component characterizations in FY 2013 over the FY 2012 completions. Even though the implementation of the ERP System did result in some additional production delays resulting from start-up issues, these were resolved in a safe, systematic, and timely manner.

EOY Adjectival

**Very Good**

B&W Pantex met the deliverables for the B61-12 LEP, W78/88-1 Study, and the W88 ALT 370. As a notable accomplishment, the contractor completed the first plastic bonded explosive (PBX) 9502 Development Lot formulation and testing in 20 years and was very proactive in participating on Product Realization Teams (PRT) to identify manufacturing development needs and strategies. B&W Pantex also met expected stockpile strategy deliverables by providing aging assessments, and engineering and physics-based lifetime estimates on nuclear explosive package components and materials for weapon refurbishment and/or replacement. Additionally, the contractor met expectations in support of the required deliverables for agreed cost, scope and schedule on NA15 Task Agreements. It is noted however, that the NNSA remains concerned with Agent Operations Central Command (AOCC) operations and maintenance due to the chronic lack of maintenance support for the command facilities.

During this rating period, B&W Pantex achieved an overall dismantlement rate of 88% of the adjusted baseline; however, they only achieved 58% of B83-0 dismantlement schedule. The contractor met most Level 2 maintenance milestones for the W76-0, W87, W88, W78, B61, B83, and W80 stockpile systems in accordance with directive documents and within site budget allotments. Pantex met the rebaselined W76-1 quantities and 88% of the dismantlement rebaselined scope. Several factors contributed to rebaselining of scope, including: high mast lighting shut-down, fire penetration seal replacement, and replacement of the plant's Enterprise Resource Planning (ERP) System. The contractor did meet all Level 2 surveillance milestones for the W76-1, W76-0, W87, W88, W78, B61, and B83 stockpile systems in accordance with published directive documents and within site budget allotments.

During this performance period, B&W Pantex contributed to the various reporting requirements throughout the year including: the Selected Acquisition Reports; schedule and risk information for the Integrated Master Schedule; DoD Cost Assessment and Program Evaluation (CAPE) reviews; cost and study information associated with the conventional high explosive (CHE) refresh of the W88 ALT 370; Quarterly Program Reviews; and monthly reporting which included Earned Value management System (EVMS) data. The contractor met program expectations for implementing EVMS at the site and developing the Primavera resource loaded schedule. B&W Pantex also developed and provided the necessary site schedule information for the B61-12 Integrated Master Schedule.

Additionally during FY 2013, B&W Pantex tested E- Gun performance with photonic doppler velocimetry to determine the thresholds of high explosives in designing initiation trains and conducting safety assessments. The contractor exceeded expectations by proactively completing and implementing the NNSA phase gate process requirements in support of active and future LEPs; and also exceeded expectations for nuclear safety and quality by demonstrating the capability to develop schedules for nuclear explosive safety evaluations (in coordination with NNSA line management) to handle potential surges in schedules. Early engagement of Federal Weapons Quality Assurance personnel in reacceptance activities related to upcoming LEPs and ALTs allowed issues to be mitigated and streamlined later acceptance activities.

**Performance Objective 2: Broader National Security Mission****I** Narrative Summary

B&W Pantex successfully executed the Complementary Work for Others (WFO) program in accordance with NNSA Orders and guidance; and generated a total of \$9.6M from WFO customers, which represents a 2.1% increase in funding over FY 2012 commitments, and is also the highest level of funding ever received for complementary work at the site. The contractor provided technical training and analysis primarily focused on NNSA's nuclear weapons and high explosives production mission to other federal agencies in support of National Security, and delivered specialized training for the DoD and the Department of Justice (DoJ) Hazardous Device Response Unit. Additionally, B&W Pantex developed and implemented a qualification process for commercially supplied Triamino Trinitrobenzene (TATB) explosives to meet future requirements for both the DOE and DoD.

