National Nuclear Security Administration

Babcock & Wilcox Technical Services Pantex, LLC (B&W Pantex)

Fiscal Year 2014 Performance Evaluation Report (PER)

NNSA Production Office
B&W Pantex

Performance Period:
October 2013 – June 2014

September 8, 2014

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, 2013 through June 30, 2014, as evaluated against the objectives defined in the Fiscal Year (FY) 2014 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 were 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 quarterly Performance Self-Assessment briefings provided to the NPO throughout the year, B&W Pantex submitted a Performance Self-Assessment Report that covered the rating period. During the first half of the year, in addition to continuing normal operations, Pantex worked through a myriad of drills associated with the lapse of appropriations, Continuing Resolution, and requirements related to a potential sequestration. They developed solutions, including initiatives to reduce costs, to help overcome funding shortfalls. In addition, the four month contract transition to the new contractor re-started on March 3, 2014, and was successfully completed on June 30, 2014. B&W Pantex supported the completion of a very complicated transition in a short amount of time and assisted the new contractor in addressing many challenges. Overall, the contract transition was very successful and B&W Pantex did a very good job ensuring minimal impact to the workforce and on-going operations.

PO-1: Manage the Nuclear Weapons Mission (25% of At-risk fee) was rated as EXCELLENT. Overall, B&W Pantex managed the Nuclear Weapons Mission, meeting or exceeding the Program Implementation Plan work scope funded through Directed Stockpile Work (DSW), Campaigns, Readiness in Technical Base and Facilities (RTBF), and the Secure Transportation's 2014 Task Agreements. B&W Pantex performed this work scope by delivering to the overall cost, schedule, weapons quality and operational requirements, as well as by technical performance, without impact to safety or security. The ability to meet and exceed work scope is noteworthy given the lapse in FY 2014 appropriations at the start of the fiscal year that resulted in a significant number of lost workdays. In most areas, B&W Pantex accelerated work in the second and third quarters in FY 2014 to allow meeting or exceeding work scope by the end of the reporting period. B&W Pantex completed all required maintenance activities resulting in exceeding total weapon deliveries at 110%. Pantex executed Surveillance Program deliveries for the stockpile work to meet limited-life component exchanges (LLCE) and dismantlements. Related to high priority activities, B&W Pantex performed above expectations for executing the high priority B61-12 phase 6 and the high priority W76-1 LEP; and, met high priority W78/88-1 phase 6.2 activities and W88 Alt-370 phase 6.3 activities; as well as supported the W78/88-1 LEP 120-Day Study and closeout activities.

PO-2: Broader National Security Mission (12.5% of At-risk fee) was rated as VERY GOOD. B&W Pantex supported efforts to remove proliferation materials by completing a shipment of power sources to Los Alamos National Laboratory (LANL) for disposition prior to the LANL pause in operations. In the area of non-proliferation Research & Development, Pantex supported an

unplanned request to bring a Mini Muon Tester (MMT) to the site and conduct measurements on specific trainers at the site. B&W Pantex also pursued and performed interagency work by entering into 22 new Work for Others (WFO) agreements with an additional six amendments through the work accomplished by the Pantex Strategic Partnerships Program (SPP). In the Emergency Management Program, B&W Pantex successfully transitioned from a stand-alone site to a combined operation with Y-12 to a unified management system located in Tennessee. Related to Emergency Response, B&W Pantex maintained operational readiness and support, and notably through the lapse-in-appropriation shutdown.

PO-3: Science, Technology & Engineering (ST&E) and Other DOE Mission Objectives (12.5% of At-risk fee), was rated as EXCELLENT. During the rating period, B&W Pantex successfully executed 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, and schedule while achieving the expected level of quality. B&W Pantex identified and executed Plant Directed Research and Development (PDRD) projects by successfully supporting the Fiscal Year (FY) 2014 PDRD portfolio of 38 projects. They maintained Mission Relevance project selection processes that were effective in preventing scope overlap, redundancy, or duplication through coordination with the Directed Stockpile Work (DSW) and the Campaigns Program Managers within Defense Programs, and solicited new projects for PDRD from plant personnel in the area of Transformative Research by actively participating in the DOE Technology Transfer Working Group. In addition, B&W Pantex ensured essential and critical skills necessary for the National Security Mission supporting future mission requirements were available, and actively monitored Program Execution budget allocations to ensure funds were available to support PDRD projects which minimized the risk of project scope, creep, and project failure. All projects were on schedule and either at, or below, the authorized budget allocated.

PO-4: Operations & Infrastructure (25% of At-risk fee) was rated as EXCELLENT. This Performance Objective encompasses most of the mission support areas including: Environment, Safety and Health; Projects; Security including Emergency Management and Cyber; Facility and Infrastructure; Business; Legal; Transition; Safety Culture; and Nuclear and Criticality Safety Engineering. In the Environment and Safety arena, Pantex's Total Recordable Case (TRC) and the Lost Time Case (LTC) rates remained low to allow the site to continue as a Voluntary Protection Program (VPP) Star site. B&W Pantex's Environmental Management System was evaluated by a third party independent audit team that resulted in a positive determination of conformance to ISO 14001. It was noted, however, that the Fire Hazard Analyses (FHAs) were not being performed every three years as required by DOE Order. B&W Pantex managed capital projects in accordance with scope, cost, and schedule baselines including the delivery of the High Pressure Fire Loop (HPFL) Project to Critical Decision (CD)-4 status ahead of the performance baseline date. They also achieved a major milestone with the completion of the Pantex Wind Farm in June 2014 which will power more than 60% of the Pantex Plant in the future with clean, renewable wind energy. B&W Pantex managed security challenges, protecting special nuclear material, and classified information. While Information Security and Classified & Controlled Information Programs were well managed and performed effectively, there were a couple of concerns with the Protective Force (PF) and another concern that indicated an organizational culture problem may exist within the PF. B&W Pantex achieved 97% facility availability for mission critical facilities. While B&W Pantex demonstrated successful management of many general plant projects (GPP) and line-item projects; the Vacuum Chamber project, which is critical to out-year deliverables at the plant, fell behind schedule and may impact future production goals. B&W Pantex exceeded expectations in

