

# PANTEXAN

WINTER 2012



PANTEX PLANT - SECURING AMERICA



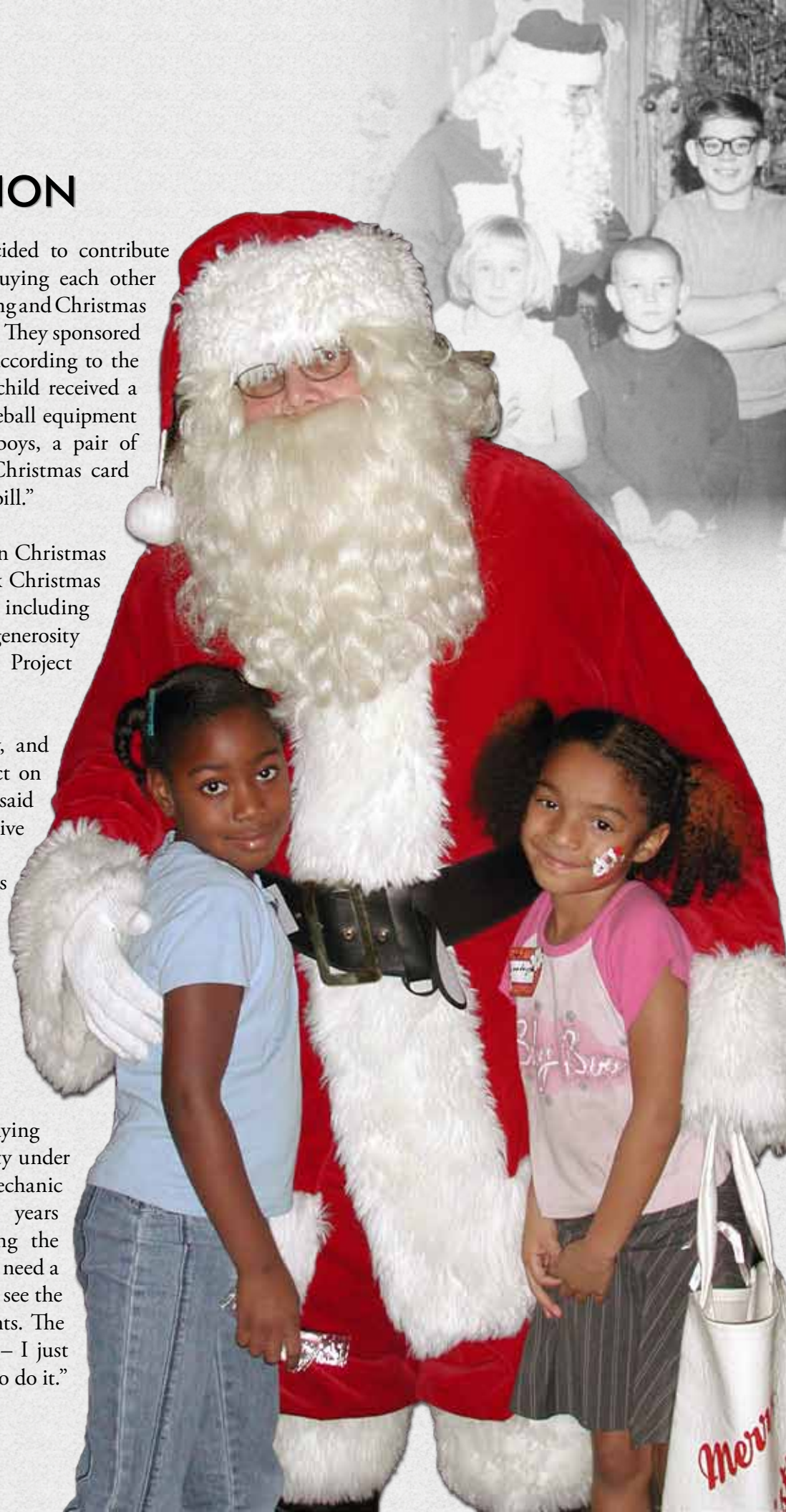
# PLANT TRADITION

In 1957, employees at Pantex decided to contribute the money they typically spent buying each other Christmas cards toward food, clothing and Christmas gifts for families needing assistance. They sponsored three families that first year, and according to the January 4, 1957 *Pantexan*, "Each child received a new toy, dolls for the girls and baseball equipment or gun and holster sets for the boys, a pair of shoes, clothing as needed and a Christmas card containing a crisp, new one-dollar bill."

