

the Y-12 times

A newsletter for employees and friends
of the Y-12 National Security Complex

WHAT'S INSIDE

Page 2

Big spring clean moves Beta 4 closer to
demolition

Page 3

Why the nation needs UPF

Page 4

A high five to the environment and Y-12

Page 5

A flight to remember

Page 8

Partnership pushes more technologies from
research into production

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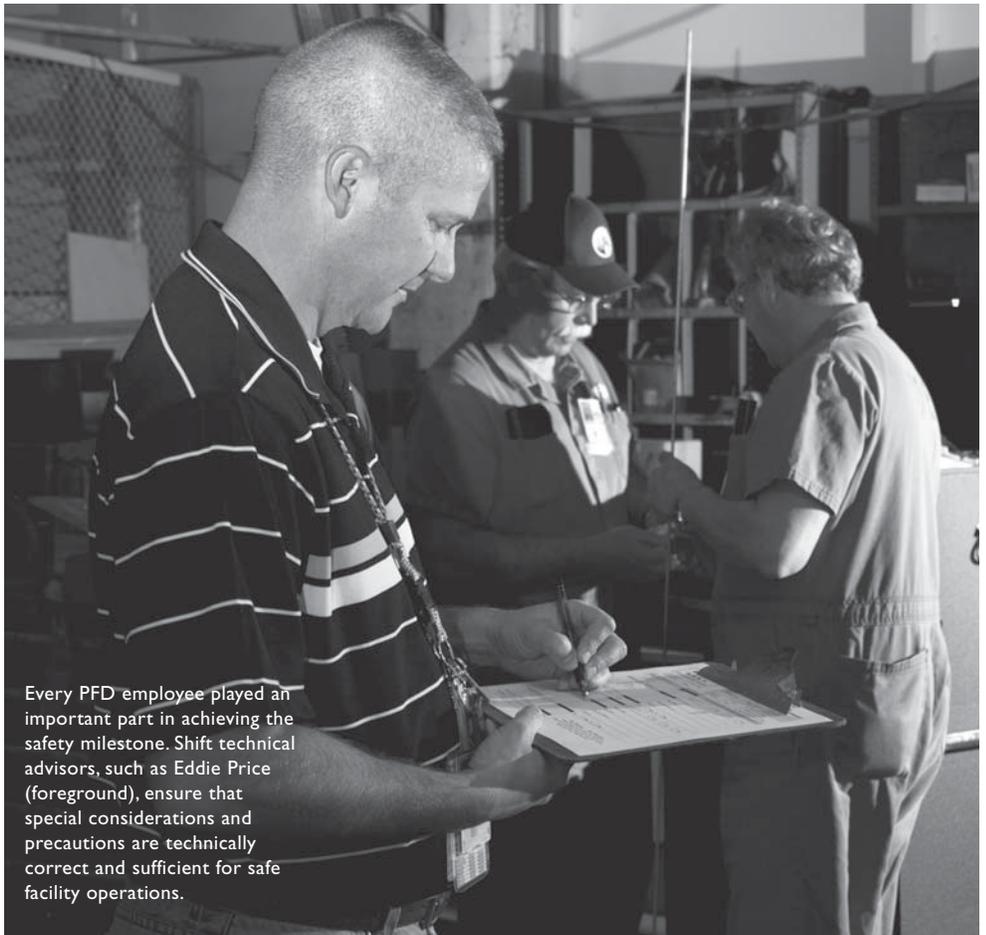
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Every PFD employee played an important part in achieving the safety milestone. Shift technical advisors, such as Eddie Price (foreground), ensure that special considerations and precautions are technically correct and sufficient for safe facility operations.

Safety for Life

6 careers, 0 injuries

Since 2009, the Production Facilities Department has had no injuries — neither a recordable nor a first aid. They have logged 523,148 injury-free hours. Most important, all 135 employees have come to work and returned home safely to their families.