business operations throughout the year including working through a myriad of funding challenges. B&W Pantex continued to lead the way in small business goals, awarding 79.8% of total procurements to small business, substantially exceeding the 65% goal. The B&W Pantex Legal Department exhibited great success in litigation management and other legal issues. They continued an aggressive posture in defending against employee discrimination litigation and complaints, exhibited thorough preparation, and were persuasive in their positions on all of these issues. The four month contract transition was exceptionally successful. Despite the added workload, B&W Pantex, focused on ensuring minimal impacts to the workforce and to plant operations, and as a result, productivity remained high and even increased in some areas.

B&W Pantex executed over $5M General Workplace Improvement (GWI) projects, well above the $2M goal in support of Nuclear Safety Culture initiatives. In the area of The Nuclear Explosive Safety (NES), B&W Pantex operations enhanced performance metrics that monitor the overall health of critical NES systems and developed comprehensive analyses of the on-site transportation risks. B&W Pantex engineering programs (e.g., nuclear safety, criticality safety, and other related programs) effectively supported the B&W Pantex production schedule and identified legacy supplier quality issues that had the potential to negatively impact weapon components and Department of Transportation compliance, which may prove to be a Weapon Enterprise-wide concern involving multiple sites. However, in the area of fire protection systems, the contractor did not perform an adequate verification of the installed condition of the new penetration seals. The Emergency Management program also had areas needing improvement. While acknowledging B&W Pantex actions taken during the performance period are positive steps to correcting deficiencies in Emergency Management leadership and program management, more time and continued diligent aggressive action will need to be applied further to realize significant improvement in program performance.

PO-5: Leadership (25% of At-risk fee) was rated as VERY GOOD. B&W Pantex did a Very Good job addressing nuclear weapons program and operational challenges through coordination and a strong working relationship with the balance of the Nuclear Security Enterprise and Stakeholders. B&W Pantex completely recovered W76-1 units affected by infrastructure aging issues, production pause for the safety weapons response on key nuclear explosive operations, supply chain challenges, and the delay caused by the potential lapse in appropriations. As a result of these efforts and leadership, B&W Pantex exceeded the Life Extension Program, Surveillance, and Dismantlement goals through the rating period. B&W Pantex self-assessed and communicated Plant operations, initiatives, and status. Specific efforts included addressing the “Safety Culture Plan for the Pantex Plant;” benchmarking the Nuclear Regulatory Commission safety policies and trust models; and overall effective and timely dialogue with the NNSA and Stakeholders. B&W Pantex enhanced their assurance systems through greater coordination with the NNSA on customer expectations and focus areas; successful completion of and follow-up to self-assessments; greater communication on findings and resolution; effective partnering with the balance of NNSA on improving nuclear safety culture; and fostering an environment of a questioning attitude and overall employee openness.

Performance Objective 1: Manage the Nuclear Weapons Mission

Summary

Excellent

Overall, B&W Pantex performed above expectations in their ability to manage the Nuclear Weapons Mission. B&W Pantex met or exceeded the Program Implementation Plan work scope (Level 2 milestones) funded through Directed Stockpile Work (DSW), Campaigns, Readiness in Technical Base and Facilities (RTBF), and the Secure Transportation's 2014 Task Agreements. B&W Pantex performed this work scope by delivering to the overall cost, schedule, weapons quality and operational requirements, as well as by technical performance, without impact to safety or security. The ability to meet and exceed work scope is noteworthy given the lapse in FY 2014 appropriations at the start of the fiscal year that resulted in a significant number of lost workdays. In most areas, B&W Pantex accelerated work in the second and third quarters in FY 2014 to allow meeting or exceeding work scope by the end of the reporting period. In addition, B&W Pantex performed exceptionally in preparing the plant for the transition of the Nuclear Weapons Mission work to the new contractor. NNSA reviewed the B&W Pantex Self-Assessment and, in most cases, agreed with the overall assessment of excellent. Specific observations follow:

CF 1.1: B&W Pantex overall performed above expectations by accomplishing negotiated work with program sponsors; achieving the expected level of quality to ensure safe, secure, reliable weapon performance and transportation; and providing cost-effective operations. B&W Pantex completed all required maintenance activities resulting in exceeding total weapon deliveries at 110%. B&W Pantex continued to maintain critical equipment and prioritized maintenance work enabling on-time completion of DSW deliverables despite reductions to production support. However, for the Task Agreements associated with Mechanical & Electronic Fleet Maintenance Project and AOCC Operations & Maintenance Project, B&W Pantex met expectations through the end of the 3rd Quarter by meeting all required deliverables for cost, scope, and schedule.

