

PANTEXAN

A man in military-style clothing is climbing a rope. He is wearing a blue long-sleeved shirt, camouflage pants, a camouflage hat, and sunglasses. He is holding the rope with both hands and is looking down. The background shows a building with a grid-like ceiling structure. The title 'PANTEXAN' is overlaid on the top of the image.

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National Nuclear Security Administration's Pantex Plant

Plant Tradition

Thirty-four years ago, Dale Stapp came to work at Pantex as a diesel mechanic, maintaining the Plant's vehicles and now-retired railcars. Today, he's helping set the future for software technology as Business Technology department manager.

"My team's responsibility is to evaluate our business processes, gather requirements, support the design and help implement our new enterprise software. It's a challenging and complex endeavor," he said. "At the same time, it's exciting. My philosophy is that every day there are opportunities to facilitate changes that improve the business – and in the end hopefully leave a bit of a legacy."

When he started in 1977, Stapp joined his father and father-in-law at the Plant. Today, familiar faces still surround him. Stapp's sisters are sweeper operator Brenda Broom and accountant Kim Lewellen; brother-in-laws are maintenance work management supervisor Randy Broom and utilities supervisor Russell Lewellen; and sister-in-law is emergency management specialist Brenda Thomas. His nephew, program manager Josh Crooks, is on assignment for Pantex in Washington D.C., and son, Chris Stapp worked here for three years as an environmental coordinator before leaving to pursue additional education.

"Part of the reason the family migrated to Pantex is that everyone recognizes it's a great place to work with a good salary that allows us to provide for our individual families," Stapp said. "And it doesn't matter what role you play, by doing the right thing every day you can make a difference in the success of this Plant. Not only does the long-term success of the Plant affect every employee's family, it affects families in the whole Panhandle region."



On the Cover

Sweat poured and bullets flew as 18 teams from the U.S. Department of Energy, military security forces and police departments competed in 10 separate events during the week-long Security Protection Officer Team Competition at Pantex in June. Pantex last hosted SPOTC in 2000, and this year the B&W Pantex team placed third out of eight DOE five-man teams. (Lt. Jeff Climer pictured. Photo by Don Gerber.)

PANTEXAN

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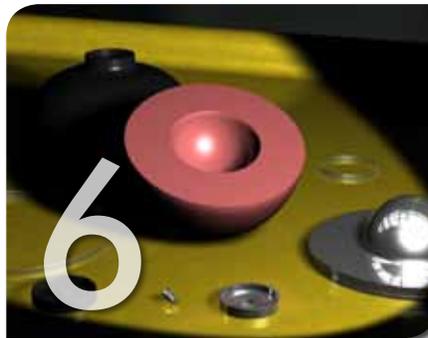
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B&W Pantex wins Eisenhower Award for small business support

B&W Pantex's exceptional use of small business subcontractors to meet procurement needs earned it the prestigious 2011 Dwight D. Eisenhower Award for Excellence in the manufacturing category from the U.S. Small Business Administration. B&W Pantex received the award in May during the annual Small Business Week celebration in Washington D.C.

Named for the president under whose administration the SBA was founded, The Dwight D. Eisenhower Award for Excellence was created in 1991 to honor large-business federal prime contractors that have excelled in their use of small businesses as suppliers and subcontractors. Winners were named in each of five categories: manufacturing, service, research and development, construction and utility.

"This is a great honor for B&W Pantex because we have put tremendous effort into increasing the amount of subcontracting we direct toward small businesses," said John Woolery, B&W Pantex general manager.

Daily operation of the Plant requires various services, goods, equipment and expertise, including construction. Of the \$121.6 million procurement dollars spent in fiscal year 2010, B&W Pantex awarded \$95 million to small business vendors, surpassing the Pantex Site Office's small business goal by 17 percent. In fiscal year 2010, B&W Pantex issued over \$34 million dollars in procurements to local businesses, significantly impacting the Amarillo area economy.