EOY Adjectival**Very Good**

B&W Pantex continues to meet or exceed expectations for executing WFO and Reimbursable Work (RW) within scope, schedule and budget established by program sponsors and partners. The contractor also engaged with their program sponsors throughout the life of all projects to ensure quality goals are achieved and potential impacts from facility issues and sequestration are minimized. Pantex responds to NPO requests immediately with quality reporting and no major issues or concerns were identified. The WFO Program received \$5.2M from federal and non-federal sponsors and \$4.4M from other DOE/NNSA M&O contractors in FY 2013, and B&W Pantex pursued WFO customers in an effort to grow this Program. Despite sequestration, the contractor maintained WFO new funding within 20% of FY 2012 levels with potential for 100% growth in FY 2014. Additionally, they executed most all projects within authorized budget and schedule constraints, and in accordance with written guidance while maintaining operational readiness. All future deliverables are on schedule to meet cost, scope, and schedule, consistent with NNSA priorities, Program Work Authorizations, Priorities and Deliverables, and Program Execution Plans.

B&W Pantex continued to achieve objectives of the Enhanced Surveillance Campaigns by completing projects consistent with the scope identified in corresponding program plans and the Technology- Enabled Capability Roadmap. During this performance period, the contractor worked with the DoD/Defense Logistics Agency (DLA) to qualify commercially manufactured high explosive molding powders, ensuring a continuing supply to meet future stockpile demands. B&W Pantex provided technical training and analysis focused on Pantex Plant's nuclear weapons and high explosives production mission to non-DOE federal agencies in support of National Security. More specifically, the contractor worked with the National Counter Proliferation Center; developed a summary paper and submitted routes for a pilot study based upon their summary paper for the Nuclear Materials Information Program, and conducted a two day course to support Stockpile to Launch.

B&W Pantex also executed outstanding program management and ensured all program milestones for the Field Intelligence Element (FIE) and the Nuclear Incident Response Program (NIRP) were met. Training in the areas of Explosive Safety, High Reliability Organization/Causal Factor Analysis (HRO/CFA), and specialty topics were also provided. B&W Pantex accomplished all defined deliverables on the Warhead Measurement Campaign including: measurements on seven enduring stockpile pits over a nine week period, six weeks of measurements on the B-53 NELA, and three weeks of measurements on B-61 pits.

B&W Pantex conducted presentations and developed written materials for the United Kingdom Atomic Weapons Establishment (AWE). The contractor also published the Pantex Plant PDRD Annual Report FY 2012 one month ahead of schedule and issued several final reports including: a technical report on “Raman Spectra of Wet Aminated TATB Powders, Pellets, and Sublimed Films at Temperatures between Ambient and 300 C;” a final report on “GPC Optimization Report;” and a final report on “Cross-Over Study for Validating Ultra-High Performance Liquid Chromatography Instrumentation for Core Surveillance.”

During FY 2013, B&W Pantex received \$2.8M to support WFO counterterrorism projects. The contractor provided specialized training for DoD and the DoJ Hazardous Device Response Unit and also provided radiological source support activities for the Naval Expeditionary Combat Command and US Coast Guard. The site deployed response team members in support of the Presidential Inauguration; provided radiological monitoring team support to the State of Arizona for the Palo Verde Power Plant exercise; and supported NA-45 required maintenance activities for the P-Tunnel complex at the Nevada National Security Site. B&W Pantex also supported the Radiological Assistance Program operations, including Render Safe Programs; provided required personnel to fill watchbills and rosters as needed; and maximized planning to minimize impacts within available funding during sequestration.