CF 1.2: B&W Pantex overall performed above expectations to increase knowledge of the state of the stockpile, resulting from successful execution of the stockpile surveillance program and a robust scientific and engineering understanding supporting delivery of the annual stockpile assessment. B&W Pantex met or exceeded the high priority Surveillance Program at 128% for pit radiography; 111% for CoLOSSIS; 100% leak check; 107% pit weight; and 100% for laser gas sampling, leak check, Tube Evaluation Test System (TETS), and Coordinate Measurement Machine (CMM). In addition, B&W Pantex improved electronic capabilities and access to surveillance data through the Quality Evaluation Requirements System (QERTS) resulting in creating automated Integrated Weapon Evaluation Team (IWET) report, thus replacing manual efforts. B&W Pantex also successfully completed an annual Enhanced Surveillance stockpile aging and lifetime assessment report in support of the annual assessment process. In addition, the contractor began a comparison study for the (Livermore Explosive (LX) -07 and plastic bonded explosive (PBX) 9012, and began an aging study of the PBX 9501, and has also completed additional threshold tests at different densities on LX-17 and provided results to Lawrence Livermore National Laboratory (LLNL).
CF 1.3: B&W Pantex overall performed above expectations to execute deliveries for the stockpile work to meet limited-life component exchanges (LLCE) and dismantlements. They met or exceeded

the high priority Dismantlement Program by completing 116% year-to-date and 70% for FY 2014. In addition, B&W Pantex dispositioned more components than expected due to increased receipt and characterized 241 total components toward the FY 2014 goal of 300. B&W Pantex authorized and commenced operations for the W87 Limited-Life Component against the high priority LLC Exchange Program, and achieved full recovery for delivery despite initial delays to the schedule. In addition, B&W Pantex completed the initial formulation of PBX 9404 and started the aging of activities for the Phase II Detonator Study. B&W Pantex performed above expectations in proposing a cost avoidance plan to use existing containers for the W76 campaign (CF 1.3, which will eliminate analyzing, and developing a costly and new safety basis (for a DPP-2 to include W76 content). This proposed plan has a potential cost avoidance of $2M. In addition, B&W Pantex is meeting expectations in participating in the development of a container pallet assembly (CPA) for the Defense Programs Package (DPP)-1 by providing the necessary data to the Design Agency

CF 1.4: B&W Pantex overall met expectations to demonstrate the application of new strategies, technologies, and scientific understanding to support stewardship of the existing stockpile and future stockpile needs. B&W Pantex met expectations through continued support for the high priority Component Maturation Framework by collaborating with the national laboratories to determine technological needs and delivery dates for meeting future stockpile enhancements. B&W Pantex also continued to support Enhanced Surveillance Programs by collecting data for the Annual Enhanced Surveillance Stockpile Aging and Lifetime Assessment Report in support of the national laboratories.

CF 1.5: B&W Pantex overall met expectations to sustain and strengthen unique science and engineering capabilities, facilities, and essential skills to ensure current and future Nuclear Weapons mission requirements are met. They specifically met expectations by continuing to provide the essential and critical skills necessary to support future mission requirements through the authorization of 38 projects among Special Nuclear Materials, Weapons Operation Center of Excellence, Transforming Business Tools and Practices, and High Explosive Manufacturing Center of Excellence projects.

CF 1.6, SSO 1.2, 1.3: B&W Pantex overall performed above expectations for executing the high priority B61-12 phase 6.3 developmental and programmatic activities. They experienced staffing challenges with the loss of key personnel but still exceeded expectations by delivering high quality products in support of several major activities. The major activities included--supporting multiple Product Realization Teams (PRTs) (including the DoD Maintenance, Sustainment and Logistics, primarily covering the tail kit assembly); supporting the completion of NNSA Integrated Master Schedule(NIMS) and a Performance Measurement Baseline (PMB); implementing Earned Value Management System (EVMS) on the classified system; completing two development lots of PBX-9502, and formulation of new PBX- 9012 (LX-07 replacement); designing new assembly tooling for Mod 12 All Up Round; initiating the pit reacceptance and reuse project; and fabricating explosive components for development and component shipping in support of various Nuclear Security Enterprise (NSE) needs.
CF 1.6/SSO 1.4: B&W Pantex overall met expectations to execute the high priority W78/88-1 phase 6.2 activities and W88 Alt-370 phase 6.3 activities in accordance with NNSA approved schedules, and is demonstrating earned value management systems (EVMS) for these programs. For both the W78/88-1 and the W88 ALT 370, they delivered site monthly reports as required; remained on track to update their project schedule for resource loading; and remained on track to implement an EVMS by the end of the fiscal year. For the W88 ALT 370, B&W Pantex continued to provide limited support

during the engineering development phase of the program by providing early requirements definition for the Joint Test Assembly (JTA) and War Reserve (WR) production. In addition, they have provided excellent provisioning support and integration with the W88 legacy system to ensure hardware assets to the qualification program while supporting the legacy production. For the W78/88-1, B&W Pantex fully supported the high priority W78/88-1 LEP 120-Day Study and closeout activities.

SSO 1.1: B&W Pantex overall met expectations to conduct a follow-on Pantex Throughput Improvement plan. B&W Pantex delivered the plan on time and met the agreed-to tasks outlined in the plan.

SSO 1.5: B&W Pantex overall performed above expectations for the high priority W76-1 LEP. B&W Pantex collaborated closely with LANL to complete process prove-in activities for the build of a W76 WR unit with a nondestructive laser gas sampling canned subassembly ahead of schedule to enable release of the Los Alamos National Laboratory Quarterly Evaluation Report ahead of schedule. During the first three quarters of FY 2014, Pantex met or exceeded W76-1 Production Control Document (PCD) monthly warhead build rates. B&W Pantex completely recovered W76-1 units affected by FY 2013 infrastructure aging issues, the production pause due to the incorporation of safety basis documentation upgrades, and the FY 2014 Government shutdown. This production recovery and subsequent exceeding of monthly PCD requirements production rates enabled the delivery of WR units to the Navy to remain on schedule in accordance with the negotiated delivery schedule. B&W Pantex implemented the NNSA-approved Baseline Change Request (BCR) regarding execution of W76-1 Retrofit Evaluation System Test (REST) and Stockpile Disassembly and Inspections (D&Is) in accordance with PCD and IWET schedule requirements due to delays in Life Extension Program production that affected REST selections for D&I and late returns of Stockpile surveillance units from the Navy. B&W Pantex resumed W76-1 D&I cell operations due to a Potential Inadequate Safety Analysis (PISA) on May 23, 2014. B&W Pantex consistently submitted their Monthly Reports to NNSA ahead of the submittal deadline.

