

the Y-12 times

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

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Y-12
VPP

Safety for life

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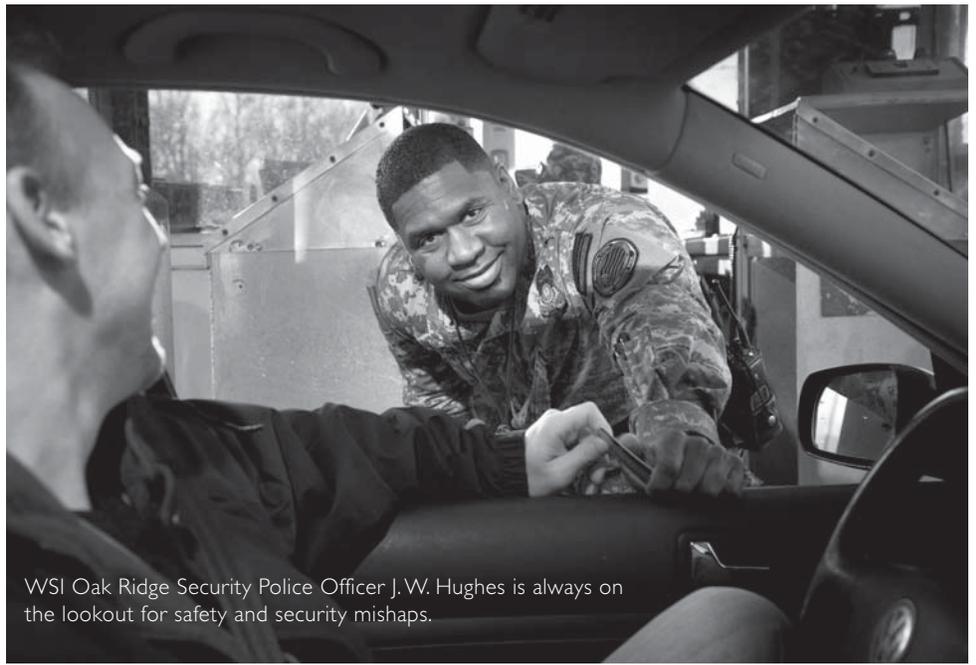
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WSI Oak Ridge Security Police Officer J. W. Hughes is always on the lookout for safety and security mishaps.

BE ALERT and save a life

The Voluntary Protection Program encourages Y-12 employees, management, agencies and subcontractors to look out for one another. A major component of the program is simply paying attention to co-workers and the work site.

J. W. Hughes, a WSI Oak Ridge security police officer, reported for duty in late December expecting a normal day. As employees entered the guard post, he noticed one employee broke routine procedures. Hughes recognized the employee and knew something wasn't right.

"I asked him to perform a step and he just repeated what he had already done," Hughes explained. "Then I realized his hand was increasingly shaking harder. Something told me it wasn't just nerves."

Hughes asked him questions and notified the other security police officers and supervision. Y-12 Fire Protection Inspector Lee Scofield was dispatched to the scene. After his assessment, the 24-year-old employee was rushed directly to Oak Ridge Methodist Medical Center.

Yulonda Wilson, the employee's resource lead, met him there and followed the next emergency transport to UT Medical Center.

"The doctors said that the quick response from Y-12 saved his life," Wilson said. The employee is undergoing treatment and recovering from his stroke-like symptoms.

"It was obvious that something was wrong," Scofield said. "We simply try to provide as much patient care as possible and get patients to the closest medical facility as fast as we can."

Hughes' unit has weekly safety meetings and is continuously told to be alert. "It's important to know your surroundings. If something's not safe, you notify someone. It's a pretty simple thing to take into consideration every single day," he said.

Steve Little, vice president of Facilities, Infrastructure and Services, said, "VPP begins with the individuals; we need to look out for one another. I commend everyone involved."



WSI Oak Ridge security police officer J. W. Hughes

VPP in action

Employees know a thing or two about the Voluntary Protection Program (Safety for Life) — what it is and why Y-12 is pursuing it — but it can be difficult knowing how to put the program into action. Recently, two employees went out of their way (and outside their job duties) to resolve a safety issue.