What was known then as Operation Christmas Card continues today as the Pantex Christmas Project. This year, 53 area families, including 128 children, were touched by the generosity of Pantex employees, and the Project sponsored 15 area elderly.

"These are tough times for many, and the Project has a significant impact on needy families in the community," said Lennet Hernandez, administrative specialist, Project chairman and 11-year volunteer. "The focus remains on the children. Each child receives two complete outfits, toys and other miscellaneous items. Occasionally the Project is asked to help with special needs, which the business community helps us support."

With 14 years experience portraying Santa at the Christmas Project party under his belt, Beau Hileman, special mechanic inspector and volunteer for 22 years explained, "Pantexans are fulfilling the hopes and wishes of others who just need a helping hand. It brings joy to me to see the smiles on the youngsters and parents. The people at Pantex *make* the project – I just wear the red suit and am humbled to do it."





# PANTEXAN

## CONTENTS

2  
Pantex 2011 Successes Help Secure America

3  
Message from the Site Manager and General Manager

4  
'Last of the Big Dogs' B53 Nuclear Bomb Dismantled at Pantex

6  
Investing in the Future

10  
Pantex Postscripts

12  
Secret, Specialized White Train Centerpiece of Pantex Railcar Exhibit



## ON THE COVER

Called 'The Last of the Big Dogs' by disassembly workers, the final B53 nuclear bomb was dismantled October 25, 2011 at Pantex. It was one of the longest lived and highest yield nuclear weapons ever fielded by the U.S. The project was completed ahead of schedule thanks in part to the creation of tooling developed by Pantexans. The B53, once an enduring Cold War symbol, is now removed from the nuclear stockpile forever.

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# PANTEX 2011 SUCCESSES HELP SECURE AMERICA

Achievements include safety stardom and security enterprise first

Over the past year, B&W Pantex, LLC, accomplished unique and important work. Highlights of these accomplishments represent the many ways the Pantex Plant continues to enhance national security.

- Completed 112 percent of weapon directive schedule deliverables and 120 percent of scheduled dismantlements.
- Dismantled the final B53 12 months ahead of schedule.
- Achieved a total recordable case rate of 0.33, the lowest in Plant history, and lost time case rate of 0.12, demonstrating exceptional safety performance.
- Earned the Department of Energy (DOE) Voluntary Protection Program Superior Star for fostering a safety culture that demonstrates an employee-management partnership and for mentoring Y-12.
- Gained national and international recognition for High Reliability Organization advancements.
- Awarded the prestigious DOE EStar for Elimination of Chlorine Gas to Protect Workers and the Environment.
- Selected the Small Business Administration's 2011 Dwight D. Eisenhower award winner in the manufacturing category.
- Achieved \$11M in cost savings and/or avoidances throughout the year.
- Achieved the lowest security incident rate\* (.85) in the enterprise (\* rating shared with Savannah River Site).
- Earned Tactical Response Force Training Certification, the first and only enterprise site to do so.
- Hosted the enterprise-wide Security Protection Officer Team Competition.







**Steve Erhart**  
Manager, Pantex Site Office, DOE/NNSA



**John Woolery**  
President and General Manager, B&W Pantex

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.

## MESSAGE FROM THE SITE MANAGER AND GENERAL MANAGER

Beginning in 1951, the Pantex Plant's mission was to assemble the nation's nuclear weapons stockpile. That mission grew during the Cold War as other sites were closed in Tennessee, Iowa and Texas. Their work was sent to Pantex, which now stands as the only site in the country that assembles and disassembles nuclear weapons and develops the high explosives needed to maintain their reliability.

Remarkably, today, all weapons in the nation's nuclear stockpile were built at Pantex and are maintained by our dedicated workforce. The reliability of the stockpile is proven here at Pantex by our workers each and every day. As a result, our nation is able to maintain a strong and safe nuclear deterrent.

Pantex recently gained international media attention with the final dismantlement of the B53. This bomb, about the size of a minivan, was built at the now-closed Iowa facility 50 years ago. Pantex employees worked for years to develop a plan and the equipment needed to complete the mission safely, and work on the B53 was completed about 12 months ahead of schedule.

The workers' dedication to this task is representative of all work performed at Pantex. Our employees continue to demonstrate high standards of excellence in safety, security and quality while meeting or exceeding established production mission goals.