Performance Objective 2: Broader National Security Mission

Summary

B&W Pantex exceeded many expectations during FY 2014. This performance summary is based on achieving consensus between the PO-2 Program Offices and the Field Office.

Very Good

During this performance period, B&W Pantex met performance expectations in supporting efforts to removing proliferation materials by completing a shipment of power sources to Los Alamos National Laboratory (LANL) for disposition prior to the LANL pause in operations.

B&W Pantex met performance expectations in the area of non-proliferation R&D by supporting an unplanned request from NA-22 and LANL on the Warhead Measurement Campaign to bring a Mini Muon Tester (MMT) to the site and conduct measurements on specific trainers at the site. They completed the design of all 55 tools for this campaign; 27 of the tools are on-site and the remaining tools expected in July. The contractor continued to support the development of the Portal Monitor for Arms Control (PMAC), a joint effort between the US and UK; and B&W Pantex also: participated in a joint US UK Team Meeting held in the UK; provided information and support to help define the requirements for deploying a system in a nuclear weapons assembly disassembly facility; and hosted a meeting for the US Field Deployment and the Host/Monitor Teams.

B&W Pantex exceeded performance expectations in the area of pursuing and performing interagency work through the work accomplished by the Pantex Strategic Partnerships Program (SPP). Through the SPP, Pantex entered into 22 new Work for Others (WFO) agreements with an additional six amendments for $4.764M in new funding. An additional 16 proposals were submitted with a total funding amount in excess of $5.3M. Of these proposals, the contractor has received customer communications indicating that eight will likely be funded in FY 2014, with a total funding amount of $2.31M; bringing likely total authorized WFO funding amount for FY 2014 to $7.07M, an increase of 38% over the previous year. The interagency work funded during FY 2014 included supporting nuclear weapons support work, providing weapons test equipment to, and refurbishing trainers for, the Department of Defense (DoD); supporting strategic mission work benefitting both the DoD and the Defense Threat Reduction Agency (DTRA); supplying expertise and analysis to Other Government Agency (OGA) customers in the intelligence community; and providing radiological source and training support to the DoD and Federal Bureau of Investigation (FBI).

For the Emergency Management Program, B&W Pantex has exceeded many expectations by successfully transitioning from a stand-alone site to a combined operation with Y-12 with a unified management system located in Tennessee. For Emergency Response, the Radiation Assistance Program (RAP 4), located in Albuquerque, New Mexico, B&W Pantex maintained operational readiness by conducting equipment maintenance, personnel training and willingness to support short notice assignments. B&W Pantex also supported the Stabilization Program (STAB) by providing subject matter experts. Render Safe program successfully supported the Nuclear Weapons Accident and Incident Exercise FY 2014 (NUWAIX 14) and Marble Challenge 14-02 exercise. B&W Pantex Ops and Exercises provided scientific experts to serve as evaluators and participants for NUWAIX 14 and

Marble Challenge 14-02 exercises. For Nuclear Forensics B&W Pantex maintained operational readiness and support for Disposition and Forensics Evidence Analysis Team (DFEAT).

During the FY14 lapse in appropriations, B&W Pantex sustained support to the emergency response programs (RAP, STAB, Render Safe and DFEAT) to ensure the Nation's capability to respond to radiological/nuclear remainded intact.

Consequently, B&W Pantex performance was very good in the areas of emergency management, RAP, STAB, Render Safe and DFEAT. B&W Pantex performance is consistent with mission objectives, scope, and schedule and cost requirements.

Performance Objective 3: Science, Technology, and Engineering and Other DOE Mission Objectives

Summary

Excellent

Overall, B&W Pantex exceeded performance expectations by successfully executing research to enable, support, and advance national security missions, and to advance the frontiers of Science, Technology and Engineering (ST&E), in the areas of Stockpile Surveillance and Enhanced Surveillance process improvements and in accordance with their budget profile, scope, cost, and schedule while achieving the expected level of quality.

B&W Pantex exceeded performance expectations identifying, selecting and executing Plant Directed Research and Development (PDRD) projects by successfully supporting the Fiscal Year (FY) 2014 PDRD portfolio of 38 projects including the Weapons Operations Center of Excellence, the High Explosives Manufacturing Center of Excellence, Transforming Business Tools and Practice, Information Technology, and Special Nuclear Materials while ensuring alignment with the Technology-Enabled Capability Roadmap.

B&W Pantex exceeded performance expectations in the area of Mission Relevance by successfully maintaining project selection processes that were effective in preventing scope overlap, redundancy, or duplication through coordination with the Directed Stockpile Work (DSW) and the Campaigns Program Managers within Defense Programs. They also authorized two Rapid Response projects, which investigated the additive manufacturing activities that could benefit B&W Pantex and re-purposed repositories that were destined to be excessed, for storage of small amounts of explosive material in the laboratory environment; and a project for lightning paths along penetrations in Nuclear Explosive Facilities, which is high importance to worker and nuclear explosive safety of all programs.

B&W Pantex exceeded performance expectations in the area of Transformative Research and solicited new projects for PDRD from plant personnel. This approach resulted in receiving over 29 proposals, which were submitted for consideration and were subjected to scrutiny of the Pantex Senior Science Council to determine the degree of innovation and applicability to the future of the plant, and/or enterprise, through applying a stringent set of screening criteria. The criteria for selection included Creativity and Innovation, Technical Impact, Technical Soundness, and Financial Resource Requirements. Only those projects meeting the screening criteria were selected for execution. Examples of the Transformative Research projects include the Purification of and Crystal Growth in Triamino Trinitrobenzene (TATB) and High Explosive Thermal Modeling, which are high importance to the B-61 and B-83 life extension explosive.

