



PERFORMANCE EXCELLENCE: U.S. Vice President Joe Biden presented the Malcolm Baldrige National Quality Award to Kansas City Plant Honeywell FM&T President Tony Brancato. Also pictured are Honeywell FM&T Quality Manager Jane Fitzpatrick and U.S. Commerce Secretary Gary Locke.

VP Biden Presents Baldrige Quality Award to Kansas City Plant Contractor

Honeywell FM&T Receives America's Highest Honor for Innovation, Performance Excellence

On Dec. 16, the Kansas City Plant's (KCP) management and operations contractor was presented with the Malcolm Baldrige National Quality Award, America's highest honor for innovation and performance excellence.

During a ceremony in Washington, Vice President Joe Biden and U.S. Commerce Secretary Gary Locke presented Honeywell FM&T the award in the

manufacturing category for its management and operation of NNSA's Kansas City Plant, which is the principal nonnuclear production site within the nuclear security enterprise.

"NNSA is proud of the work done by the men and women at the Kansas City Plant with our Honeywell FM&T partners," said NNSA Administrator Thomas D'Agostino. "Receiving the Malcolm Baldrige Award is a tremendous honor, one that demonstrates our commitment to maintaining the highest

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NNSA Secures Highly Enriched Uranium and Plutonium in Kazakhstan

In November, NNSA successfully completed the transfer and secure storage of 300 metric tons of spent fuel, which contained more than 10 metric tons of highly enriched uranium (HEU) and three metric tons of weapon-grade plutonium in Kazakhstan - enough material to make 775 nuclear weapons. Completing the final shipment represents more than a decade's worth of cooperation between the U.S. and Kazakhstan to secure one of the largest stockpiles of weapon-usable nuclear material in the world. "Moving the BN-350 fuel to a new facility for secure long-term storage

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Administrator's Corner

As we all know, the month of December is a very important and busy time as we gather to celebrate the various religious and cultural events that we collectively cherish. All of us can remember celebrations from years past that brought us great joy and happiness. Spending time with loved ones, family, friends, and members of our community is truly special. These holidays give us purpose and perspective in how we live our lives and how we conduct ourselves as members of our communities. The New Year also gives us a renewed sense of purpose and a chance to set new goals for the coming year.

Before we start 2011, I would like to take a moment to thank you for all of the hard work you do, and to applaud your dedication to meeting America's nuclear security commitments.

Without question, 2010 was a banner year for the NNSA. Neile Miller, Don Cook and Anne Harrington joined the NNSA senior leadership team and made an immediate and positive impact. The Nuclear Posture Review, the Nuclear Security Summit, and the debate on New START all highlighted the high-level interest in our mission. We celebrated the 10th Anniversary of the NNSA. Across the enterprise, you excelled in meeting our mission.

In addition to our program accomplishments this past year, I would like to thank you for the major contributions you made to help those in need in our communities through the Feds Feed Families Initiative, the Combined Federal Campaign and, most recently, the U.S. Marine Corps Reserve Toys for Tots Program. I enjoy working with you because of your dedication to duty, commitment to excellence, and your generosity and concern for others.

With these thoughts in mind, I wish each of you a safe and enjoyable holiday season.

Tom D'Agostino

VP Biden Presents Baldrige Quality Award to Kansas City Plant Contractor

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operational standards across our enterprise. I congratulate our federal and contractor partners in Kansas City for a job well done."

Each year, companies and organizations striving for excellence pursue the Malcolm Baldrige National Quality Award as a measure of their effort to continuously improve their level of excellence and productivity. Companies are examined in seven categories: leadership; strategic planning; customer focus; measurement, analysis, and knowledge management; workforce focus; process management; and results. Honeywell FM&T was the only manufacturing organization to receive the award this year.

"The Malcolm Baldrige National Quality Award is a great honor for both Honeywell and the NNSA," said Tony Brancato, President of Honeywell FM&T. "Our people represent a tradition of passion and precision that is unparalleled and we take great pride in keeping our nation safe and secure."

NNSA Secures Highly Enriched Uranium and Plutonium in Kazakhstan

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is a critical nuclear nonproliferation milestone and an important contribution to global security," said NNSA Administrator Thomas D'Agostino. "Through our close partnership with Kazakhstan, we were able to finish the challenging series of shipments ahead of schedule. Our partners in Kazakhstan once again demonstrated their commitment to international nonproliferation efforts, and together we have taken a major step forward in meeting President Obama's goal of securing all nuclear material within four years."