“Half a million hours without an injury is an incredible achievement for a group our size,” said Bill Tindal, manager of PFD. “Those 500,000 hours translate to six careers — six people working 40 hours a week for 40 years without an injury!”

Last year, PFD made a “concerted effort to step up safety,” Tindal said. PFD increased its focus on Behavior-Based Safety observations with an initiative called Safety Century. A team was selected by managers to be full-time BBS observers until each had completed 100 observations.

Derwin Gould, a shift technical advisor, was responsible for BBS observations in the material access area and office area. He said, “I think BBS is working, and Safety Century heightened our awareness of its importance.” PFD plans to continue using Safety Century when it can be most effective, such as after holidays.

In addition to intense BBS efforts, PFD also is continuing to concentrate on enhanced floor surveillance, which focuses on conduct of operations and timely feedback to facilitate improvement.

“PFD is proving to be a leader on Y-12’s Safety for Life journey,” said Sam Lariviere, Voluntary Protection Program facilitator. “The department’s accomplishment illustrates what VPP is all about — promoting safety and health excellence among Y-12 employees, so every employee can have an injury-free career.”

Spring cleaning at Y-12

Beta 4 (Building 9204-4), one of the oldest and largest buildings at Y-12, recently reached a significant cleanup milestone, thanks to funding from the American Recovery and Reinvestment Act.

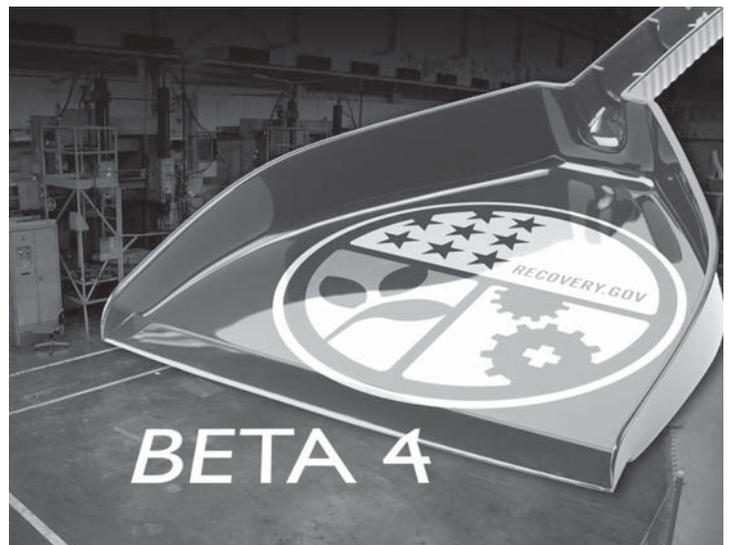
The second floor of the building, more than 82,000 square feet, has been cleared of large equipment and waste from Cold War operations. The project was finished one month ahead of schedule despite having to remove 26 percent more material than was initially estimated (720 cubic yards more than originally estimated).

“The completion of this phase of the Beta 4 project is significant to Y-12’s site transformation plan because it moves us another step closer to the eventual demolition of the building,” said John Eschenberg, assistant manager for Environmental Management at the Department of Energy’s Oak Ridge Office. “It has also allowed us to contribute to the two primary goals of the American Recovery and Reinvestment Act — support jobs and spur economic activity.”

The Beta 4 facility originally housed the calutrons that were used to separate uranium for the first atomic bomb during the Manhattan Project from 1944 to 1945. After World War II, the 313,771 square-foot building housed a variety of other operations including the production of lithium-6 and other weapon fabrication support.

Through the Recovery Act, workers were able to remove and dispose 3,438 cubic meters of material from Beta 4, including non-process equipment, containers, tools and miscellaneous office equipment. “In addition to safely packaging and removing the materials for disposal, we also recycled as much material as feasible,” said Tom Fitzmaurice, Beta 4 project manager. “We sent 3,370 cubic meters of waste to the Nevada National Security Site and Y-12 sanitary landfill for disposal and 68 cubic meters to recycling facilities for metal, oil and other materials.”