B&W Pantex exceeded performance expectations in sustaining ST&E initiatives in the area of Technology Transfer by actively participating in the DOE Technology Transfer Working Group, which provided an opportunity to interact with industry professionals, sharing success stories as well as discussing insight regarding customer relationships, intellectual property rights, and the potential legal issues tied to technology transfer. B&W Pantex effectively managed a portfolio of 38 PDRD projects in FY 2014 which supported Transforming Business Tools and Practices, the High Explosives

Manufacturing Center of Excellence, Special Nuclear Materials, Information Technology, and the Weapons Operations Center of Excellence. These projects provided part-time researchers with challenging technical work, and resulted in exercising and expanding respective competencies.

B&W Pantex exceeded performance expectations executing their role in the National Security Mission by ensuring essential and critical skills in the areas of Engineering, Metrology, Laboratory, Security, and Quality, which are necessary to support future mission requirements were available. The contractor also supported projects in this area such as Transforming Business Tools and Practices, the High Explosives Manufacturing Center of Excellence, Information Technology, Special Nuclear Materials, and the Weapons Operations Center of Excellence through the PDRD program. The Technology-Enabled Capabilities Roadmap offered numerous project opportunities that reinforced the mission needs and provided interesting technology challenges for a skilled workforce.

B&W Pantex exceeded performance expectations in the area of Program Execution through actively monitoring budget allocations to ensure funds were available to support PDRD projects which minimized the risk of project scope, creep, and project failure. All projects were on schedule and either at, or below, the authorized budget allocated.

Performance Objective 4: Operations and Infrastructure

Summary

Overall, B&W Pantex exceeded expectations in this performance objective. On-going operations continued to meet expectations overall despite the added workload and pressures of executing a contract transition.

Excellent

B&W Pantex exceeded expectations in implementing the Environment, Safety and Health programs. The ending Total Recordable Case (TRC) rate was 0.52 and the Lost Time Case (LTC) rate was 0.17. With rates this low allowed B&W Pantex to continue as a Voluntary Protection Program (VPP) Star site. Motor vehicle incidents continued to be a concern with 18 during the period. The overall number of events required continued vigilance by B&W Pantex to ensure the safety of workers. Pantex Site substantially progressed in safety culture improvement during the fiscal year through the implementation of the Trust Model and empowerment of the Safety Culture Monitoring Panel. While improvements in safety culture continue, B&W Pantex is leading the NNSA Complex in efforts to improve safety culture including investments in improving quality of work life. B&W Pantex's Environmental Management System was evaluated by a third party independent audit team that resulted in a positive determination of conformance to ISO 14001. B&W Pantex successfully completed 20 years without a RCRA violation. Although good progress was made toward addressing the backlog of overdue fire protection system preventative maintenance evolutions, Fire Hazard Analyses (FHAs) were not being performed every three years as required by DOE Order 420.1C. B&W Pantex has substantially improved and matured their contractor assurance system including, developing a more comprehensive metrics to monitor system health. A serious range safety violation (near-miss) occurred when a Security Police Officer (SPO) performing semi-annual firearms qualifications at the B&W Pantex indoor range discharged a round from his handgun into the floor approximately 3 inches from his foot. Despite these concerns, the distractions of a diminished budget, a protracted transition to a new contract and the uncertainties inherent to transition, B&W Pantex safety and health performance was sustained and/or continued to improve.

B&W Pantex exceeded expectations in managing capital projects in accordance with scope, cost, and schedule baselines. This was demonstrated through its performance on delivering the High Pressure Fire Loop (HPFL) Project to Critical Decision (CD)-4 status ahead of the performance baseline date while adding additional project scope, and successfully navigating through challenges and quality control issues identified late in the project by the sub-contractor for the project. Serving primarily as the project integrator on the High Explosives Pressing Facility (HEPF) Project, B&W Pantex managed their portion of the project within the expected scope and schedule baselines, provided excellent support to NNSA, and performed all Earned Value Management System input and analysis on a monthly basis. During the third quarter, a design error with the fire alarm system was discovered and a letter was written regarding liability of the Management & Operating (M&O) Contractor/AE. In spite of this recent design issue, the HEPF project experienced extremely low cost growth due to design changes/modifications, due to a well-managed design by the M&O. Related to the High Explosive Science and Engineering (HESE) Facility, B&W Pantex identified numerous cost-saving solutions during a preliminary design review and supported this project with environmental compliance, safety, security, project management, and operations support, as well as exceeded NA-

APM and NPO expectations in the development of the Conceptual Design Report. The contractor also achieved a major milestone with the completion of the Pantex Wind Farm in June 2014, which will advance the President's vision for energy stewardship at federal facilities. The construction of the five turbines, 11.5 megawatt wind farm was completed and will power more than 60% of the Pantex Plant with clean, renewable wind energy. Additionally, the project will reduce carbon dioxide emissions by over 35,000 metric tons per year; the equivalent of removing 7,200 cars from the road each year or planting 850,000 trees. Finally, B&W Pantex completed CD-0 documents for the Zone 4 and Zone 12 Perimeter Intrusion Detection Assessment System (PIDAS) Projects and revised the Mission Needs Statement for the Material Staging Facility to capture lessons learned from the Department of Defense on similar projects.