The fuel was transported from the BN-350 fast reactor on the Caspian Sea, originally built to breed plutonium for the former Soviet Union's nuclear weapons program, to a secure storage facility 3,000 kilometers away. Completing the transfer of the more than 13 metric tons of HEU and plutonium required the construction of additional roadways and rail lines, five specially-designed cask rail cars and two specially-designed guard cars, a fleet of security vehicles for the road escort, 61 fuel casks weighing 100 tons each and the construction of three new nuclear facilities - the Aktau Temporary Cask Storage Site, the Kurchatov Rail Transfer Site, and the long term Cask Storage Facility in Eastern Kazakhstan.

Ken Baker Honored for Public Service

On Oct. 25, NNSA's Principal Assistant Deputy Administrator for Defense Nuclear Nonproliferation Ken Baker was awarded with the 2010 Roger W. Jones Award for Executive Leadership at a ceremony in Washington, D.C. Created in 1977, this annual award is given by American University's School of Public Affairs to recognize exceptional leadership among persons who have devoted themselves to a life of public service.

"Ken Baker represents the very best of public service," said NNSA Administrator Thomas D'Agostino. "After more than 40 years, he continues to serve his country with honor and distinction. In addition to being a trusted advisor to me, Ken has worked tirelessly to keep the American people safe and secure by helping build the world's largest nuclear nonproliferation program."

Baker joined the Department of Energy (DOE) and what would become NNSA in 1992 after a distinguished 28-year career with the U.S. Air Force, including several key posts at the White House and the Pentagon. As the Principal Assistant Deputy Administrator for the NNSA's Office of Defense Nuclear Nonproliferation, Baker has played a key role in ensuring the security and safety of the nation and the world.

After 18 years with DOE, Ken Baker will be leaving in January to accept a position at the National Defense University, serving as Chair for Nuclear Security in the College of International Security Affairs. Ken's wealth of experience, extensive background, detailed technical knowledge, and practical, real-world working relationships, both within the U.S. federal structure and equally important, with the Russians and many other nations, make him the ideal individual to lead this exciting effort.

Abigail Cuthbertson Receives 2010 Linton Brooks Medal for Public Service

Abigail (Abby) Cuthbertson, federal project manager for NNSA's Off-Site Source Recovery Project in the Office of Defense Nuclear Nonproliferation, has received the 2010 Linton Brooks Medal for Public Service to for outstanding service to NNSA.

NNSA Administrator Thomas D'Agostino presented the award to Cuthbertson during a ceremony on Dec. 16 that featured Ambassador Brooks, NNSA's Principal Deputy Administrator Neile



OUTSTANDING SERVICE: 2010 Linton Brooks Award winner Abigail Cuthbertson and Ambassador Linton Brooks.

Miller, and other members of NNSA's leadership team.

The Brooks Award, established in 2008, recognizes newer employees whose actions and deeds exemplify the spirit of commitment to public service.

Cuthbertson oversees the recovery of at-risk radioactive sealed sources as part of NNSA's Global Threat Reduction Initiative, a program within the Office of Defense Nuclear Nonproliferation. Under Cuthbertson's direction, the program has grown from recovering slightly more than 2,000 sources to almost 3,500 sources per year.

Cuthbertson was recognized for her outstanding job of working with international and interagency partners to leverage resources and agreements to accelerate source recovery efforts, develop critical relationships on behalf of NNSA's nonproliferation program, and centralize the procurement of equipment and training – helping taxpayers save more than \$100,000 in the process.

Employees Throughout the Nuclear Security Enterprise Give Back This Holiday Season

From donating shoes for kids to collecting food for the less fortunate in their communities, employees across the nuclear security enterprise have found countless ways to make this time of year more cheerful.

The following is a summary of some of those efforts. To see the complete list go to <http://nnsa.energy.gov/mediaroom/factsheets/holidaygiving2010>.

Kansas City Plant

- KCP employees gave nearly \$500,000 to local United Way agencies and others during the annual Employee Giving Campaign.
- KCP employees adopted 250 Angels and 12 Family and Senior Angels from the Salvation Army's Angel Tree program.



SANDIA SHOES FOR KIDS: For 54 years, employees of Sandia National Laboratories have been contributing to the Sandia Shoes for Kids program. Each year, about 500 children receive new shoes.