**Performance Objective 3: Science, Technology & Engineering (ST&E) Mission****I** Narrative Summary

During this performance period, B&W Pantex executed research to enable, support, and advance national security missions, and advance the frontiers of ST&E in accordance with their budget profile, scope, cost, schedule, and risk while achieving the expected level of quality. The contractor substantially improved WFO processes which contributed to successfully reducing their average approval time for new proposals from 36 days to 2 days in FY 2013, and resulted in significant efficiencies and improved overall program performance. The contractor completed all WFO project deliverables related to this performance objective on time and without extensions; and also accomplished all defined deliverables on the Warhead Measurement Campaign including: measurements on seven enduring stockpile pits over a nine week period; six weeks of measurements on the B-53 nuclear explosive-like assembly (NELA); and three weeks of measurement on B-61pits.

EOY Adjectival

**Very Good**

During this performance period, B&W Pantex strengthened their Plant Directed Research, Development and Demonstration (PDRD) program by securing three additional PDRD projects for mid-FY 2013 starts - achieving a greater value for the investment. Additionally, the contractor solicited FY 2014 PDRD projects and the solicitations were of such quality that they received 22 proposals in response. B&W Pantex developed the FY 2013 PDRD portfolio of twenty projects which included efforts within the Weapons Operations Center of Excellence, and the High Explosives Manufacturing Center of Excellence; and incorporated business tools and practices transformation in concert with the High Explosives Center of Excellence Plan and the Technology-Enabled Capability Roadmap. These documents are consistent with published NNSA strategic documents, as well as other internal site plans, to encompass a comprehensive preview of site capability requirements necessary to sustain the enduring stockpile well into the future.

In coordination with Directed Stockpile Work (DSW) and Campaigns Program Managers in Defense Programs, B&W Pantex implemented project selection processes effective in preventing scope overlap, redundancy, or duplication through coordination of B&W Pantex's FY 2013 "Plant Directed Research, Development and Demonstration (PDRD) Program Execution Plan." They developed new and creative ways to identify PDRD projects and solicited new PDRD project proposals from plant personnel. Proposals were evaluated by the Pantex Science Council to determine applicability to the future of the Plant using a stringent set of screening criteria developed in concert with Enterprise capabilities described in the Stockpile Stewardship Management Plan (SSMP), Component Maturation Framework, and the Technology-Enabled Capability Roadmap. The screening criteria considered creativity, innovation, technical impact, technical soundness, and financial resource requirements and resulted in sound PDRD project possibilities.

During the performance period, B&W Pantex formed a development organization in the Explosives Technology Division primarily dedicated to accomplishment of PDRD, Campaigns and WFO projects. They solicited proposals from technical organizations, thereby reinforcing competency sustainment objectives within those functional organizations.

B&W Pantex actively participated, as a voting member, in the DOE Technology Transfer Working Group. They developed business plans for aggressively advancing process development and WFO initiatives, and a business plan and processes for reinvigorating technology transfer activities. Additionally, the contractor conducted an internal status review of the PDRD program and briefed the programmatic status, outcomes, and lessons learned at the Nuclear Security Enterprise (NSE) PDRD Review.

## Performance Objective 4: Security, Infrastructure, Environmental Stewardship & Institutional Management

### I Narrative Summary

B&W Pantex Safeguards and Security Program displayed an overall strong performance with some areas of improvement identified within specific topics/sub-topics. Protection program management and administration functions well and assures the mission of the S&S Program is effectively executed. Contractor managers provide the leadership necessary to assure the mission of the S&S Program is effectively executed and that outcomes are used for continuous learning and improving. Notable improvements for the year include false alarm rates/nuisance alarm rates reduced by 41%, red alerts on the Ground Surveillance Radar (GSR) System reduced by 80%, Argus personnel alarms reduced by 87%, and Argus latch bolt alarms reduced by 61%. In addition to these reductions, B&W Pantex continues to closely manage the Priority 1 maintenance issues as evidenced by Security Alarm System Repair Cycle Times remaining low throughout the year with an average repair time of less than 24 hours, significantly less than the requirement to initiate repairs. Physical security systems at Pantex provide a robust and effective means of controlling access to critical security areas and a layered defense-in-depth method provides an increased level of detection assurance. Additionally, B&W Pantex has provided Argus technical support on numerous occasions to other sites, such as LANL and Y-12, sending technicians to these sites for extended periods of time. The Protective Force is properly protecting the Department of Energy's critical assets at Pantex. This assessment is supported by external reviews conducted by HSS. NPO's Personnel Security and Information Protection reviews provide assurance that the programs met expectations. The multiple layers of protection associated with the MC&A program also provide assurance that nuclear materials are protected and controlled. Overall, the S&S program performed well and has shown significant progress over the last few years as demonstrated by specific self-assessments conducted by S&S personnel, internal audit assessments conducted by B&W Pantex quality personnel, and external reviews by NPO, HSS, and other NNSA entities.