The cleanout of Beta 4’s second floor is one of seven Recovery Act projects at Y-12 that have added almost 1,500 full-time-equivalent jobs and committed \$71.3 million in procurements (76 percent to small businesses).



Compensatory measures during the HEUMF PIDAS tie-in maintained the security posture.

HEUMF PIDAS tie-in may be a first

The Highly Enriched Uranium Materials Facility has been operating for a year, and the achievements in building it are still coming to light. Recently Y-12 engineers became aware of a first in extending the Perimeter Intrusion Detection and Assessment System. “To my knowledge, the HEUMF PIDAS is the first time a new PIDAS has been connected to an old PIDAS in the Department of Energy complex,” said Larry Miller of Sandia National Laboratories. Miller and other experts at Sandia have been involved in most of the original PIDAS upgrades at DOE facilities.

In addition to collaboration with the Sandia designers, a factor in the successful effort was input from Y-12 subject-matter experts. “A good example is the experience of our civil, instrumentation and electrical engineers and our construction people,” said Mitch Evans of Engineering. “A number of them were at Y-12 when the original PIDAS was built, and they know what’s underground.”

Y-12’s Gary Henderson said, “Our task was to outline the new system and make sure the layout met the security needs of HEUMF while protecting the original sensor locations at the PIDAS tie-in points.”

In addition to Engineering and Construction, organizations such as Maintenance and Safeguards and Security were major players in the PIDAS tie-in effort. Many team members are now lending their expertise to the Uranium Processing Facility project. “I expect their experience will help us avoid pitfalls in designing and constructing this facility too,” Evans said.

8 reasons the nation needs the Uranium Processing Facility

The Uranium Processing Facility planned for Y-12 will be the essential, one-of-kind facility that will handle the highly enriched uranium removed from old weapons. It also will refurbish warhead parts for the weapons that remain active in the U.S. stockpile.

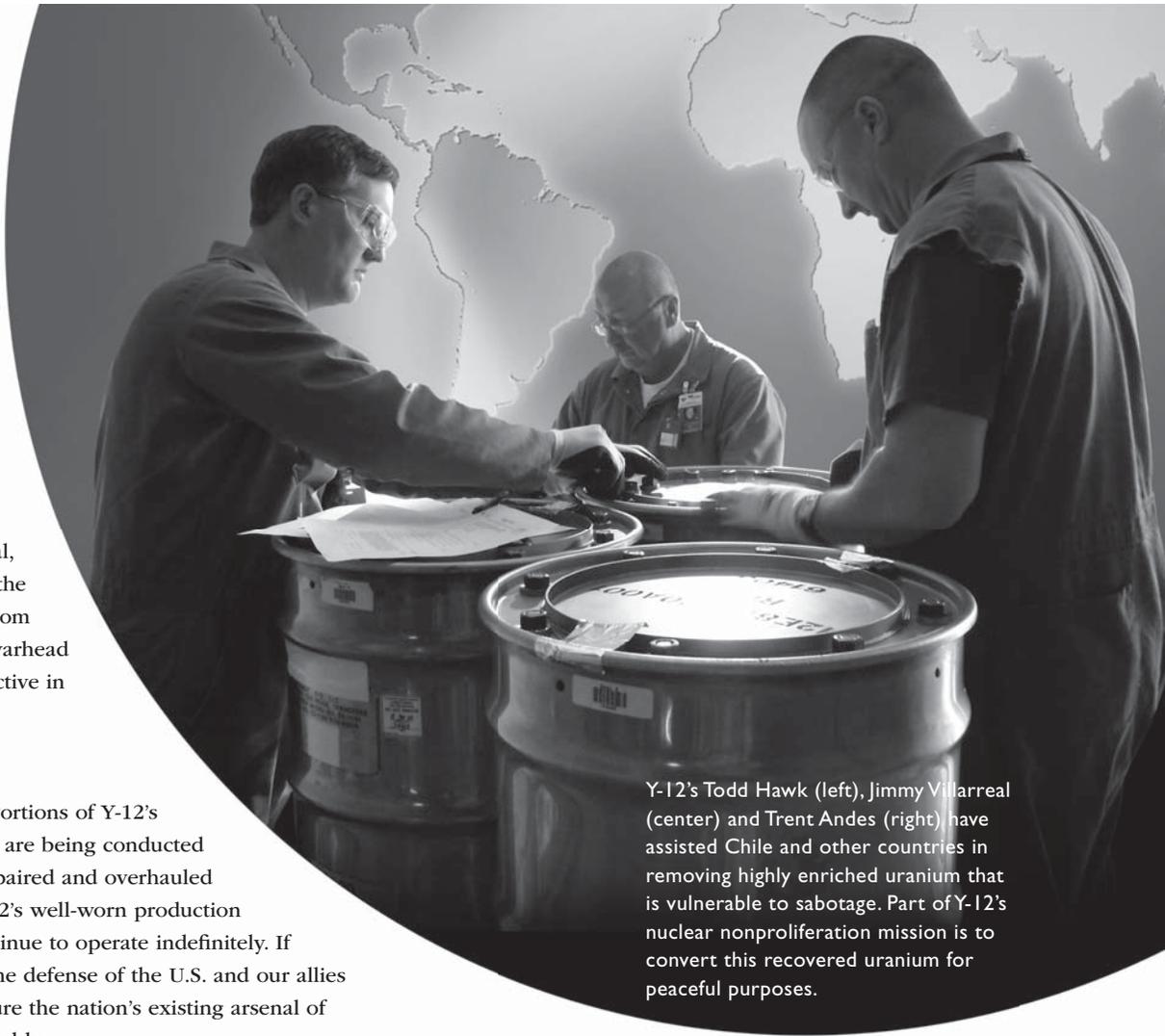
The nation needs UPF now to:

1 Underpin America's defense. Portions of Y-12's critical national security mission are being conducted in 60-year-old facilities. Although repaired and overhauled multiple times over the decades, Y-12's well-worn production facilities and equipment cannot continue to operate indefinitely. If these facilities and equipment fail, the defense of the U.S. and our allies is at risk. A modern facility will ensure the nation's existing arsenal of nuclear weapons is effective and reliable.

2 Save taxpayers millions of dollars every year. UPF will significantly reduce operating and maintenance costs. Savings will also come from consolidating operations now conducted in four facilities in about a million square feet into one manufacturing complex that is 350,000 square feet. A smaller, integrated layout saves money by simplifying the movement of special nuclear material, decreasing material-handling steps and concentrating security forces over a significantly smaller area.

3 Keep our world safe. Y-12 has been stopping the spread of nuclear weapons since the early 1990s. We assist other nations in removing highly enriched uranium that is vulnerable to sabotage. We play a major role in disassembling old weapons. We then convert some of this uranium for peaceful purposes.

4 Enhance Y-12 security. With lives and national security at stake, UPF will be an impenetrable fortification. It will withstand earthquakes, as well as terrorist attacks by land or air. Security technologies will be built into the design, and the lessons we learned from building the Highly Enriched Uranium Materials Facility will be included.



Y-12's Todd Hawk (left), Jimmy Villarreal (center) and Trent Andes (right) have assisted Chile and other countries in removing highly enriched uranium that is vulnerable to sabotage. Part of Y-12's nuclear nonproliferation mission is to convert this recovered uranium for peaceful purposes.

5 Improve worker safety and the environment. Many operations performed in the open today will be contained in UPF to protect workers from exposure. Use of hazardous chemicals will be greatly reduced or eliminated, and low levels of radioactive waste generated as a result of production activities also will be significantly reduced.

6 Fuel the nuclear Navy. The U.S. Navy depends on Y-12 to fuel its nuclear fleet. UPF will ensure this mission continues uninterrupted.

7 Create electricity. Ten percent of the electricity in the U.S. comes from former U.S. and Russian nuclear weapons. Y-12 supplies recycled fuel from these weapons to U.S. nuclear power plants to create electricity.