"This award is a reflection of NNSA's and Pantex's commitment to working with our partners in the small business community to invest in our future, implement the president's agenda and improve the way we do business," said NNSA Administrator Thomas D'Agostino. "Small businesses drive our economy, so I applaud the men and women at Pantex for continuing to invest in small businesses in the Texas Panhandle and across the country."



Message from the Site Manager and General Manager

Many things set Pantex apart, but one characteristic exhibited in all we do is commitment to the mission entrusted to us. This is evident daily in our work to protect the nation's nuclear weapons stockpile. It's also something we demonstrate within the enterprise and community.

As 2011 Security Protection Officer Team Competition host, Pantex set a unique stage for the enterprise to safely showcase its security force capabilities. Not only was our SPOTC team determined to perform at its best, organizers created a back-to-basics course requiring accurate marksmanship, strength and physical conditioning. Departments across the plant also converged to lend specialized support, and volunteers made visiting teams and spectators feel welcome despite the unrelenting heat and wind.

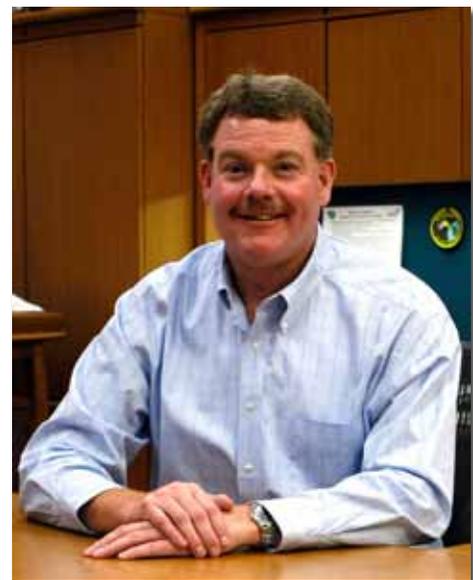
With respect to our crucial mission, our resolve to help Secure America remains strong. Building the High Explosives Pressing Facility will modernize one of the most critical aspects of that mission – the pressing process in manufacturing high explosives for the nation's nuclear deterrent. The importance of this investment cannot be overstated because Pantex is literally where it all comes together.

And our efforts to work smarter, coupled with persistence, enabled us to demonstrate the use of RuBee™ technology to track material assets at all levels of security. We are proud to be the first site to accomplish this feat, and the results of our pilot are now available to others. We believe that improving the way we do business is part of becoming a High Reliability Organization, and sharing what we've learned is part of the 'One NNSA' philosophy.

Other examples of our commitment include supporting small business subcontractors to fulfill our procurement needs, saving taxpayer dollars by partnering with our sister sites and transforming our information technology to better meet employee needs.