As painters Ed Ragsdale and Lance Foster entered the west end through Post 33, they noticed Brian Hutson and George Renfroe flagging them down. They were guarding an uncovered manhole, and while Hutson and Renfroe tried to find the appropriate personnel to fix the problem, they needed someone to stand guard to prevent any accidents. Ragsdale and Foster not only guarded the hole, but they also retrieved a forklift and used it to put the cover back on.

“People walk in this area, often when it’s dark outside. If it had remained exposed, it could have caused some major problems,” Ragsdale said.

Foster, a recent apprentice program graduate, has always looked up to Ragsdale when it comes to safety. “If he sees something wrong, he gets it fixed,” Foster said.

Foster tells of a time last summer when Ragsdale witnessed a leaking concrete truck driving inside the plant. Instead of looking the other way, he alerted the proper person and got it fixed before any safety issues or site damage occurred.

“Acts like these are exactly what VPP is about,” said Wade Ray, Maintenance Execution director and VPP committee member. “Safety is everyone’s responsibility. The attitude of the painters shows that employees understand VPP and the change in the safety culture here at Y-12.”

Ed Ragsdale (left) and Lance Foster put Safety for Life in action when resolving a safety issue created by an uncovered manhole.



..... VPP culture at Y-12



For more than a year, Y-12 employees have been pursuing Safety for Life as part of the Voluntary Protection Program journey. This journey is never ending, and judging by employees’ actions, they’ve agreed to Safety for Life.

“Employees recognize that safety is a part of the culture at Y-12,” said Sam Lariviere, VPP facilitator. “Each week, the VPP Champions Committee hears about circumstances where employees reported something because it didn’t look right or seem safe. By employees taking ownership, we are reducing hazards.”

Two such examples are shared in this issue of *The Y-12 Times* (see pages 1 and 2), but successes have been shared for a while. In May 2011, an employee team notified the VPP Champions Committee that a portion of the sidewalk near Building 9995 was beginning to collapse. The issue was addressed and the sidewalk repaired. In December 2010, the VPP kickoff event was rescheduled due to weather causing the plant to close. Dale Stewart of Safety said, “When inclement weather is imminent, Y73-006, *Inclement Winter Weather Planning, Response, and Recovery*, is put into action.”

While the official VPP journey began in January 2011, assuring safety has been a focus for more than a decade. Various tools — Integrated Safety Management, Behavior-Based Safety, Enhanced Floor Surveillance, Human Performance Improvement and employee teams — have been used throughout the journey.

“Safety has always been a value at Y-12,” said Bill Reis, vice president of Environment, Safety and Health. “VPP recognizes a culture where employees keep each other safe through a questioning attitude and zero tolerance for error-likely situations. Our employees are constantly working to strengthen this culture.”

Lab technician Jennifer Lemmons dons the proper personal protective equipment before beginning her job.

Operational discipline: Pay attention!

Brig. Gen. Sandra Finan (USAF), principal assistant deputy administrator for Military Application at the National Nuclear Security Administration, visited Y-12 Feb. 6, using an hour of her day to address operational discipline with more than 250 employees.

Highlighting her points with humorous videos underscoring the importance of paying attention and working properly, Finan shared four core tenets: The right way every day; details matter; courage in action; and individuals make the difference. These objectives, which can be tied to our Voluntary Protection Program Safety for Life journey, are what help us meet NNSA and Y-12 missions.

The right way every day is the only way: “Rules are there for a reason,” Finan said. Employees must know and understand requirements, guides and checklists. “Don’t take shortcuts,” she said. “That’s when you get in trouble.” And work the right way even when no one is looking.

Details matter: There’s no second chance to do the job right when nuclear weapons are involved, Finan reminded the audience. “Perfection is the product,” she said. She shared a story from a national laboratory where valves on a piece of equipment had been repositioned, but workers failed to do a pre-operational check, as required by procedures, resulting in a worker suffering second-degree burns.

Courage in action: Finan encouraged employees to make their voices heard, letting others know of facts they believe need to be considered, and stopping co-workers from violating procedures. “Quite often, courage in action is the hard road. Step up when you see something’s not right,” she said, even if it’s your boss.