8 Power research and medical isotope production. By reducing bomb-grade uranium to low-enriched uranium, Y-12 eliminates weapons and supplies fuel for 80 percent of the free world's research reactors. Some of these reactors produce medical isotopes.

Green recognition

Y-12 employees can be proud of being green. The site won four of nine Best in Class awards presented by the National Nuclear Security Administration for pollution prevention/sustainability activities.

“This is the eighth consecutive year Y-12 has been recognized by NNSA for award-winning activities,” Y-12 President and General Manager Darrel Kohlhorst said. “Y-12’s sustainability program is an outstanding one.”

The Best in Class awards were presented to:

- Y-12 Clean Steam Team
 - Waste Not Want Not, Y-12 Comprehensive, Cost-Effective Recycling Program
 - Y-12’s Innovative Lab Method Answers Be or No Be Question Faster, Safer and Sustainably
 - Y-12 Sustainable Recovery and Transformation
-

These NNSA awards were one group of several handed out by Kohlhorst and Y-12 Site Office Assistant Manager Ken Ivey at an April 25 ceremony held at the Jack Case Center.

Some highlights of the Y-12 Best in Class winning activities include recycling more than 89 percent of sanitary waste during



Justin Cox of Environmental Management (left) receives a sustainability and stewardship award from Ken Ivey (center), Y-12 Site Office, and Darrel Kohlhorst, Y-12 president and general manager, at the April 25 awards ceremony.

fiscal 2010 and reduced, reused or recycled 49,765 metric tons of waste. Transformation activities reduced, reused or recycled more than 2.5 million kilograms of waste, with workers achieving a 2-year work period without a lost-time injury/illness.

The NNSA Best in Class winners move forward for consideration for the E-star awards (U.S. Department of Energy-wide) and the Green Gov awards (federal government-wide).

Employee newsletter to be distributed on-site

The Y-12 Times will no longer be mailed to employees’ homes beginning with the June issue. Instead, the newsletter will be distributed to employees on-site through Y-12 Plant Mail. Non-employees will continue to receive their copies via the U.S. Postal Service.

Distributing the publication through Plant Mail will save almost \$10,000 annually in postage costs. The reasons for discontinuing employee home mailings was twofold: to reduce the overall publication cost and to investigate whether the resulting savings could be applied to reaching a wider audience with site news.

The Y-12 Times will remain available on YSource and Y-12’s public website (<http://www.y12.doe.gov/news/times.php>). Employees are encouraged to share copies of the newsletter they receive on-site with family and friends. To opt out of receiving a paper copy at work, choose the “SAP” link from the YSource home page. Click “Human Resources” in the left menu, and choose “Home Info Update.” Make your change.

Publishing Communications’ Beth Eckerman compiled and analyzed the data for this productivity improvement initiative as part of her Six Sigma yellow belt project. Y-12 will continue to look at ways to reduce the newsletter’s cost and provide more site information to a broader audience.

CORRE UPDATE

Garry Whitley, former Atomic Trades and Labor Council president and Y-12 employee, has been elected to the Coalition of Oak Ridge Retired Employees board of directors, replacing Bob Keil who has resigned from the board after many years of service. The deadline for new nominations for 2012 to the CORRE board is June 1. Nominations may be sent to Mike Bradshaw, chair, nominating committee, at bradshawmr@bellsouth.net or 11324 Berry Hill Drive, Knoxville, TN 37931. More information on the nomination process is available on the CORRE website: www.corre.info.

Long-time CORRE board member Pete Lotts has changed his status from regular board member to advisor. He also has relinquished his position as chairman of the government relations committee. The board appreciates his service.

CORRE has established a new committee to look at health care issues that could impact Oak Ridge retirees.

Watch for the CORRE booth at the Secret City Festival in Oak Ridge June 17 and 18.

CORRE is made up of retired employees of the U.S. Department of Energy’s managing contractors in Oak Ridge. —Submitted by Judy Kibbe, CORRE Communications

Air America: Honoring heroes



Y-12's Eddie Warren (left) and veteran Joe McCloud are greeted by the many people welcoming the veterans back to Knoxville.