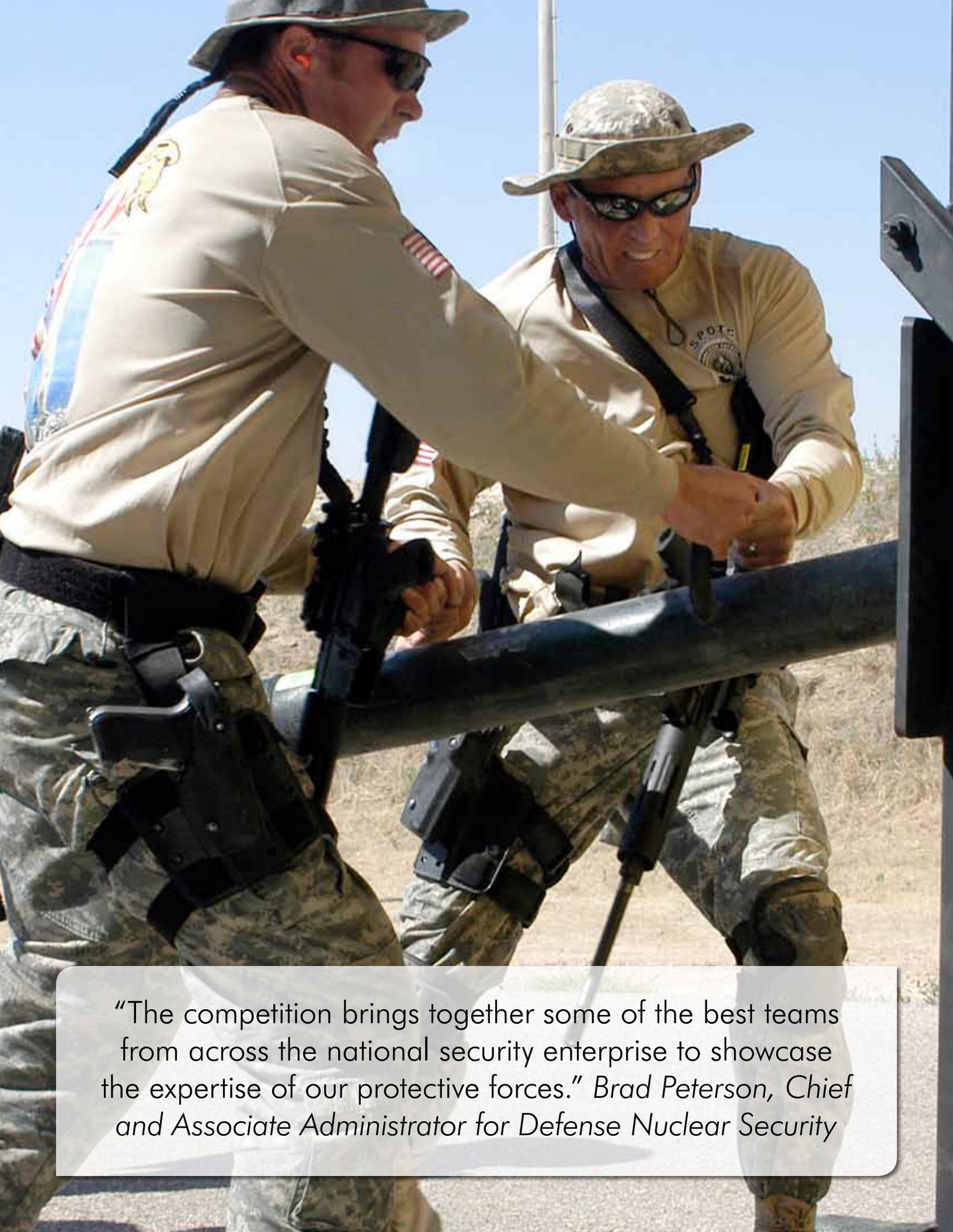


Steve Erhart
Pantex Site Office Manager



John Woolery
B&W Pantex General Manager

Pantex is securing America as the NNSA's production integrator and provider of the nuclear deterrent to the Department of Defense; serving the nuclear security enterprise through our highly reliable people, processes, infrastructure and business systems.



“The competition brings together some of the best teams from across the national security enterprise to showcase the expertise of our protective forces.” *Brad Peterson, Chief and Associate Administrator for Defense Nuclear Security*

Pantex-hosted SPOTC challenges security force strength

Record wind, heat prove formidable opponents

Workouts in the gym with the air conditioning off might have given Canada's Bruce Power a glimpse of what they'd endure at Pantex, but nothing could prepare them for the near 30-mile-an-hour winds and 100-degree-plus temperatures June 12 to 16 at the 39th annual Security Protection Officer Team Competition.

The team was one of 18 to run, climb, shoot and muscle their way through firearms and tactical exercises designed to simulate situations security personnel may encounter on the job. Twelve teams represented U.S. Department of Energy sites and six represented non-DOE entities such as U.S. military and local law enforcement.