Individuals make the difference: Finan explained that while meeting our missions, we must watch out for one another. “Leaders are responsible to take care of the individuals — never walk by a problem,” she told the audience, which was made up largely of managers and supervisors.

She also encouraged listeners to apply these principles beyond the workplace. “Take operational discipline home with you,” she said.



During her Feb. 6 visit to Y-12, Brig. Gen. Sandra Finan told employees their work is “very important to the nuclear deterrent and a key piece of our nation’s future.”

Inventory changes save \$1 million

By taking a fresh look at federal requirements and modernizing the inventory process, Y-12’s Property Management organization saved more than \$1 million on accountable property inventories in fiscal 2011. The effort was part of a Governance Transformation initiative to use technology solutions and commercial standards when possible and to ensure that work processes don’t exceed requirements.

Accountable property is anything that must be uniquely controlled under B&W Y-12’s contract with the government. Based on contract requirements, Property Management reduced the items categorized as accountable property and made use of technology and statistical analyses to streamline the inventory process.

For example, a screen appears periodically during computer startup requiring users to identify the location of computer equipment. That “ping” is now counted as an inventory of the equipment. Similarly, when a repair is done to a piece of equipment or vehicle, the repair data are captured and used by the inventory system — so this “touch” by a repair person counts as an inventory of the item. Employing statistical sampling further reduced the number of items requiring a typical physical inventory, going from more than 21,000 items to around 3,000, a decrease of 85 percent.

“The inventory steps implemented help bring the site more in line with private industry,” said Lyle Bennett from Business Services and Performance Assurance. According to Bennett, recent changes follow proven standards for property management set by two principal standards organizations, ASTM International (formerly American Society for Testing and Materials) and the American National Standards Institute.

Gavin Thomasson, Quality Control Inspection and Testing, knows firsthand how beneficial the changes are for property custodians. “In addition to reducing our accountable property items, the move to statistical inventories is a huge improvement,” Thomasson said. For the most recent inventory, Thomasson’s group was asked to do a random physical inventory of five items, compared to some 200 items in previous inventories. It took only minutes to complete, saving time and money.

Keeping Y-12 *green* in 2012

Since the late 1980s, Y-12 employees have been preventing pollution at the site. The Pollution Prevention Program started during that time and morphed into the Sustainability and Stewardship Program. In 2012, Y-12 celebrates the renewal of its Tennessee Pollution Prevention Partnership green flag, a symbol that the site is a recognized leader in environmental protection and pollution prevention. Members of the Sustainability and Stewardship Program of Facilities, Infrastructure and Services look forward to another outstanding year in minimizing waste and avoiding costs.

“For 2012, we have more than 80 additional pollution prevention projects planned,” said Aprell Patterson of Pollution Prevention. “We are pursuing various recycling activities that are in the planning stage with some in the implementation stage.”

Patterson said, “Since 1993, Y-12 has completed more than 1,128 pollution prevention projects, including ongoing recycling projects that resulted in eliminating more than 2.04 billion pounds of waste. It’s estimated these projects created a cost avoidance of more than \$67.3 million.”

Sustainability and Stewardship Program Manager Jan Jackson said, “By removing the unneeded materials, chemicals and equipment, we improved operational efficiencies, housekeeping, safety and security issues.

“Approximately 74,000 square feet of rad areas were downposted that can now be used for other mission critical tasks,” she said.

“Every employee has played a role,” Jackson said. “We look forward to reducing even more waste this year.”



Reliable Workers

Many Y-12 employees, especially those with regular access to the site’s special nuclear material, participate in the U.S. Department of Energy’s Human Reliability Program, which holds them to the highest standards of reliability and physical and mental suitability.

Seven years into the program, Y-12 has amassed data from conducting more than 14,000 HRP medical and psychological evaluations. Dr. Russ Reynolds, Y-12’s lead staff psychologist, noticed a way in which Y-12 could use that data to potentially refine the HRP process for all DOE sites.

“If we had the time and resources to look at Y-12’s wealth of information, we could discover if we were identifying indicators of safety and security risks. And, if so, which parts of the HRP certification process are giving us most of that information?” Reynolds said.