Pantexans have set the bar high for all other National Nuclear Security Administration (NNSA) sites. Just this past fiscal year, Pantex employees sustained the Plant's reputation for safely delivering on commitments with the completion of 112 percent of the planned mission.

While performing this work, Pantexans also set the all-time personal safety record not only for the site, but for the entire NNSA enterprise, and earned the DOE's Voluntary Protection Program's Superior Star award. This accomplishment can only be achieved when every employee is dedicated to working safely. Our goal is for our employees to have no accidents or injuries while working. The workers are making that goal a reality.

Pantex has a proud history and a secure future. Our workers will forever be a part of both. We thank them for their continued diligence.





# 'LAST OF THE BIG D BOMB DISMANT

Milestone holds special meaning for p

Thirty-five years ago, an Air Force aptitude test uncovered David Johnston's mechanical abilities, which led to a 20-year career as a nuclear weapons specialist. "Full circle" is how he describes what it felt like to transport the last B53 nuclear bomb from storage to dismantlement at the Pantex Plant.

The B53 was put into service in 1962, a year when Cold War tensions were at their highest during the Cuban Missile Crisis. At the time it was retired in 1997, the B53 was the oldest, the largest and the most destructive weapon in the U.S. nuclear arsenal.

*"The world is a safer place with this dismantlement."*

*Thomas D'Agostino, Under Secretary of Energy for Nuclear Security and Administrator, National Nuclear Security Administration*

Dismantlement of the final B53 took place October 25, shortly after Johnston's retirement from Pantex following almost 16 years as an operations manager in the Plant's Transportation Department.

Johnston spent the first six and a half years of his Air Force service working on the W53, the W signifying warhead as opposed to B for bomb, though according to Johnston, "if you're the target, it's going to do the same." He added,





# THE DOGS' B53 NUCLEAR DISEMPOWERED AT PANTEX

...a patriot whose career paralleled weapon

“Normally you don’t get to do programs that long. I was just a kid in my 20s working on the W53. How many young kids have that chance?”

Many B53s were disassembled in the 1980s, but a significant number remained in the U.S. arsenal until they were retired. With the help of Los Alamos and Sandia National Laboratories, where the weapon was designed, Pantex studied and designed a fully compliant way to dismantle the aging B53 using the NNSA’s Seamless Safety for the 21st Century program.

Called “The Last of the Big Dogs” by disassembly workers, the megaton-class B53 weighed around 10,000 pounds and was about the size of a minivan. It was built at the now-closed plant in Burlington, Iowa, and was designed

to be air dropped from a B-52 Stratofortress strategic bomber. The weapon contained about 300 pounds of high explosive surrounding a uranium pit.

“The world is a safer place with this dismantlement,” said Thomas D’Agostino, Under Secretary of Energy for Nuclear Security and Administrator, NNSA. “The B53 was a weapon developed in another time for a different world. Today, we’re moving beyond the Cold War nuclear weapons complex that built it toward a 21st-century Nuclear Security Enterprise.”

“This is history. This is the last of the large-yield weapons. They just don’t make ‘em like this anymore,” said Johnston. “I consider myself privileged to work on it and then help retire it. Kind of like it was waiting on me.”



# INVESTING IN

*Whether it's patriotism, southern hospitality or genuine concern for one another, anyone who's been to Pantex is impressed by its people. The average service time of Plant employees is 15 years, and attracting new employees requires an investment. Through such offerings as internships, co-op work opportunities and the college pre-hire program, B&W Pantex strives to continue its tradition of recruiting and retaining the best.*



## Unique college pre-hire program recruits, helps retain Pantex engineers

When it became apparent that traditional hiring methods such as newspaper ads and career fairs weren't attracting enough quality candidates, Pantex's Engineering Division decided to go right to the source. By reaching out to universities, Pantex not only attracts but educates students about employment possibilities at the Plant.

Called the Engineering Division College Pre-hire

Program, it's the first and only of its kind in the NNSA enterprise. Shane Rogers, program manager and technical staff member, currently works with five universities – West Texas A&M, Texas Tech, Oklahoma State, University of Texas El Paso and New Mexico State. Students hired under the program receive up to \$30,000 reimbursement for tuition and books their last year of undergraduate college.