What's unique about SPOTC, explained Neil Cowley, Nevada National Security Site team coach, is that it's difficult to master because each year there is a new emphasis. "Last year it was about strategy. This year it's more physically demanding." Manolo Victor, Los Alamos National Laboratory team captain, agreed, adding, "From Monday to Wednesday, we gained confidence and focus. I think it can be mental to a large degree."

Heading into the Super Team Competition, B&W Pantex held first place, Idaho National Laboratory second and Savannah River Site third among DOE full, five-man teams. The final event, traditionally the most demanding, requires increased amounts of energy over an extended duration, according to Randy Putt, Safeguards and Security training manager and SPOTC manager.

Following a 12-minute showcase of talent and skill, Idaho emerged victorious to take home the 2011 Secretary's Trophy. "This year's competition came down to the last bullet," said Brian Deorocki, Protective Force manager. The overall winner for the DOE three-man team was Sandia National Laboratories, and overall winner for the non-DOE team competition was Bruce Power.

B&W Pantex placed third out of eight DOE five-man teams. Its team members include Brandon Jones,

Jeran McLain, Gabriel Ordonez, Eddie Ray, and Hector Hermosillo Jr. They were led by Lt. Jeff Climer, team captain, and trained by Lts. Joe Martinez and Billy Hall. This year's finish follows Pantex's second place last year and first-place finishes in 1998, 1999, 2000 and 2003. Pantex last hosted SPOTC in 2000.

"This competition is about camaraderie built within and between teams. It's the opportunity to meet new people, share ideas, attempt new skill sets and see new facilities. There's no other venue like it," said Putt, himself a former SPOTC veteran and host of five such events at various sites. "There are no losers. You have to compete just to make it onto a team. When the teams compete against each other you discover your strengths and weaknesses. That insight is the take away."



Brad Peterson, Chief and Associate Administrator for Defense Nuclear Security, said, "I applaud all teams who competed in the annual SPOTC...The competition brings together some of the best teams from across the national security enterprise to showcase the expertise of our protective forces. I commend the DOE Office of Health, Safety and Security for sponsoring the event and Pantex for hosting the week-long competition."

For information about the event, visit www.spotc.doe.gov. For additional photos, see Page 13.



“To meet our future production workload and surveillance requirements to serve the enterprise, there’s a need to consolidate operations and modernize the physical infrastructure of certain facilities.” *Janice Tolk, Explosives Technology Division manager*

Modernizing the High Explosives Center of Excellence

Investment in weapons production future supports enterprise

Few realize that Pantex is the sole location in the U.S. where high explosives are manufactured to support the nation's nuclear deterrent. As the DOE's High Explosives Center of Excellence for manufacturing, Pantex transitions high explosives research and development from bench scale to production scale, as it has done for more than 50 years.

"Scientists and technicians at Pantex have earned a reputation as experts in the high explosives community for manufacturing and testing that has remained strong throughout the years," said Janice Tolk, Ph.D., Explosives Technology Division manager. "Collaboration with national labs, the Department of Defense, commercial vendors and the United Kingdom continues through mutual respect and leveraging of capabilities."

To satisfy the requirements of today's technologically modern and energy-efficient infrastructure, aging World War II facilities are making way for Pantex's 45,000-square-foot, \$65M High Explosives Pressing Facility, which will provide a state-of-the-art environment for producing main-charge hemispheres and consolidate operations that now take place in six separate buildings.

The U.S. Army Corps of Engineers will manage the construction project, and contractor Kiewit Building Group expects to complete it in approximately two and a half years. Work will begin in September, with one year of startup time anticipated, according to Dennis Huddleston, Projects Division manager.

The new facility will replace existing, substandard infrastructure. Because much of the process equipment is more than 20 years old, new presses also will be purchased and installed. This will alleviate down time related to repair and replacement of outdated parts.