About 50 Y-12 employees greeted the veterans upon their return to McGhee Tyson Airport.



Seventeen-year-old Alyssa Novak, daughter of Y-12's Denise and Tom Novak, also assisted the veterans.

As you celebrate Memorial Day, take a few minutes to remember why we have this day. Recently, Eddie Warren of Quality Assurance spent the day with many World War II and Korean War veterans on an HonorAir flight. The non-profit Honor Flight Network transports America's veterans to Washington, D.C. to visit the memorials dedicated to honor their service and sacrifice. Warren, who assisted the veterans in having a safe experience, shared these thoughts.

April 2: Meeting the veterans

We were the first to arrive at the pre-flight briefing to meet the 140 veterans. My 20-year-old son thought I was nuts to be there so early for a meeting about the HonorAir trip to Washington, but I didn't want to be late for the briefing. I can't think of a group of Americans I have more respect for than our combat veterans.

April 13: The flight

I arrived at McGhee Tyson Airport 15 minutes early. Soon the veterans began to arrive and assemble with their teams. Some appeared anxious, others apprehensive. But above all, there was an air of confidence. After all, these men and women had been deployed to far more serious objectives before.

I found my three guys. Mr. McCloud was a Navy security gunner on a transport in the Atlantic and Pacific. Mr. McClain was a B-24 bomber pilot who flew 47 missions over Europe. Mr. Rutherford was in the infantry in Korea and Vietnam.

As the bus came to a halt at the World War II memorial site, the mood grew quiet. There are 4,064 gold stars arranged on the granite wall, one star for each 100 Americans killed in World War II.

The bus ride to the next stop was quieter. We entered the long straight road — flanked by white markers in rigid military formation — that passes through Arlington National Cemetery en route to the Tomb of the Unknown Soldier. I didn't hear a whisper as we passed the fields of white stones, 330,000 of them, until we stopped at the Tomb. There were about 400 people assembled to see the wreath-laying ceremony and the changing of the guard. My B-24 pilot said to me he would never be able to see through this crowd. I had to do something, so I found a security guy and told him we had 10 World War II vets in wheelchairs from Tennessee who would really like to see. In a few minutes, the security guy returned with some others who made room for us on the front row. I was not prepared for the bugler playing taps. When I noticed the vets around me winking tears from their eyes, that did it for me and I teared up, too. A few left before and during the playing of taps, one of my vets among them. He later told me he had already heard it too much.

Once we were back on board the bus, we were off to Reagan National. We hit the runway at McGhee Tyson on schedule. As we made the last turn to leave the terminal, we were greeted by about 500 fellow East Tennesseans, including more than 50 Y-12 employees and their family members. What a fitting end to such a special day for some well-deserving American men and women.



Y-12 THROUGH THE DECADES

into the 1960s



Throughout the 1950s and into the 1960s, Y-12 continued to expand its metal-working capabilities. By the 1960s, the turning machines and milling machines were becoming some of the most accurate metal-working machines in the world. Extremely close tolerances for machining nuclear weapon components required it.

This growth in metal working was happening along with the major project to separate lithium-6. The COLEX (column exchange) process occupied Buildings 9201-4 and 9201-5, two of the largest buildings at Y-12. The multiple mission approach was becoming the way of Y-12.

It was not unusual to see Y-12 engineers beginning to travel to machine tool manufacturers and providing them personal guidance regarding the specifications required for the equipment being purchased. While this practice continues today, the early years saw giant strides made in metal working because of Y-12's influence in the industry.

In the late 1950s and into the 1960s, an accelerated program of providing technical information and assistance to industry interested in uranium salvage and recovery operations began. Y-12 was among the few places where such processes had been developed.

On June 16, 1958, the world's first industrial criticality accident happened at Y-12 in Building 9212. Eight workers were exposed to radiation. They quickly evacuated the area, limiting their exposure. However, they were hospitalized and struggled with radiation related health issues for several months.