# THE FUTURE

“The advantage to Pantex is that we have, in most cases, eliminated the idle time waiting on a clearance. Most new engineers start cleared and are able to start work immediately,” said Shane Rogers, technical staff member. “From a business cost perspective it’s significantly cheaper to pay for a semester or so of college while their clearance is being processed than paying their salary waiting on a clearance to be processed.”

Presentations at the schools are followed by on-campus interviews. Interview teams select to 10 to 20 candidates who are invited to the Plant. Visits include a tour and an opportunity to meet department managers and hear from senior management. Final selections are made based on the visit, and those who accept an offer commit to working at Pantex two years for every year they accept college pre-hire monies.

Rogers explains that for the student, participating in a site visit to Pantex gives them the opportunity to see the work environment so they have a good idea of the job and requirements before they accept the offer. For years, he said, the selected candidate was unaware of the job and its requirements until they were hired and cleared, only then to realize the job wasn’t for them. The result was a high attrition rate in the younger ranks. “The college pre-hire program has virtually stopped the loss,” said Rogers.

“This program corrects many of the shortcomings of the traditional hiring process. It allows a person to be hired while completing their college degree, taking the pressure of finding a job away so they can focus on their grades,” said Steve Young, Engineering Department manager. “Meanwhile, B&W Pantex can process their background check and clearance investigation so they can come to work with the appropriate security clearance after they graduate.”

Candidates interested in the Engineering Division College Pre-hire Program may find jobs postings on the Pantex website at [www.pantex.com](http://www.pantex.com) under Job Opportunities as Engineer I (College Pre-Hire) as well as on the university websites.

## Pantex forges technology partnership with higher education

B&W Pantex, New Mexico Tech, Amarillo College and West Texas A&M University share an interest in developing and enhancing education in engineering and science and management in the Amarillo area. Cooperation will ensure that personnel with essential skills are available for future weapons work in each area of the Pantex Plant.

A recently signed Memorandum of Understanding establishes parameters for the partnership and enables New Mexico Tech to offer a graduate engineering degree program in Mechanical Engineering with an emphasis in Explosive Chemistry and a graduate degree program in Engineering Management.

Amarillo College provides campus facilities to allow New Mexico Tech to broadcast live classroom sessions on the Amarillo College campus making remote education a much more user-friendly endeavor. West Texas A&M University created and now offers an undergraduate degree for a Bachelors of Applied Arts in Science, and the agreement will allow for partners to serve on the school’s Engineering Advisory Board.

Long term, the collaboration aims to develop and enhance physical science, engineering and computer science education and research capabilities in the Amarillo community.





## Internship cements student's career plans

Spencer Hoff spent most of his time at Pantex outdoors where “the work truck *is* the office,” he said. The West Texas A&M University wildlife biology major worked full time this past summer as an intern alongside Pantex Wildlife Biologist Jim Ray.

In addition to helping handle routine tasks such as occasional nuisance animal calls involving rattlesnakes and skunks, Hoff was exposed to all things wildlife including surveys and tagging of Texas Horned Lizards, Swainson's Hawk radio tracking and trapping, prairie dog colony mapping, Bobcat home-range mapping using GPS software tracking equipment, wind-turbine research and helping graduate students at the Plant with their research.

“Being cut off from the outside and people with weapons everywhere definitely takes some getting used to, but all in all, it's a great place to work,” said Hoff. “The people are nice and very informative, it is one of the safest places to work and no one else in America gets to work on the stuff that many of these people work on every day.”

One thing Hoff will never forget is being sprayed by a skunk, though he said the most valuable aspect of the intern experience was the opportunity to work with Ray, who he describes as an extremely accomplished and published scientist.



“My internship is perfect for my major and life plans,” said Hoff. “Jim is a wildlife biologist and that's what I hope to become in the future.”



## Bobcats among wildlife studied by university students

This year, West Texas A&M University's Department of Life, Earth and Environmental Sciences provided funding for a graduate student to work on the Pantex bobcat project. Lena Thurmond is basing her Master of Science Degree thesis on data collected about Pantex-area bobcats.

Other West Texas A&M University Life, Earth and Environmental Sciences graduate and undergraduate students help with projects such as the effects of wind turbines on migratory birds, bats and Swainson's hawks; Texas horned lizard research; reptile and amphibian research; locating Purple Martin Pre-migratory Roosts with Weather Radar; and Purple Martin Banding.

“These students gain valuable experience with fieldwork techniques and some have given presentations on the Pantex projects at professional meetings,” said Ray.