Working with researchers from the University of Tennessee, Kent State University, DOE Headquarters, and the Defense Personnel Security Research Center, Reynolds developed the Predictors of Emergent Risk and Integrity Lapses, or PERIL, project to answer those questions.

Ultimately, Reynolds and his team hope to use the data both to validate HRP and identify ways to improve the process for all DOE sites.

“Y-12 plays a critical role as DOE looks to improve HRP,” said Dr. Michael Ardaiz, chief medical officer of DOE’s Office of Health, Safety, and Security and a co-investigator on the PERIL project. “Y-12 has sufficient personnel to generate meaningful statistical analyses. It also has mental health subject-matter experts and research affiliations — that’s a winning combination.”

Keeping watch 24/7

Y-12's Utilities Management stationary engineers report to work no matter how slick or cold it is outside.

Utilities provides and regulates industrial gases across the site. It also operates and monitors pumps, fans, air compressors, refrigeration chillers, cooling towers, and various types of water. Stationary engineers — also referred to as utility operators —

maintain those various systems across the site, many with manual adjustments.

“With some systems, the temperature has to stay within two degrees at all times, so we manually open or close the valves to keep it steady,” said utility operator John McGaha. “If we don’t, it could take hours or even a week to get it back up, recertified and operational, which of course takes valuable time and money.”

Some operators are assigned to specific areas or watch stations, maintaining the systems of one or more buildings. “Utilities supports everything that has anything to do with the basic function of a building,” explained utility operator Chuck Hickman.

As temperatures drop outside, utility operators get even more meticulous. If chill water or steam were to collect and freeze, the consequences would be great. Not only would the water supply be affected, but so would the heating and air units and each system on site.

“We keep an extremely close eye on the water supply lines and steam traps during the winter months. It’s something most employees don’t think about, but we’re always here maintaining this stuff behind the scenes,” McGaha said.



Utility operator Chuck Hickman ensures that system levels are stable.

Graham's efforts recognized locally and regionally

One accolade after another came Tammy Graham's way in the first two weeks of December 2011.

In mid-December, Tech 2020's Tennessee Valley Technology Council named Graham, Y-12's Technology Transfer manager, one of two Tech Commercialization Champions of the Year. During its annual Navigator Awards Ceremony, Graham was lauded for her work in creating and developing Y-12's Xpress Terms Licensing mechanism. A streamlined technology transfer process, XTL accelerates the time it takes for a startup company to license technology developed at Y-12.

Earlier in December, Graham received news that she and Ron Simandl of Engineering had won the 2011 Excellence in Technology Transfer award in a competition sponsored by the Federal Laboratory Consortium Southeast Region. Their winning submission featured development and transfer of RonJohn® solvent, invented by Simandl, using the XTL license.

Graham has been involved in matching Y-12's technologies with small businesses for almost 15 years. During that time she has helped broaden Y-12's technology transfer efforts to include economic development through job creation, working to make contracting terms more palatable to entrepreneurs.

“2011 was a pivotal year in terms of our tech transfer philosophy,” Graham said when asked why she thought her work had recently caught the attention of observers near and far. “Our office had instituted some new approaches in both internal and external interfaces. Rather than thinking ‘Why?,’ we started thinking ‘Why not?’”

Graham developed the XTL concept and associated business terms and negotiated the sole commercial patent license in early 2011.



Y-12

*Through the Decades-
Late 1980s*

The late 1980s was a busy time for Y-12, with 8,000 people working to make as many nuclear weapon components as possible. President Reagan's ambitious Strategic Defense Initiative required a huge amount of nuclear weapon "secondaries," the part of the weapon containing special nuclear material, for nuclear tests and the ever-increasing number of warheads being added to the nation's arsenal.

At Y-12, the mission was clear. The nation was depending on us to help win the Cold War. The mutually assured destruction, or MAD, doctrine called on Y-12 to produce components at the highest rate of production ever seen here. The Soviet Union attempted to match Y-12's production rate one-for-one but could not do it.