Lawrence Livermore National Laboratory

- Each year LLNL employees stage the grassroots Brighter Holiday campaign to support needy families in Alameda, San Joaquin and Stanislaus counties. This year, lab personnel provided holiday gifts, food and money toward power and heating bills this winter to more than 81 local families.
- LLNL began its annual HOME Campaign more than 35 years ago to support charities in the Greater Bay Area during the holiday months. Employees raised \$2.5 million this year.

Los Alamos National Laboratory

- Lab employees donated \$1.6 million in this year's Employee Giving Campaign. Coupled with a prorated match of \$1 million from Los Alamos National Security, LLC, it brings the total to \$2.6 million.
- More than 1,400 holiday tags have been distributed to LANL employees to fill a child's wish during the holidays.

Nevada National Security Site

- NSTec employees pledged more than \$350,000 to United Way of Southern Nevada. The final 2010 Nevada Site Office Combined Federal Campaign total was \$39,102.22, which represents 97.76 percent of its goal of \$40,000.
- Employees donated 180 bicycles and 27 barrels of toys for the local Marines' Toys for Tots program.

NNSA Service Center

- NNSA Service Center employees donated 12,963 pounds of non-perishable food items and essentials to Road Runner Food Bank during the 2010 Feds Feed Families food drive.
- NNSA Service Center participated in the Eighth Annual Take a Turkey to Work Day. NNSA Service Center and Sandia Site Office employees donated more than 26,000 pounds of turkey to Roadrunner Food Bank this year.



SRS FOOD DRIVE: The 335 federal employees at SRS donated 66,292 pounds of goods in just more than 30 days to feed the needy in Georgia and South Carolina.

Savannah River Site

- The 2010 SRS Employee United Way Campaign raised more than \$2 million from workers employed by the site's two primary contractors, exceeding this year's goal.
- SRS employees collected more than 13,000 toys for the U.S. Marine Toys for Tots campaign.

Y-12 National Security Complex

- YSO employees donated almost \$53,000 to the annual Combined Federal Campaign, which represents an \$11,470 increase over the 2009 campaign.
- This year, B&W Y-12 will donate 1,000 baking hens to the Second Harvest Food Bank to be included in Christmas baskets being distributed through their partner agencies in the 18-county region.

Pantex Plant

- The Pantex Christmas Project adopted 74 families with 243 children and 10 senior citizens to help this Christmas. All the families were hosted at a Christmas party.
- Contributions to Combined Federal Campaign were \$35,853. B&W Pantex employees pledged more than \$611,000 to the area's 2010 United Way campaign.

Sandia National Laboratories

- Sandia employees and retirees donated more than \$4.2 million to the United Way of Central New Mexico. Sandia has been the number one donor to the United Way for more than 50 years.
- More than 500 local elementary school children will be fitted with new shoes this year courtesy of Sandia's Shoes for Kids program, which raised more than \$13,000. More than 12,000 children have received shoes since the program began more than 54 years ago.