B&W Pantex met expectations in managing security challenges, protecting special nuclear material, and classified information. Specifically, the Information Security and Classified & Controlled Information Programs were well managed and performed effectively. In the area of Protective Force (PF), the results of numerous force-on-force exercises, Alarm Response and Performance Tests, and Limited Scope Performance Tests demonstrated that the PF possessed the pertinent skills, as well as were well-prepared to address a wide-range of potential physical security threats. A contributing reason for the positive test and exercise results was that the PF effectively implemented training identified on the Enterprise Mission Essential Task List (EMETL). A couple of concerns existed with the PF. One concern was the increase in the number of drug and alcohol related issues in comparison to past years, e.g., a SPO was detected with alcohol on his breath. In this case, the B&W Pantex supervisor responded appropriately by disarming the officer, requiring the officer to take a breath alcohol test, which confirmed that he was not fit for duty, and referred the officer for disciplinary action and assessment for reliability. Another concern indicated an organizational culture problem may exist within the PF. For example, eleven SPOs that typically work together called in sick when they were scheduled to support a night exercise – a task that they were not typically assigned. B&W Pantex quickly investigated the issue, determined that it was a "sick out," and took appropriate and firm disciplinary action for not reporting for duty. The B&W Pantex Physical Security Systems Program effectively managed and maintained security-related equipment at the Pantex Plant. During FY 2014, B&W Pantex worked expeditiously to ensure all issues that occurred with security-related systems were handled effectively and communicated to NPO in a timely manner. Although several systems at the Pantex Plant are near their end-of-life, B&W Pantex ensured the operability and availability of all security-related systems on the site. Within the Performance Assurance Department, testing of essential security system elements were completed as scheduled, as well as assessments prescribed by the Performance Assurance Plan. A credit to the B&W Pantex security program's ability to maintain operational awareness was the fact that the security system testing identified no significant issues.

The NPO Pantex Cyber Security Program operated under an approved and well-thought out Risk Management Framework (RMF). In January 2014, the Office of Health, Safety and Security (HSS) conducted a comprehensive cyber security review of the classified and unclassified networks with very positive results. NPO also surveyed various programmatic and technical areas. Survey results showed that the cyber security personnel were well-trained and worked towards development of innovative solutions to ensure defense-in-depth and process improvements, utilizing program dollars well. The B&W Pantex Information System Security Manager (ISSM) responded quickly to emerging issues. For example, B&W Pantex identified some potential cyber weaknesses with a security system.

The ISSM and his staff gathered a Red Team to assess the significance of the issues and working with the physical security staff took actions to mitigate the immediate risks and established plans for a permanent solution. Overall, FY 2014 survey and Red Team results reflected that B&W Pantex provided a solid Cyber Security Program that was also affirmed by HSS. B&W Pantex did an excellent job of operating during the contract transition and working with the successor contractor to meet all of the transition objectives and milestones in physical and cyber security. NNSA Information Management (NA-IM) organization's evaluation of the Pantex cyber security program concludes with an overall rating of above expectation based on the contractor's ability to meet or exceed requirements and demonstrate appropriate measures to significantly improve performance in ways that did not compromise core objectives and mission performance at the Plant or within the Nuclear Security Enterprise (NSE).

B&W Pantex exceeded expectations in maintaining, operating, and modernizing the DOE/NNSA facilities, infrastructure, and equipment; and achieved 97% facility availability for mission critical facilities. The contractor developed a reinvestment strategy to address end-of-life critical safety systems. The stability and reliability of critical safety systems are imperative for nuclear, nuclear explosive, and high explosives operations at Pantex. Specifically, the proposed modernization will reduce the infrastructure risk to the production facilities required to meet the NNSA mission. The reinvestment strategy focused on the replacement of the Flame Detection System, Radiation Alarm Monitoring System (RAMS), and HPFL Lead-ins. This strategy allowed preparation of design packages in advance, as well as planning required for timely execution of the bay and cell modernization in concert with the plant workload. While B&W Pantex demonstrated successful management of many general plant projects (GPP) and line-item projects; the Vacuum Chamber project, which is critical to outyear deliverables at the plant, fell behind schedule and may impact future production goals.

B&W Pantex was proactive in identifying, developing, and executing several GPP and expense-type projects within funding targets. Despite budgetary challenges, B&W Pantex maintained plant systems effectively supporting mission activities. The Defense Nuclear Facility Safety Board (DNFSB) Staff visits for Fire Systems and High Voltage Electrical System were generally positive and identified no major issues.

In the area of Energy Management, B&W Pantex met expectations by improving light management and achieving a 23% decrease in water intensity. The contractor achieved a major milestone with the completion of the Pantex Renewable Energy Project (PREP) Wind Farm that went on-line in June 2014. Although B&W Pantex was not meeting the interim FY 2014 "energy intensity reduction target" of 27%, power generated from the wind turbines will significantly reduce Pantex's energy intensity and will bring the Plant closer to meeting the FY 2015 goal of a 30% reduction, dramatically increasing the use of renewable energy onsite and decreasing greenhouse gases. It is noted, however, that Sustainability Program projects are not adequately considered in the plant budget and funding constraints may have contributed to B&W Pantex not achieving NNSA objectives for energy intensity, steam and chilled water metering, and High Performance Sustainable Buildings (HPSB).

B&W Pantex exceeded expectations in delivering efficient, effective, and responsible business operations and systems. Particularly, during the first half of the year, B&W Pantex worked through a myriad of drills associated with the lapse of appropriations, Continuing Resolution, and requirements related to a potential sequestration. They also worked solutions to help overcome funding shortfalls.

For instance, despite these funding challenges that significantly reduced headcount strength over the past two years, B&W Pantex maintained Critical Skills positions at an average of 99% (well above the 90% goal). B&W Pantex also proactively negotiated a one-year extension to the Metal Trades Council (MTC) Collective Bargaining Agreement (CBA). During this period, B&W Pantex awarded 79.8% of total procurements to small business, substantially exceeding the 65% goal. Several of the business-related functions, especially Human Resources, Chief Financial Officer, and Information Technology (IT), were heavily involved in contract transition tasks during the last four months of the contract. The contractor not only supported the transition, including executing a Voluntary Separation Program (VSP) and supporting the new contractor, but maintained normal operations during this challenging period. In addition, B&W Pantex IT collaborated well with B&W Y-12 IT on a variety of initiatives.