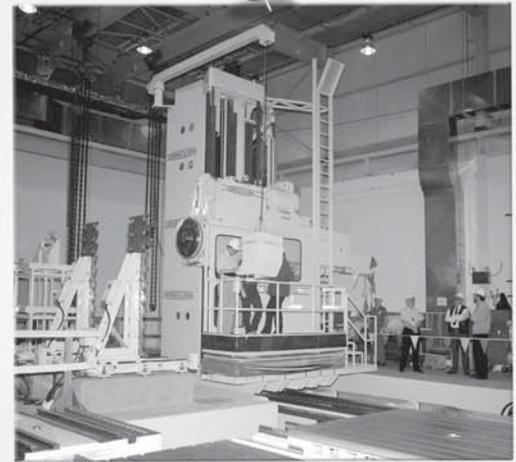
In 1986, the Computer and Automated Systems Association of Society of Manufacturing Engineers recognized Y-12 with a prestigious award for having the best computer-integrated manufacturing program in the nation. Y-12 has maintained that cutting-edge lead in manufacturing technology and even today has a gantry mill that is pushing the state-of-the-art in machining speed and depth-of-cut beyond anything seen before.

In 1988, the Navy requested help to machine the uniquely designed and very large propulsor for the Seawolf submarine, at the time the newest class of nuclear-powered submarines. Y-12 agreed to cut the contours required by the Navy.

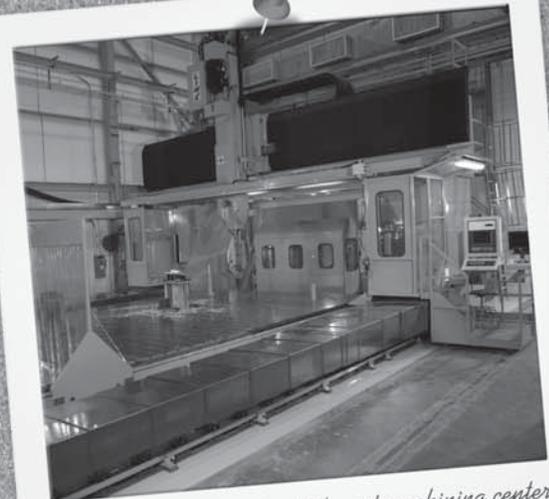
At first Y-12 was asked to make a 1/4-scale prototype of the propulsor. After that was completed, there was still no private industry that could take on the enormous task of machining the full-scale unit. Y-12 again agreed to do the work.

The fall of the Berlin Wall in November 1989 signaled the coming end of the Cold War, which occurred with the collapse of the Soviet Union between March 11, 1990, and December 25, 1991.

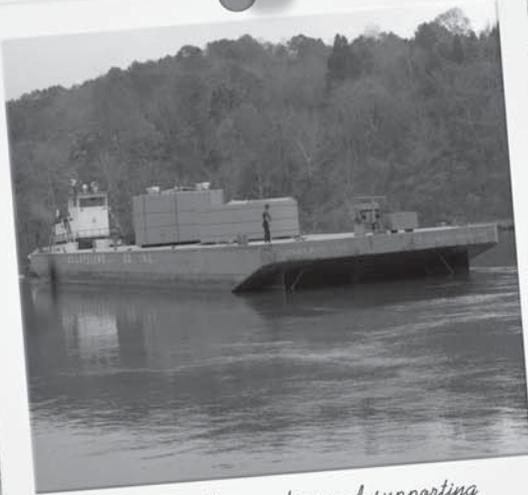
The precision manufacturing capability of Y-12 helped win the Cold War and served the nation's needs throughout the 1980s and continues to do so today. When it comes to precision machining, Y-12 remains second to no one.



A special vertical turning machine tool with computer controls was purchased and a building constructed around it, just for the Seawolf project.



Gantry mill. This state-of-the-art machining center demonstrates the large cut and fast turning speeds that can quickly machine materials.



The Seawolf propulsor and supporting materials were transported by barge down the Clinch River.



The Seawolf propulsor was wider than a truck bed and required delicate maneuvers just to transport it out of Y-12.

Around Y-12 ...