“My internship is perfect for my major and life plans.” *Spencer Hoff, intern*



## West Point Cadets experience Pantex as interns



Adaptability is what's most important at Pantex, according to Tyler Sutherland (pictured), a nuclear engineering student at the U.S. Military Academy at West Point. Sutherland spent five weeks at Pantex through a West Point-sponsored experience referred to as an academic individual advancement program, which is a requirement for graduation.

Kyle Carberry, also a nuclear engineer from West Point,

interned at Pantex for a four-week period. The two are the first West Point cadets to be accepted as interns at Pantex. Sutherland spent his time at Pantex exploring Process Engineering, Systems Engineering and Tooling Departments, as well as at the DOE/NNSA Pantex Site Office. He also toured various areas of the Plant and programs.

"I learned about how processes are written and developed, how tools are thought up, designed and machined, as well as how the systems that make sure the Plant is able to work are in proficient condition," Sutherland said. "I got to really experience a wide variety of what happens at Pantex, which has helped me to be able to understand how departments work together and get a good overview of the Plant as a whole instead of just focusing on one area."

Asked if there are any jobs at Pantex that he'd consider after he graduates, Sutherland answered, "All the engineering aspects that I've been able to be a part of have been very interesting. I would feel fortunate to come back in any possible area to work here."

## Co-op student applies skills to digital imaging systems

Architectural engineering graduate Chantal Jones wanted a true engineering experience. She found it and more as a co-op in the Special Nuclear Materials Division at Pantex.

For seven months, Jones worked with a development team in automotive digital imaging systems for which she not only created the mechanical designs, but built the systems. The Tennessee State University graduate holds a bachelor degree and is working on her Masters of Engineering in Mechanical Engineering.

"I learned more in the past few months than I think I've learned in school. I learned about beam profiles, how to design and build mechanical systems, how to measure and run systems, writing procedures, how to use Pro-E (a system design software), and I got to do a vacuum training," she said.

"I also learned more about nuclear weapons and how the Plant plays a big part in the U.S. government defense

program," she said. "In terms of work, I learned about the different components of some of the systems used to work with these weapons."

Jones recently accepted a full-time engineering position at Pantex and is working on engineering design concepts for consolidation of offices and accessibility, maintainability and inspectability controls.





# PANTEX POSTSCRIPTS



**Prehistoric animal bones found:** Workers excavating at the construction site for the new High Explosives Pressing Facility in September uncovered the jawbone of an ancient peccary, a prehistoric pig related to modern javelinas. The bones were discovered imbedded about eight feet below the surface in the walls of an excavation dug the day before. They belong to a peccary extinct for at least 11,000 years. “We were very fortunate to find the bones and to be able to get in there and remove them without impacting the schedule on the facility,” said Monica Graham, Pantex historian. “It’s a win-win for everyone when we can learn about the ancient history of this site at the same time we are ensuring the future with this new facility.”

**Outstanding performance:** B&W Pantex earned a numerical rating of 95.9 percent, and an adjectival rating of “Outstanding” by the Pantex Site Office for its

performance from October 1, 2010, through September 30, 2011. This is the company’s highest score to date.

**National Safety Council honors Pantex:** The National Safety Council honored Pantex as one of our nation’s leaders in promoting a safe work environment. For the third year in a row, the Council gave B&W Pantex the Occupational Excellence Achievement Award for its safety performance. The award recognizes remarkable achievement in reducing the lost-time injury rate to a level well below other similar facilities. The Pantex lost-time injury rate of 0.12 is several times lower than the 0.9 required to be eligible for the award.





**Pantex earns Superior Star:** The NNSA announced in September that B&W Pantex was among three managing contractors that received awards from the DOE Voluntary Protection Program. Pantex was awarded the Superior Star for its leadership in safety and health performance; achieving an injury and illness rate significantly below the average of similar businesses and operations. In addition to its excellent safety rates, Pantex was recognized for actively conducting outreach to other organizations. Currently, Pantex is mentoring the Y-12 National Security Complex to help it achieve Voluntary Protection Program Star status.

**Survey to help assess safety culture:** B&W Pantex is working with DOE and the Energy Facility Contractors Group's safety culture group to help develop ways for DOE organizations to assess their safety culture. Pantex piloted the Pantex safety culture survey program last year with Texas Tech University in the Explosives Technology Division. As the second part of the initiative, B&W Pantex again partnered with Texas Tech University to conduct a Plant-wide safety culture survey. The survey will help uncover the safety culture within Pantex and enable Plant officials to begin to understand how the current safety programs and policies affect that culture.