EOY Adjectival

**Excellent**

During this rating period, the performance of many of the B&W Pantex Emergency Management program management elements was assessed as below expectations. In the last quarter of the rating period, B&W Pantex made some significant changes, including assigning two capable managers to key Emergency Management program positions and the program is receiving significant management attention. Emergency responders, including the fire department, Emergency Medical Technicians, and Incident Command Team elements, are well-trained and capable.

Within line item projects, B&W Pantex has demonstrated superior support of the High Explosives Center of Excellence (HE CoE) by providing assistance to the NA-APM Federal Project Directors with preferred design option alternatives for High Explosive Science, Technology & Engineering (HEST&E), developing Functions and Requirements for the facility and equipment, and supporting NA-APM Enterprise Construction Management in developing conceptual design. B&W Pantex also provided direct project support for the High Explosives Pressing Facility (HEPF) in the way of Title III Architect/Engineer services and Earned Value & Baseline Management support. Related to the High Pressure Fire Loop (HPFL), B&W Pantex performed well in all aspects of project delivery: design, construction management (QA, Safety, and etc.), and Start-Up & Commissioning. The B&W Pantex project management organization support NPO in the award and construction of the Pantex Renewable Energy Project (PREP) and continues to provide outstanding project support.

B&W Pantex managed Business functions very effectively through a variety of challenges, particularly in light of the FY 2013 budget sequestration which reduced overall funding by 7.7% - a \$28.6M impact for Pantex. The site proactively reduced target headcount (from 3,394 in FY 2012 to 3,129 in FY 2013) via a plant-wide hiring freeze and realigned needed skills to critical vacancies to overcome funding shortfalls. In anticipation of a new prime contract, Labor Relations proactively and successfully negotiated collective bargaining agreement extensions with both Metal Trades Council and West Texas Building Trades Association. B&W Pantex continues to exceed aggressive small business goals established by DOE/NNSA with procurements to small business, exceeding 75% against a goal of 61%. The contractor provided complete and timely responses to a variety of data calls ranging from Budget shortfalls and Programming requirements to costs information for the Consolidated Contract. Financial system enhancements were made in a variety of areas to streamline reporting/drill-down capability and facilitate the merge of Pantex/Y-12 systems.

B&W Pantex Information Technology (IT) not only met expectations stated in the PEP but overall IT performance was above expectations when additional requirements were taken into consideration. Pantex did a very good job in both managing IT requirements as well as collaborating with B&W Y-12 IT to develop and to implement a cutting-edge virtual desktop computing environment (one of NNSA's earliest deployments) in support of site consolidation. B&W Pantex continues to excel with its mobile enablement technologies for use within the plant and mobile teleworker environments, and they were able to integrate these technologies into this year's completed IPRO System. Although better planning to prevent single point failure could have occurred, B&W Pantex performed a very well executed recovery of its entire datacenter operations following an electrical fire. IT Management exhibited a very mature continuity of operations process during the outage. B&W Pantex implemented a solid Cyber Security Program with well trained personnel working towards development of innovative solutions to ensure defense in depth and process improvements. There are areas for improvement, as identified in NPO assessments, but overall the Information Systems Security Manager (ISSM) has provided a solid, stable program, protecting information as required, and responding to issues quickly when they developed.