"To meet our future production workload and surveillance requirements to serve the enterprise, there's

a need to consolidate operations and modernize the physical infrastructure of certain facilities," said Tolk. "Modernization will allow Pantex to serve the mission without being an unnecessary drain on resources. Increased revenue from Work for Others is expected through fiscal year 2015."

"This revitalization demonstrates support of NNSA's objective to transform the nuclear security enterprise to uphold modern stockpile stewardship requirements."
Steve Erhart, Pantex Site Office manager

NNSA will reap the benefit of having a physical plant for explosives operations that is both operationally and energy efficient, explained Tolk. "There is also benefit to the workers who will have comfortable and ergonomically efficient workspace and a benefit to B&W Pantex from having technologically modern facilities and equipment for performing work for others," she said. "That also helps with recruiting scientists and engineers."

According to Pantex Site Office Manager, Steve Erhart, "This revitalization demonstrates support of NNSA's objective to transform the nuclear security enterprise to uphold modern stockpile stewardship requirements."

The return on investment, Erhart said, will be cost savings from a consolidated footprint, energy savings from operating in facilities that meet modern energy-efficiency standards and increased productivity from consolidating operations in fewer facilities within close proximity.



"My experience is that most people think the labs are noted for innovation, but I feel the plants have a lot to offer..."
John Doggett, Pantex Site Office authorization official

Innovation meets Pantex asset tracking

Automated system “sees” material movement

When it comes to tracking the nearly 50,000 custom tools, 11,500 shipping containers and millions of records, parts and components at Pantex, barcodes and physical inventories may be making way for a more modern way to manage material.

B&W Pantex recently piloted magnetic auto-ID technology to identify, track and inventory the plant’s material assets in even the most restrictive security areas. The technology demonstrates the ability to remove direct human interaction from the great majority of the asset management process, improving accuracy and efficiency.

“Pantex, like other facilities across the nuclear security enterprise, has been searching for better solutions to the issues with property management for years...” *Leesa Duckworth, project lead*

The project, called the Advanced Inventory and Materials Management pilot, launched in February following an extensive evaluation and intense collaboration with the vendor. The AIMM pilot project concluded in May.

When RuBee™ tags were affixed to such items as tooling and chemicals, RuBee antennas enabled users to view their movement on a computer screen, via Oracle software, as they migrated through the pilot test areas. The antennas provide the greatest degree of weapons compatibility available today while ensuring transmitted information is controlled within the bounds of Pantex facilities.

“My experience is that most people think the labs are noted for innovation, but I feel the plants have a lot to offer,” said John Doggett, Pantex Site Office authorization official. “I believe our ability to demonstrate the use of RuBee shows innovative thought by Pantexans, but also a dedication to the overall improvement of operations locally that can have a broader impact to improve operations in the enterprise.”

Pantex is the first in the DOE/NNSA enterprise to install RuBee technology in a secure area, called the Limited Area. Because of success in the first two pilot phases, Pantex was also the first to install and evaluate RuBee in a Material Access Area – the most restrictive security area.

Project findings are being published in the Institute of Nuclear Materials Management Conference Journal, and the project plan has been shared with other facilities in the nuclear security enterprise eager to find a materials management solution.

“Developing and deploying RuBee exemplifies Pantex’s pursuit of becoming a High Reliability Organization,” said John Woolery, B&W Pantex general manager. “We strive to be an HRO by purposefully and continuously looking for ways to improve our systems and processes through redesign or deployment of new technologies and capabilities. Commercially available technology deployments at the Pantex Plant can be very challenging due to the type of work that we perform and constraints on energy sources in certain areas. This project presented a number of hurdles for the team to overcome. At Pantex, we are constantly striving to improve our accuracy, efficiency and reliability.”

“Pantex, like other facilities across the nuclear security enterprise, has been searching for better solutions to the issues with property management for years,” said Leesa Duckworth, AIMM project lead for Pantex. “The problem has been finding a solution that could pass the high levels of scrutiny required for operation in Pantex work environments.”