B&W Pantex Legal Department performed in a very professional and effective way during FY 2014. They exhibited great success in litigation management, the security guards dismissal issue, and contract transition. They continued an aggressive posture in defending against employee discrimination litigation and complaints. They refused to settle cases, won jury trials, collected court costs in four of these cases, and won one case on a motion for summary judgment. In the security guards dismissal case, they provided solid and immediate advice on employee terminations, filed a grievance against the Pantex Guards Union, and filed a complaint with the National Labor Relations Board. Although the company settled with the Union and rehired most of the guards, the attorneys' vigorous offensive strategy forced a very positive outcome for B&W Pantex. In contract transition, they provided excellent work on the asset transfer agreement that transfers assets, agreements and litigation to the incoming contractor. They were very involved and very well-prepared in discussions regarding the voluntary severance program and severance pay for departing employees. They exhibited thorough preparation and were persuasive in their positions on all of these issues.

SSO 4.1 The four month contract transition to the new contractor re-started on March 3, 2014, and was successfully completed on June 30, 2014. The contract transition was a huge additional and extremely important workload above normal day-to-day operations. The transition team worked very well addressing many challenges and supporting the completion of a very complicated transition in a short amount of time. The incumbent contractor provided exceptional support to the new contractor by helping refine their transition plan and schedule, and keep the transition on track. They were instrumental in helping overcome many issues that came up throughout transition, such as protecting sensitive information, clearance issues, and helped develop new processes, such as a register to track requests for information and support, that not only enabled a smoother transition, but should be used as benchmarks for future contract transitions. Despite the added workload, B&W Pantex focused on ensuring minimal impacts to the workforce and to plant operations, and as a result, productivity remained high and even increased in some areas. The new contractor commented several times about the outstanding support they received by B&W Pantex throughout contract transition.

SSO 4.2 B&W Pantex exceeded expectations in executing General Workplace Improvement (GWI) projects. Through the end of February, B&W Pantex completed 247 activities and costed/committed over $5.1M towards these improvements, $3.1M above the NA-00 direction to include $2M within target in future budget submittals for these types of initiatives. The contractor identified funding from a constrained budget and realigned resources and priorities to achieve this initiative. These

efforts strengthened the site's nuclear safety culture, which was documented through a questionnaire the contractor developed to gauge the effectiveness of the workplace improvements completed to date. Some notable milestones included: plumbing repairs in 49 facilities; heating, ventilation, and air conditioning (HVAC) system repairs in 29 facilities; completed refurbishment of guard station 709 and ongoing refurbishments scheduled for two additional stations to be completed in July and September, and many more initiatives.

SSO 4.3 B&W Pantex exceeded many expectations in the area of Nuclear Explosive Safety (NES). B&W Pantex enhanced performance by developing and implementing metrics which monitored the overall health of critical Pantex NES systems. These metrics were used to support the NNSA NES (NA-121.1) through NES Study (NESS) participation. Because of this "systems-based approach" to the planning and execution of work, the contractor was able to identify critical staffing levels and qualification. This NES systems-based approach was the first of its kind. To improve NES performance using this "systems approach", the contractor revamped their "NES Overview" training course. NNSA found the training to be effective and will result in improved safety. B&W Pantex also played an active role in the development of the new NES-related NNSA Supplemental Directive (SD). The contractor worked with NA-SH, NA-12, NPO, and other organizations to communicate production impacts with the proposed SD. Without the contractor's input, the SD may have been approved which would have resulted in reduced operations at Pantex until clarification could be provide by the government. The contractor participation allowed the government to modify the SD language that enhanced safety at Pantex without production impacts. In addition, B&W Pantex fulfilled its duties as they pertain to Contractor NES Change Evaluations (CNCE). Instead of doing the minimum, the contractor took on additional duties and responsibilities to improve facility and operation start-up/restart activities which will improve plant safety. B&W Pantex completed 97.1% of the corrective actions associated with the Causal Factors Analysis (CFA) to address surrounding circumstances of an NES issue. This was particularly important because of NES staffing shortages that existed throughout the year because of the contract re-bid. Finally, the contractor completed an engineering analysis of the NES Master Study of On-Site Transportation and Staging at the Pantex Plant. The engineering analysis was complete and thorough and the contractor received positive feedback from both NA-12 and NPO organizations.

SSO 4.4 B&W Pantex engineering programs (e.g., nuclear safety, criticality safety, and other related programs) effectively supported the B&W Pantex production schedule. To improve nuclear safety process, the contractor: 1) stabilized the staffing levels of the authorization group; 2) developed and implemented System Engineering system health leading indicators that assimilate information vital to making proactive management decisions in regards to critical safety systems; and 3) implemented a Documented Safety Analysis (DSA) Improvement Plan that addressed many authorization basis deficiencies from previous years. This resulted in significant improvements in the quality and thoroughness of Technical Safety Requirements by eliminating non-10 CFR Part 830 compliant language, disposition of legacy Conditions of Approval, removal of scenarios from the Site-Wide Safety Analysis Report and placing the scenarios in the appropriate Hazard Analysis Reports, and addressing "High-Consequence, Low-Probability" events. These three initiatives were significant improvements from last year. In addition, B&W Pantex exemplified the Nuclear Safety Culture "questioning attitude" by identifying legacy supplier quality issues that had the potential to negatively impact weapon components and Department of Transportation compliance. The identification of which may prove to be a Weapon Enterprise-wide concern involving multiple sites.