## In the Community

**United Way giving at record high:** Employee pledges and donations to the United Way totaled a record \$614,535, which will help support programs throughout the Panhandle. A record 327 Pantexans pledged \$1,000 or more, as did the Metal Trades Council, and Babcock & Wilcox Company contributed \$40,000. For their exemplary support, the Pantex Site Office was awarded Combined Federal Campaign Fundraiser of the Year, and B&W Pantex earned the Reaching New Heights Award.

**Pantex union members help United Way:** As part of the ongoing commitment from Pantexans to support the United Way, members of the Metal Trades Council used their electrical skills to upgrade the charity's offices in October. About a half dozen electricians and other trades people from the union spent the day installing new ballasts, bulbs and motion sensors that make the building more energy efficient. Funds to purchase the lighting equipment were donated by B&W Pantex. "We're just so thrilled that these guys volunteered to help us out," said Frankie Francel, executive director of the United Way of Amarillo and Canyon. "The people of this community are so generous and creative in the ways they find to help us, and this is one of the more creative ideas."

**Food drive tops last year's total:** Pantexans once again came together to help meet a serious need for food donations in the Texas Panhandle area. Federal employees at the Pantex Site Office and B&W Pantex joined together to gather food donations in honor of the Feds Feed Families program. Combining food and cash

donations, the two groups gave the equivalent of 61,945 pounds of food to the High Plains Food Bank. This is the second year for the food drive, and the second year that Pantex topped sister site Y-12 in donations in the friendly competition. The drive meets a critical need because it occurs during the summer months when demand at the food bank is high from children not in school and when donations can lag compared to the holiday months.

**Pantexans run against hunger:** Byron Logan and Randy Stokes, officers in the Safeguards and Security Division, ran 30 miles December 9 from Pantex to the High Plains Food Bank's food drive, in an effort to gather donations for families in need during the holiday season. Stokes and Logan were joined for portions of the route by fellow Pantexans. They were followed by a Bearcat, which is an armored vehicle used by Security Police Officers. Pantexans donated approximately 1,500 pounds of food and \$500.





# SECRET, SPECIALIZED WHITE TRAIN CENTERPIECE OF PANTEX RAILCAR EXHIBIT

## Weapons transport chameleon turned peace symbol preserved

During the Cold War, railcars supported our nation's security. Preserving the cars honors their role in transporting weapons and recognizes the controversy that followed.

“Seven railcars significant in the transportation of weapons at Pantex during the Cold War have been preserved, and an exhibit developed focusing on the history and function of each railcar,” said Monica Graham, Pantex historian.

From 1951 to 1987, hundreds of nuclear weapons were

transported by armored railcar from the Pantex Plant to weapons storage areas around the nation, creating stockpiles against the threat of a Soviet military attack. As nuclear stockpiles grew, storage of the weapons became a problem.

An agreement between the Atomic Energy Commission and the Department of Defense established 13 weapons storage areas adjacent to military bases in 12 states around the country. To get the weapons to those sites, the government turned to the nation's well-developed rail system, which was the primary means of transporting cargo, because at the time the U.S. highway system was still underdeveloped and inefficient.





“A secret and specialized train—the White Train—was designed and built for the job. For 36 years, the White Train traveled between these weapons storage areas and the Pantex Plant, loading and unloading its dangerous cargo,” said Graham.

As highways improved and trucking became a more reliable alternative, fewer weapons traveled by rail. The train then became the focus for peace and anti-nuclear weapon activism in the west. While the train’s color was changed numerous times to avoid notice, it continued to be referred to by its original color.

After the last attempt to prosecute protesters who blocked the passage of the train failed, DOE began to move nuclear weapons by truck without public notice. In 1987, the White Train rolled to a stop at Pantex for the last time.

The railcars rested at Pantex until 2007, when many of the railcars were donated to the Amarillo Railway Museum. A representative sampling of the train remained onsite for historical preservation purposes. The exhibit consists of seven cars in the configuration that most represents the order of transport.



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# PANTEX IN THE NEWS

## A BIG BOMB GETS BIG COVERAGE



The New York Times  
The Washington Post  
The Dallas Morning News