RuBee is now employed at the Pantex armory for gun issuance and receipt, and a related RuBee project is under way to demonstrate a fully synchronized RuBee-enabled building at the Pantex Medical Facility. Future applications could include environmental and radiological sampling and special nuclear materials container management.



Container reconditioning, recertification broadens Pantex capabilities

Collaboration with Y-12 leads to operational efficiencies

Not long ago, empty nuclear containers were shipped from the Pantex Plant in Amarillo, Texas, to Y-12 in Oak Ridge, Tennessee, for reconditioning and annual maintenance – only to be returned to Pantex for components' packaging and shipment right back to Y-12.

Recent teaming with Y-12 to establish drum-type container stewardship capabilities at Pantex dispenses with the wait for Y-12 to perform the work and return the containers. To date, 66 containers have been processed at Pantex, creating a cost avoidance of \$429,000 for the NNSA.

Reconditioning DT containers involves visual inspection and expendable hardware replacement, if necessary. Recertification (aka annual maintenance) requires reconditioning and leak testing to ensure container integrity and the ability to sustain a leak-tight seal after packaging. Once both are completed, the container receives a one-year transportation certification.

All necessary process equipment was already available at Pantex in support of other container stewardship missions. Distribution of the work at the two sites depends on when reconditioning and annual maintenance are required and the location of the respective container at that moment in time.

“Both Pantex and Y-12 perform the operations. This is intentional to maximize logistical efficiencies in managing the container fleet,” said Steve Hallett, Directed Stockpile Work – Campaigns program manager. “With both sites

qualified to perform the work, containers can be processed at either site, thus eliminating the need to repeatedly return them to Y-12 for processing. The joint capabilities reduce overall operating costs and substantially enhance productivity at both sites.”

Y-12 supported the efforts by providing example technical procedures, subject-matter expert advice and process reviews, as well as an inventory of expendable parts for the DT-22 processes. According to Hallett, Y-12 continues to support the ongoing DT-20 and DT-23 implementations in a similar manner, which are planned to be operational by September. The site projects a cost benefit to NNSA in the range of \$500,000 to \$1 million annually when all DT container capabilities are operational beginning in fiscal year 2012.

“The success of this initiative will yield enduring value for each and every DT container passing through Pantex in the future,” said Hallett. “It also offers Pantex the potential opportunity to develop itself in a role as nuclear container scheduling integrator should future nuclear security enterprise interactions warrant such a service.”

The ability to recondition and recertify DT-22 containers both improves efficiency and expands Pantex's Special Nuclear Material operations, explained Scott Kennedy, B&W Pantex deputy general manager. “Working together, we've streamlined production support operations and, more importantly, demonstrated the value of partnering with our sister sites to provide greater benefit for the taxpayer dollars we receive,” he said.

Pantex paves information superhighway

Destination is customer satisfaction

Rather than fixing potholes to solve the problem of the day, Pantex is building an information superhighway to simplify, consolidate and modernize its computing environment with a focus squarely on enhancing the customer experience. It's the most comprehensive information technology streamlining in Plant history.

Modernization of hardware and software will help reduce cycle times for getting new applications, functionality and services to customers, explained Kent Gross, chief information officer. The ability to respond to Plant information technology needs faster, more efficiently and provide better solutions at a lower cost is the anticipated end result.

Propelling the Plant's infrastructure toward new technology involves consolidating and updating backend servers to blade technology, upgrading the wired network and adding wireless network capabilities. On the end-user's side, outdated software is being replaced while business functions are consolidated into standard software that can be viewed through a customizable portal.

"Our Enterprise Supply Management System is the cornerstone unclassified application, and the Operations Systems Development and Integration project is critical in the classified environment to provide the basis to consolidate significant business functions," said Gross.