Other notable achievements included: 1) reduced the unplanned Limiting Conditions of Operations (LCO) conditions for the nuclear facilities; 2) installed three HPFL lead-ins that improved the reliability of the HPFL piping without mission impacts; 3) developed an Engineering Evaluation that assisted NA-12 in making an informed decision on the associated risks with a pre-start finding from the NES Master Study of On-Site Transportation and Staging at the Pantex Plant; 4) completed a comprehensive evaluation of the falling man accident scenario based on a letter from the Defense Nuclear Facilities Safety Board; 5) assisted NPO, NA-SH, and NA-12 organizations on nuclear explosive impacts based on the changes to Standard 3016; and 6) incorporated Issue G/H of the W76 weapons response into the existing Hazard Analysis Report (HAR) that eliminated two Evaluation of the Safety of the Situation (ESS) and Justification for Continued Operations (JCO). B&W Pantex successfully and appropriately completed transition activities timely and provided the new contractor full and open disclosure of issues (i.e., Key Initiatives identified in their quarterly Contractor Assurance Program Report), upcoming deliverables and commitments, performance metrics, and facility condition and status.

However, B&W Pantex was less than successful in fire protection systems. More specifically, the contractor did not perform an adequate verification of the installed condition of the new penetration seals. This resulted in a number of JCOs that were required to support operations and was not indicative of an acceptable level of performance to ensure the availability of safety systems. In addition, the contractor's effort to commission the newly installed fire pumps and tanks was not timely and did not appear to have priority to become operable and enhance the HPFL safety system. B&W Pantex demonstrated effective safety system management by taking a systems approach in resolving the Nonconform process; treating the Nonconform process as a system revealed numerous variances between the procedure and actual conduct of operations. Standing Orders were effectively preventing nonconforming parts from entering the war reserve (WR) product stream and have not negatively affected deliverables; however, these corrective actions were not timely due to complications with IPRO coding.

SSO 4.5 In the Emergency Management (EM) Program area, NPO assessed 13 of the 15 program elements and identified issues that the contractor either has addressed or were being worked at the end of this rating period. During this rating period, B&W Pantex took aggressive action to develop corrective action plans and conducted root cause analyses for FY 2013 and FY 2014 findings. Some of the areas assessed as needing significant improvement included training, planning/conducting drills, and planning/conducting/evaluating exercises. In FY 2014, the EM program conducted a series of drills and exercises aimed at improving the performance of the Emergency Response Organization. For example, a full scale exercise, EMEX13-1, was conducted January 29, 2014, and during this rating period, performed significant planning in order to conduct an upcoming severe event exercise FPE14-1 scheduled on August 13, 2014. The contractor has emphasized training of the Emergency Response Organization and has conducted several drills. While acknowledging B&W Pantex actions taken during the performance period are positive steps to correcting deficiencies in leadership and program management, more time and continued diligent aggressive action will need to be applied further to realize significant improvement in program performance. Emergency responders, including the fire department, Emergency Medical Technicians (EMT's), and Incident Command Team elements, continue to perform within expectations and are well-trained and capable.

Performance Objective 5: Leadership

Summary

Very Good

B&W Pantex leadership effectively worked through a myriad of drills associated with the lapse of appropriations, continuing resolution, and requirements related to the sequestration. In addition, B&W Pantex leadership met expectations ensuring on-going operations were not impacted during all the challenges associated with contract transition, including the uncertainty regarding personnel actions. The new contractor commented several times on their appreciation for the B&W Pantex leadership support throughout transition.

During the rating period, B&W Pantex did an outstanding job in addressing nuclear weapons program and operational challenges through coordination and a strong working relationship with the balance of the Nuclear Security Enterprise and Stakeholders. B&W Pantex completely recovered W76-1 units affected by infrastructure aging issues, production pause for the safety weapons response on key nuclear explosive operations, supply chain challenges, and the delay caused by the potential lapse in appropriations. Specific steps taken by B&W Pantex Leadership included implementation of the Pantex Throughput Initiative Plan II; strengthened Design Agency/Pantex Plant focus on addressing Enterprise-wide production challenges; and strong leadership within the NNSA Standing Management Team. As a result of these efforts and leadership, B&W Pantex exceeded the Life Extension Program, Surveillance, and Dismantlement goals through the rating period.

B&W Pantex did a very good job in developing a Plant Mission, Vision, and Strategic Plan consistent with the NNSA Strategic Plan. In addition, strong supporting implementation plans were executed including the Ten Year Site Plan, Site Sustainability Plan, Critical Skills Management Plan, and Integrated Plan of the Day. The results of these implementation plans included effective Plant integration essential to getting the job done; construction of the largest government wind farm, focus on critical skills while right sizing the Plant population; and effective day-to-day execution of strategic goals and objectives.

B&W Pantex did an excellent job in self-assessing and communicating Plant operations, initiatives, and status. Specific efforts included addressing the "Safety Culture Plan for the Pantex Plant;" benchmarking the Nuclear Regulatory Commission safety policies and trust models; and overall effective and timely dialogue with the NNSA and Stakeholders.

B&W Pantex did a good job in enhancing their assurance systems through greater coordination with the NNSA on customer expectations and focus areas; successful completion of and follow-up to self-assessments; greater communication on findings and resolution; effective partnering with the balance of NNSA on improving nuclear safety culture; and fostering an environment of a questioning attitude and overall employee openness.

B&W Pantex did an excellent job in working with the Nuclear Security Enterprise to surpass its assigned workload targets. Specific leadership roles resulting in surpassing these targets included implementation of the Pantex Throughput Initiative Plan II; strengthened Design Agency/Pantex

Plant focus on addressing Enterprise-wide production challenges; development of the Production Authorization Weapon Integration tool, and strong leadership within the NNSA Standing Management Team.

B&W Pantex continued to do a very good job in the area of continuous learning including the focused efforts on high reliability operations; causal factor analysis; encouraging a questioning attitude and openness; "system thinking" analysis; enhanced radiological training; training needs analysis; and benchmarking of the Idaho National Laboratory Conduct of Operations training.

B&W Pantex received very good support through corporate oversight and resources from corporate parents.