The Critical Experiments Facility located just south of Y-12 was used to duplicate the exposure and determine how much radiation the workers were likely to have received. There were no fatalities, and the eight people returned to work, but this accident resulted in increased emphasis on engineered solutions to criticality safety issues.

Handling special and hazardous materials requires the discipline that comes with understanding and respecting these materials. Y-12 remains a primary leader in criticality safety, and today, criticality safety remains a main component of Y-12's safety program.



Top right: Jig borer; top left: gas cylinders at mechanical testing department; middle: general machining area; and bottom: 750-ton press (one of Y-12's early presses).



Around Y-12 ...

- Ambassador Carey Cavanaugh, director of the Patterson School of Diplomacy and International Commerce at the University of Kentucky, and a group of his students visited Y-12 and Oak Ridge National Laboratory April 13 to learn about Oak Ridge's global nuclear security missions. "The discussions at Y-12 and ORNL built directly upon issues they had analyzed in class — nonproliferation challenges, border security, international scientific cooperation and how to meet future energy needs," Cavanaugh said. "Gerald DeVault's presentation on the vital role played by Y-12 in the collection and storage of HEU from around the world, coupled with visiting the plant and seeing the protection offered by the HEUMF (Highly Enriched Uranium Materials Facility), let our students truly understand the enormity and complexity of this undertaking."
- Y-12, which is managed and operated by a team from Bechtel National and Babcock & Wilcox Technical Services, received runner-up in Bechtel's 2010 Project Management Excellence Awards. Five worldwide Bechtel projects were evaluated, and this is the first time the Y-12 site was considered. "This recognition is a testament to the phenomenal amount of work accomplished last year at Y-12," said John Howanitz, former senior vice president of Transformation and Projects at Y-12.
- Y-12's Steam Plant Life Extension Project received the Secretary of Energy's Project Management Improvement Award. The \$61 million project, which resulted in the completion last year of a new highly efficient gas-fired steam plant at Y-12, was one of three U.S. Department of Energy projects receiving special recognition for excellence in project management. In a recent ceremony, Energy Secretary Steven Chu presented the award to Anna Beard, Y-12 Site Office senior project director; Robert Spurling, B&W Y-12 project manager; and YSO Deputy Manager Dan Hoag, who received the recognition on behalf of the overall Y-12 federal/contractor project team. NNSA Deputy Administrator for Defense Programs Don Cook said, "The special recognition for Y-12's Steam Plant Life Extension Project demonstrates our commitment to improving the way we do business where we work to invest in a modern nuclear security enterprise."
- The Oak Ridge Metrology Center recently received continuing accreditation for specific parameters in Calibration Laboratories. This certification was granted by the National Voluntary Laboratory Accreditation Program. NVLAP is a voluntary, fee-supported program to accredit laboratories that are found competent to perform specific tests or calibrations or types of tests or calibrations. This program provides an unbiased third-party evaluation and recognition of performance, as well as expert technical guidance to upgrade laboratory performance. ORMC serves as a unique resource to the National Institute of Standards and Technology and provides calibration services that are traceable to NIST standards in 29 measurement disciplines. ORMC also is accredited under the NVLAP Accreditation Program in 12 of those measurement disciplines.
- Y-12 was the largest corporate sponsor for the third annual Mothers Against Drunk Driving Walk in Knoxville April 16. Y-12 donated \$1,000 to the cause, helping the Knoxville MADD Walk organizers reach their contribution goal. "Thanks to all of you who braved the cold, wind and mud to come out and walk for a good cause," said Candice Smith, Y-12's team captain. "You have shown dedication to a lifesaving mission."
- Y-12 employees honored Earth Day April 20, by learning about the Y-12 Pollution Prevention Program, Y-12 Energy Management and green janitorial display. Employees were reminded to reduce, reuse, recycle and conserve energy and water every day.



MAY 60 years

Production: James E. Thompson Jr.