Shrinking of the physical infrastructure footprint is already yielding energy consumption reductions. Since July 2010, the Plant has experienced an eight-percent reduction in server-related electricity usage, according to Dane Parsley, Information Technology Transformation Program manager. This is expected to increase as the remaining 47 of 172 total physical servers are eliminated. Plant-wide rollout of multipurpose print/copy/scan/fax machines will add to energy savings as well as lower the cost of ownership.

"We've made huge strides in transformation over the past year, most of which has been behind the scenes, back office infrastructure kind of improvements," said Gross. "We are on the cusp of rolling out very visible, tangible, customer impactful tools. We have come a long way in a year. In a couple of years, I want Pantexans wondering

how we survived doing things the old way."

By the end of fiscal year 2012, the majority of infrastructure improvements that began in May 2010 should be complete. The complete application transformation is expected to take two years longer because of customer impact and involvement, explains Gross. While there is a slight increase in funding, the transformation program is funded primarily within the existing IT budget. Money is redirected from lower-priority activities, with cost savings and/or avoidances reinvested into transformation projects.

"With the kind of technology transformation solutions being envisioned, developed and implemented, the Pantex Plant will reap huge dividends from streamlining all complex business processes, enhancing manufacturing processes, better usage and leverage of technologies and forging a stronger partnership and collaboration with the national nuclear security enterprise as we move forward with our vision of 'One NNSA,'" said Mark Padilla, Pantex Site Office assistant manager for Contract Administration and Business Management.



Pantex Postscripts

Honoring our military: Pantex upheld tradition in May by celebrating Armed Forces Day. The event honored the more than 840 active Plant employees who have served or are serving in the military. “We feel a natural connection to the military, not only as proud Americans, but through our shared mission to provide for the defense of our country,” said master of ceremonies retired Navy Cmdr. Dave Butler.

Pantex leads way to improve safety, quality and security: Because of the growing importance of HRO concepts and practices within the DOE, the Energy Facilities Contractors Group chartered a task group on HROs. Pantex’s Rick Hartley will serve as chair because of his HRO leadership within the DOE complex. The group’s purpose is to assist organizations interested in exploring and pursuing an HRO-conducive culture.

Stokes earns Sydnor Award: The Sydnor Award was presented to Pantex Capt. Randy Stokes during the SPOTC opening event. Stokes earned the complex-wide award for leadership. The Sydnor Awards, first presented in 2002, are named in honor of retired Col. Elliot P. “Bud” Sydnor, a pioneer in American special operations activities.

Rewarding innovation: B&W Pantex rewards employees for their problem-solving ideas through the Employee Suggestion Program. Ideas with measurable dollar benefits can be worth up to \$1,000. A recent suggestion to use synthetic oil in the Bearcat fleet, which reduces the frequency of oil changes, will result in an annual savings of \$92,812. Another suggestion – to apply electrostatic discharge film to static sensitive equipment panels – will reap an annual cost savings of \$18,960.



Nuclear Science Merit Badge: Every other year since 1969, Pantex employee volunteers spend three weekends teaching Boy Scouts and Girl Scouts about radiation. This year, more than 95 scouts from Texas and Oklahoma earned their Nuclear Science Merit Badge through the program. Scouts participate in classes and hands-on activities led by scientists and technicians to learn about nuclear science and to conduct experiments that fulfill badge requirements. Those who complete the seminars and pass required tests are invited to participate in a trek to Albuquerque and Alamogordo, New Mexico, to visit Kirtland Air Force Base and scientific museums. “It’s a one-of-a-kind program where boys and girls are challenged about nuclear science, and they get to see it in action – past and present,” said Mark Smith, Pantex employee and Scoutmaster who has volunteered since the program’s inception.



Event photographers included: Larry Bach'Lachman, Laura Bailey, Linda Bernal, Heather Contreras, John Ebling, Laura Elkins, Donald Gerber and Lauri Minton.

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