During FY 2013, B&W Pantex maintained facility availability despite chronic underfunding of the Pantex Operations of Facilities program. B&W Pantex conducted a risk-based evaluation of the current state of Pantex's facilities and infrastructure (F&I) against current and future mission requirements. This evaluation resulted in a prioritized list of 281 projects and end-of-life equipment replacements (including 4 line items). B&W Pantex also successfully mitigated multiple unplanned and emerging events which directly impacted facility availability and consequently impacted mission deliverables. Some of the major issues Pantex successfully resolved during FY 2013 included fire suppression lead-in breaks and solenoid valve failures, deteriorated utility poles, and fire penetration seal deficiencies. While working through several of these issues, Pantex also effectively implemented sequestration cuts through workforce management and project deferment and prevented mandatory workforce reductions or furloughs. B&W Pantex also provided about \$5M Operations of Facilities funding to support Quality of Worklife issues, strengthening nuclear safety culture at the site. In relations to Energy Savings goals, the contractor achieved High Performing Sustainable Building status for 12-138 and supported a Federally awarded Energy Savings Performance Contract (Pantex Renewable Energy Project/PREP) positively affecting Greenhouse Gases and Renewable Energy objectives at the site. B&W Pantex is recognized as a leader with the Department of Energy (DOE) in assessing infrastructure conditions and populating the DOE's Condition Assessment information System (CAIS); Pantex also leads the DOE's CAIS Users Group. The contractor was impacted in achieving its fuel goals because the site's

alternate fuel delivery system was down for approximately six months before funding and resources were available to perform necessary repairs. Lack of funding contributed to the site's inability to complete a planned metering project.

The contractor implemented robust, mature, and effective safety management programs (e.g., Integrated Safety Management and Environmental Management) that resulted in: 1) Zero unplanned occupational exposures to radiation, chemical, biological or other work place hazards; 2) No civil violations, fines or penalties for regulatory non-compliances (e.g., PAAA, TCEQ, etc.) that included 19 years without a RCRA violation; 3) Selected as the DOE nominee for the 2013 Presidential Migratory Bird Federal Stewardship award; 4) Electrical Severity Index that was approximately 25% of the DOE average and a 50% reduction from FY 2012 index; 5) Plant-wide vehicle accidents were reduced by 21%; 6) Generated and distributed 55 internal and three external Lessons Learned to communicate to the workforce along with other DOE/NNSA contractors opportunities for improvement; and 7) Eight recordable/lost time incidents that resulted in a 33% reduction from FY 2012 and achieved the lowest total recordable safety rate in the history of the Plant. Of particular importance, the contractor proactively and aggressively implemented a variety of measures to mitigate arctic weather conditions that resulted in no employee injuries and a safe resumption of plant operations. The contractor supported the Final Supplement Analysis for the Pantex Site-Wide Environmental Impact Statement while implementing 235 new training courses to ensure that Plant employees are trained and qualified to successfully implement the mission. However, the contractor was less than fully successful in implementing fire protection inspection, testing, and maintenance programs for Balance of Plant facilities.

The B&W Pantex Legal office performed in an exemplary manner in the rating period. They very efficiently managed several litigation cases. These cases involved discrimination of various sorts and in both federal and state courts. They and their outside counsel won one major case in a jury trial, won another important on a Motion for Summary Judgment, settled one case for a nominal amount, successfully handled another complaint on jurisdictional grounds, and overall exhibited very professional and expert competency in all matters. Their management of legal risk was always in the government's best interest by seeking early and proper disposition of issues.