44 years

Classification: Wendell W. Jones

42 years

Engineering: Lonnie E. Cochran

Projects: Samuel D. Babb

Resource Management: Bill A. Shipwash

41 years

Document and Property Management: James D. Huddleston

Quality Assurance: Harold E. Warrington

40 years

Document and Property Management:

Edwena L. Crowe

Production: James G. Vandergriff

35 years

Accounts Payable, Travel, and Treasury:

Linda A. Neal

Communications Services: Karen M. Dixon

Engineering: Calvin T. Peters

Plant Services: Larry D. Noe

Production: Donald G. Dickey, Hugh D.

Hubbs Jr., Karen S McIntosh,

William T. Northcutt III and Ronald S. Smith

Quality Assurance: Ronald R. Wilson

Resource Management: Gary M. Bolin, Terry

M. Hitson, Wilbur A. Sims, and Richard E.

Woodward

30 years

Benefit Plans Management: Talanda A.

Dobson

25 years

Production: Frederick L. Lawson

20 years

Budgets: Sheree L. Lollar

Engineering: Stephen D. Conley

Information Technology: Charles K. Carter Jr.

Nuclear Materials Control and Accountability:

Connie M. Turner

Production: Floyd W. Gibson, Dan M.

Reichert and Ginger H. White

Program Planning: Patricia B. Helms

Quality Assurance: Kathleen M. Vermillion

Radiological Control: Mitchell S. Ammons

and Michael D. Murr

Sustainability and Stewardship:

Bradley K. Mattie

In memoriam

Bill Phibbs of Facilities, Infrastructure and Services passed away March 20. He was a member of IBEW Local Union 270. He had 17 years of company service.

His co-worker and friend Mitch Burnett said, "I found Bill to be extremely intelligent and full of life. He had a great sense of humor and was a lot of fun. He could also work out complicated problems with ease and could take any project and produce great results. I will miss Bill most because he was a good friend."

Jerry Baker of Production passed away April 4. He had 15 years of company service.

This employee is listed as a member of the organization in which he last worked.

Y-12 offers condolences to his friends and family.

Secret City Festival

June 17–18

Oak Ridge

secretcityfestival.com

(B&W Y-12 is the largest
corporate sponsor)

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Y-12 President and General Manager Darrel Kohlhorst, left, and UT-Knoxville Chancellor Jimmy Cheek sign a Memorandum of Understanding at the Partners in Technology Forum April 6 at Y-12's New Hope Center. Standing behind from left to right are Ted Sherry, manager of the National Nuclear Security Administration's Y-12 Site Office, Kevin Greenaugh, director of NNSA's Office of Military Application and Stockpile Operations, and Wes Hines, University of Tennessee.

Partnership moves technologies into the marketplace

Y-12 signed a Memorandum of Understanding with the University of Tennessee April 6 with the goal of pushing more technologies into the private sector and expanding collaborations in areas ranging from joint research to analyzing business operations. The partnership combines the leading research talents of the university with Y-12's successful track record in technology development and application.

"Research is critical to our mission and seeing this research used on the shop floor is very rewarding," said Darrel Kohlhorst, Y-12 president and general manager. "Y-12 and UT share that belief and are committed to investing the resources to establish real, sustainable opportunities and successes."

"The University of Tennessee-Knoxville and Y-12 already enjoy a strong partnership and with this agreement it will become even stronger," said Chancellor Jimmy Cheek. "I

am personally committed to bolstering this relationship and look forward to possible opportunities in the development of joint research projects, appointments and even centers for excellence."

More than 100 researchers from UT and Y-12 exchanged ideas and experiences during the April 6 half-day tech forum. Also on hand to voice his approval of the partnership was Kevin Greenaugh, director for Military Application and Stockpile Operations at the National Nuclear Security Administration. While the Department of Energy and NNSA advocate close collaborations between universities and its sites, typically such agreements are between the national laboratories and universities. Y-12 and UT are breaking the mold by striking out to form a relationship between an NNSA production site and a major research university.