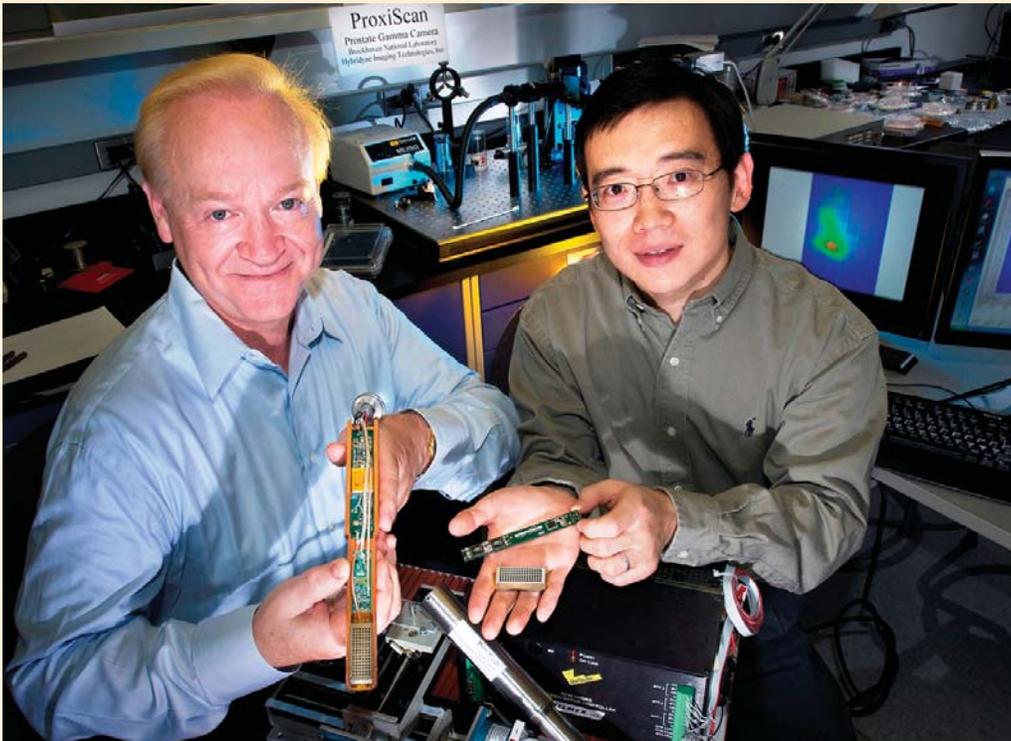


NSTec TOYS FOR TOTS: NSTec employees with bicycles and toys they collected and donated for the local Marines' Toys for Tots program.

The Science of Nuclear Security

Nonproliferation R&D Leads To Award-winning Cancer Screening Device

NNSA-funded researchers at Brookhaven National Laboratory (BNL) were recently awarded the 2010 North American Frost & Sullivan Award for Technology Innovation of the Year. The award was given to BNL and its commercial partner, Hybridine Imaging Technologies, Inc. for ProxiScan TM, a compact, high-resolution gamma camera currently used for prostate cancer detection but with applications for other cancer diagnostics.



TECHNOLOGY INNOVATION: Drs. Ralph James and Yonggang Cui from Brookhaven National Laboratory, shown with the cadmium zinc telluride (CZT) detector elements.

Through their nuclear nonproliferation work, NNSA and BNL developed a specialized cadmium-zinc-telluride (CZT) gamma-ray detection material for the next generation of detectors that are deployed throughout the world to prevent nuclear smuggling and proliferation. Today, ProxiScan TM utilizes the same CZT sensors to identify, localize and image cancer tissue in the prostate gland at an early stage. This early detection is critical for the successful diagnosis and early treatment of the potentially deadly disease.

"ProxiScan and technologies like it are perfect examples of how our investment in nuclear security is also being leveraged to tackle broader national challenges," said NNSA Deputy Administrator for Defense Nuclear Nonproliferation Anne Harrington. "Promoting strong science and investing in research and development is critical to improving our ability

to prevent the spread of nuclear weapons and material. It is particularly rewarding to see those same technologies used to save lives on a daily basis."

CZT sensors are room-temperature devices that detect the radiation emitted by sources such as dirty bombs and special nuclear material while differentiating nuclear threats from harmless, naturally occurring radioactive materials. This capability is critical to supporting NNSA's nuclear nonproliferation, counterterrorism and emergency response missions.

While developed for nonproliferation purposes, CZT materials have numerous medical, industrial, scientific, environmental and homeland security applications. With ProxiScan TM, Hybridine has demonstrated that CZT-based sensors are ideal for minimally invasive medical imaging, allowing physicians to obtain higher quality images of abnormal tissue and use smaller amounts of a radiological tracer.

Currently used for prostate cancer diagnosis, CZT-based sensors may also be utilized for imaging other cancers, such as cervical, colorectal, and breast.

Successful Sandia Labs Z Machine Experiment

Sandia National Laboratories successfully performed an experiment with Los Alamos National Laboratory on the properties of plutonium materials on the Z machine in mid-November.

This was the first plutonium Z machine experiment in four years and is a continuation of studies performed at Sandia prior to the major refurbishment of the Z machine to increase the output of electrical energy.

"The successful Z Machine experiment demonstrates our commitment to ensuring that NNSA has the infrastructure, facilities, and highly trained scientists and engineers required to maintain the safety, security and effectiveness of a smaller stockpile without nuclear testing," said Don Cook, deputy administrator for Defense Programs.

"This is a great example of how stockpile stewardship brings together the laboratories, local high-tech industry, and the NNSA to develop a capability that safely allows measurements that the program needs to complement our work done at Nevada," said Chris Deeney, assistant deputy administrator for Stockpile Stewardship.

Keith Matzen, director of Sandia's pulsed power program, said, "Understanding the detailed response of these materials at high pressure is an important component of the science basis for ensuring the safety, reliability, and effectiveness of the nuclear stockpile."

The Z machine can fire 200 shots every year and uses currents of about 26 million amps to reach peak X-ray emissions of 350 terawatts and an X-ray output of 2.7 megajoules and pressures greater than those at the center of the Earth.