The contractor implemented an effective nuclear, non-nuclear, and weapon's quality assurance program. Performance includes: 1) No Certificates of Inspection (COI) deficiencies; 2) Improved product quality by evaluating and revising non-COI hold points to maximize the effectiveness of their inspection process; 3) Conducted over 2600 hold point inspections to verify product quality and apply NNSA acceptance status stamps; 4) Benchmarked by LANL on the contractor's Weapon Product Acceptance process; 5) Due to quality assurance issues at Y-12, B&W Pantex led a joint effort with B&W Y-12 to improve Packaging and Transportation effectiveness and compliance at Y-12; and 6) Rejection rates of 35 account material improved from 25% to 15% due to improved communication between the contractor and the vendor identifying Pantex specific QA requirements. Also, the contractor QA department developed the Nonconformance Module in the new IPRO System and added extra safety functionalities in the Move Right System Module. The contractor was less than fully successful in overseeing and verifying subcontractor work deliverables related to fire seals and fire pumps that support safe operations in nuclear and nuclear explosive facilities.

The contractor continued to implement a Contractor Assurance System (CAS) program where basic processes are formalized, documented, and the necessary process discipline is in place to minimize variation and success is process based (vs. individual based). The contractor completed all 276 assessments (i.e., independent, management self-assessments, and TSR) with over 95% completed on time which was significant because of the production delays due to the installation of IPRO and weather conditions. The contractor also supported CAS benchmarking efforts from LANL, SNL, B&W Y-12, and the Portsmouth/Paducah Project Office. Other Pantex CAS improvements included: 1) Significant changes in the FY 2014 risk model; 2) Streamlining the Assessment Review Team evaluation process by implementing InfoPath form and managed as a database in SharePoint; and 3) Exceeded Office of Enforcement reporting guidelines. The structure of the B&W Pantex CAS report improved over the FY (quality and thoroughness) and included a logical progression and identification of Key Initiatives (KI). Although the CAS report provides a status of each KI, the report does not convey the collective significance of each KI or if the Pantex Plant System Health is affected by the KI. This NPO comment has been a re-occurring theme in previous QIMM reports. Also, more work is required in the implementation of an organizational health system based CAS program.

Within Engineering and Nuclear Safety, Authorization Basis (AB) deficiencies were highlighted during the mid-year PER. A DSA Improvement Plan was since submitted and it is evident the contractor focused on developing a plan that would produce both immediate and long term measurable results. Twenty-five submitted change packages were evaluated against 15 Core Principles to provide opportunities for improvement. Examples of improvements include removal of non-10CFR830 compliant language, disposition of legacy Conditions of Approval, removal of scenarios from the Site-Wide Safety Analysis Report (SAR) and placing them in individual Hazard Analysis Reports (HARs), and addressing "High-Consequence, Low-Probability" events. Two additional change packages were submitted to re-write accident scenarios and implement the relevant Core Principles. Additionally, the contractor submitted a major revision to the Unreviewed Safety Question Procedure to reduce areas subject to interpretation and provide flexibility to reduce unnecessary operational shutdowns. While major improvements in the quality of the Pantex safety basis documents are still needed, including a reduction in identified controls, the contractor made significant improvements during the period while establishing an aggressive plan for future actions. Operability and availability of safety systems were maintained to support mission operations in spite of significant challenges due to system age-related failures. B&W Pantex developed a Systems Engineering Modernization Plan which, when complete, will identify a critical safety systems life cycle planning approach to the replacement/refurbishment of critical systems and capital expenditure replacement items. Contactor Nuclear Explosive Safety (NES) activities were conducted in support of mission operations. Numerous Nuclear Explosive Change Evaluations (NCE), Operational Safety Reviews, and NES Master Studies were coordinated and performed to certify continued safe weapon operations meeting all operational commitments. The evaluation and cause analysis work of the Pantex Nuclear Safety Change Control Process completed last fiscal year and the Causal Factors Analysis performed this year have required extensive effort in closing and resolving concerns. However, B&W Pantex was less than fully successful in: 1) AB documents still trend toward a weakness in the presentation of hazard analyses. As the contractor continues to train its staff and stem attrition, it is expected that the hazard analyses and control development will be more consistent regardless of the AB analyst preparing the document; 2) B&W Pantex struggled to adequately and promptly resolve high visibility emerging issues such as the fire penetration seal replacement/repairs. The resolution of this major concern required significant NPO involvement; and 3) the contractor must ensure it maintains a significant focus on implementing the DSA Improvement Plan on schedule.

While B&W Pantex's preparation for contract transition was very thorough, the transition was placed on hold after 10 days.

Within projects, The HEPF is currently GREEN in PARS and is being managed to cost, scope and schedule baselines. B&W Pantex continues to provide very good project support to the U. S. Army Corps of Engineers (USACE); performed all Earned Value Management System (EVMS) input on a monthly basis; and provided timely communication and resolution of issues to key project stakeholders. B&W Pantex also continued to do a very good job ensuring timely input on requests for information (RFIs) and other design related inquiries. The average turn-around time for most RFI's remains at approximately 7 days. B&W Pantex implemented the HPFL project within cost, scope, and schedule parameters and the project was reported as "Green" status to NA-APM. The project will also replace the HPFL lead-ins at two other locations within existing project budget.

The contractor submitted the CERCLA 5-Year Review Report to EPA and Texas Commission on Environmental Quality (TCEQ) two and a half months ahead of schedule. Due to the exceptional quality and technical depth of the draft report, the EPA and TCEQ provided only minor comments to the 5-Year Report.

## Performance Objective 5: Contractor Leadership

### Narrative Summary

Contractor leadership (10%) was rated as VERY GOOD. Throughout FY 2013, Pantex demonstrated continual leadership supporting the current NNSA mission direction and responded appropriately to arising issues. Pantex leadership reacted well to many challenges over the past year including the impacts of a delayed contract transition. Supporting strategic alignment, B&W Pantex developed a Plant Directed Research, Development and Demonstration Program Pantex Plant FY 2013 Program Execution Plan which aligned with the NNSA Strategic Plan. B&W Pantex effectively collaborated with others, such as the Y-12 National Security Complex. In particular, they built the NPO IT desktop environment; setup technical equipment which allowed for the training of Pantex and Y-12 personnel simultaneously; and, together resolved a container supplier issue. The Pantex Renewable Energy Project strengthened private industry relationships by facilitating the commitment to perform critical mission work in the most environmentally sensitive manner. B&W Pantex attended benchmarking trips to NRC regulated nuclear power plants to gather lessons learned in order to improve Pantex Plant operations. They maintained critical skills through partnerships with universities to attract the best and brightest in support of effective safety and security performance. In the Safeguards and Security (S&S) program, contractor managers provided the leadership necessary to assure the mission is effectively executed and that outcomes are used for continuous learning and improvement. Overall, the S&S program performed well and continued to show progress over the last few years as demonstrated by the results of self-assessments conducted by contractor S&S personnel, internal audits by quality personnel, and external reviews by NPO, HSS and other NNSA entities. While NPO assessed performance of several Emergency Management (EM) program elements below expectations. B&W Pantex made some changes in the last quarter and the program is receiving significant needed management attention, including the assignment of two capable managers to key EM program positions. EM emergency responders, including the fire department, Emergency Medical Technicians, and Incident Command Team elements, were well-trained and capable. In another area for continued management attention, B&W Pantex was less than fully successful in implementing fire protection inspection, testing, and maintenance programs for Balance of Plant facilities. However, B&W Pantex routinely coordinated and effectively communicated key information to the appropriate NNSA leadership. Their parent company also reflected a commitment to the site and a Management Assurance System by providing senior, experienced professionals to fill management positions focusing on areas such as nuclear safety culture and contractor assurance. B&W Pantex continued pursuing improvements in their self-assessment process in all areas by establishing self-assessments, workplace surveillances, surveys, and management walkthroughs throughout the plant.

EOY Adjectival

**Very Good**