SANDIA'S Z MACHINE: Sandia National Laboratories successfully performed an experiment with Los Alamos National Laboratory on the properties of plutonium materials on the Z machine on Nov. 18. This was the first plutonium Z machine experiment in four years.

NNSA, LLNL Decommission ASC Purple

Supercomputer was first machine to be used as a capability platform by all three labs

ASC Purple, the first supercomputer capable of producing reliable three-dimensional simulations of nuclear weapons, was decommissioned by NNSA and Lawrence Livermore National Laboratory (LLNL) in mid-November.

ASC Purple, which was housed at LLNL, represented the culmination of the Accelerated Strategic Computing Initiative's (ASCI) nearly 10-year quest to deploy a 100-teraFLOP/s (100 trillion floating point operations per second) system. Purple transformed ASCI from an initiative into today's Advanced Simulation and Computing (ASC) program and was the first machine to be used as a capability platform by all three NNSA laboratories.

"The Purple machine was the icon of the Advanced Simulation and Computing Initiative kicked off in 1996 that was intended to demonstrate that science-based simulations could effectively underwrite the nation's nuclear deterrent during a moratorium on underground nuclear explosive testing," said Don Cook, deputy administrator for Defense Programs. "The success of Purple reinforces our confidence that we are on the right path to realizing predictive simulations for particularly tough scientific questions."

ASC Purple was the result a long term collaboration effort between NNSA's ASC Program and IBM, with LLNL as the lead laboratory. The ASC Purple contract was announced by the Secretary of Energy in November 2002.

ASC is a tri-laboratory program, including Los Alamos National Laboratory, Sandia National Laboratories and LLNL, that develops the complex application codes and provides the computers necessary to certify the safety and reliability of the enduring stockpile.

Small Businesses Play Vital Role in NNSA's Mission

NNSA distributed more than \$395 million in small business obligations in 2010

NNSA likes minding its small business.

NNSA distributed more than \$395 million in small business obligations for federal prime contracts in fiscal year 2010 and surpassed its departmental small business goal by 39 percent for the year.

"NNSA is committed to developing strong partnerships with small businesses," said NNSA Administrator Thomas D'Agostino. "Small business contracting plays an important role in ensuring NNSA can focus on its core missions of maintaining the safety, security and

effectiveness of the U.S. nuclear stockpile and running the largest nuclear nonproliferation program in the world while being effective stewards of taxpayer dollars."

The benefits of using small business companies include more efficient use of taxpayer dollars, reducing overhead operating costs, and providing an opportunity for small businesses to gain exposure within the nuclear security enterprise throughout the nation.

NNSA uses small businesses to fulfill the majority of its technical and administrative support services at its headquarters in Washington, D.C. These blanket purchase

agreements (BPA) represent 11 teams of more than 80 small businesses and are open for use by any DOE departmental element. NNSA has access to a large number of firms with diverse skills and capabilities.

In addition to the agency's own small business work, NNSA's Management & Operating (M&O) contractors' small business programs obligated over 55 percent of all subcontracted work to small businesses.

To highlight the success of its small business program, NNSA featured six different small businesses on the NNSA website. See: <http://nnsa.energy.gov/smallbusiness2010>

First SGT Delivery Marks Successful Transition

With the delivery of the first refurbished SafeGuards Transporter (SGT) from its Kirtland Operations (KO) in New Mexico, the Kansas City Plant (KCP) continues to make a significant contribution to nuclear safety and security. The SGT is a vault-type trailer used for secure transportation of nuclear weapons and special nuclear materials by the NNSA's Office of Secure Transportation (OST).

KCP's Kirtland Operations completed the refurbishment on time and within budget by teaming with several organizations, including OST, Kansas City Site Office, and Sandia National Laboratories.

The Kansas City Plant has been producing new build SGTs, performing SGT refurbishments, reprocessing SGT annual surveillance test trailers and providing SGT fleet upgrades and repairs for the past 15 years. The mission to keep the SGT fleet up and running was successfully transitioned to the New Mexico operations earlier this year, marking the next phase of the SGT program.



SGTs SUCCESSFULLY TRANSITIONED: KCSO Manager Mark Holecek and OST Office of Support Manager Rich Richey commemorate the beginning of KO's support for the OST SGT refurbishment program.

NNSA News is published monthly by the Office of Congressional, Intergovernmental and Public Affairs.
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