- **Are you ready for the Voluntary Protection Program on-site assessment?** Visit the VPP website (accessible from the YSource index) to help you prepare for the April 9–20 visit. On the website, you will find a list of frequently asked questions, review questions other assessment teams have asked employees at other sites and a list of what to expect if you are interviewed by an assessment team member. Contact Sam Lariviere (576-4905) if you have questions about the visit.
- **Congratulations to Y-12's Kevin Dyer of Program Management and Dave McGinty of the Y-12 Site Office who received the National Nuclear Security Administration's most recent quarterly awards for Defense Programs.** Dyer was recognized for ensuring all production work within the Stockpile Systems Program at Y-12 is accomplished on time and in accordance with program requirements. McGinty was recognized for his outstanding contributions in a recent effort to replace an enhanced laser gas sampling system with a new nondestructive laser gas sampling system at Y-12.
- **The Atomic Trades and Labor Council and B&WY-12 kicked off this year's combined March of Dimes campaign Feb. 9 for Anderson, Roane and Loudon counties by hosting a luncheon at Y-12's New Hope Center.** Bill Klemm, B&WY-12 senior vice president and deputy general manager, presented a \$20,000 check to MOD representatives as B&WY-12's and the ATLC's commitment to the organization.
- **State Sen. Doug Overbey, Sen. Randy McNally and state Sen. Becky Duncan Massey visited Y-12 Feb. 10.** The senators toured a laboratory at the New Hope Center. Senior Vice President and Deputy General Manager Bill Klemm and Dan Hoag, acting manager of the National Nuclear Security Administration's Y-12 Site Office, explained Y-12's work in nuclear weapons, nonproliferation and provision of fuel to the Navy and research reactors. Personnel from Y-12's Development Division explained research on aging and compatibility of materials as well as resources for radiation detection that support national missions in nuclear security and nonproliferation.
- **On Feb. 2, many Y-12 employees wore red in support of the American Heart Association's Wear Red Day and in recognition of February being heart month.** "It's great to see so many employees support this worthy cause," said Mary Benton, Health Promotion coordinator. "According to the Tennessee Department of Health, Tennessee was ranked third highest in heart disease deaths in the nation in 2005. We need to do what we can to improve these statistics."
- **Famed Manhattan Project photographer Ed Westcott celebrated his 90th birthday with friends from Y-12 and the Oak Ridge community.** The celebration for Westcott, the only employee authorized to use a camera when work began on the 1940s ultra-secret project, was held Jan. 30 at the American Museum of Science and Energy. "Without Ed Westcott's photographs, we would be at a loss in telling our history of Oak Ridge and the magnificent things that happened here," Y-12 historian Ray Smith said.
- **The B&WY-12 Community Relations Council recently added 14 members and elected a new chair and vice chair, bringing the total to 31 members.** For a list of the new members, visit the Y-12 website (<http://www.y12.doe.gov/news/release.php?id=268>). The new members were added as a means of reaching a broader area in East Tennessee.
- **LiveWise recently announced the Y-12 Couch-to-5K® Program, designed to get employees safely to the finish line and encouraging them every step along the way.** The program, open to all B&WY-12 employees, includes a training plan as well as weekly meetings to help accomplish the event's goal: completing the Secret City 5K April 21.



Admiral James Winnefeld Jr., vice chairman of the Joint Chiefs of Staff, received a tour of key facilities and briefings at Y-12 Feb. 6 as part of a two-day visit to Oak Ridge. Dan Hoag, left, acting manager of the National Nuclear Security Administration's Y-12 office, greets the nation's second highest-ranking military officer. Also pictured, left to right, are Van Mauney, vice president of program management for B&WY-12, and Bill Klemm, B&WY-12 senior vice president and deputy general manager.



MARCH

52 years

Financial Performance Assessment:
William R. Ragland

44 years

Quality Assurance: Joseph P. Konopka
Strategic Planning and Transformation:
Thomas E. Smith

43 years

Environmental Compliance: Sydney H. Coffin

42 years

Document and Property Management:
James A. McCleary
Material Management: Homer Gallaher
Production: Calvin L. Vowel
Quality Assurance: Carl E. Bennett Jr. and
Willie T. Thomas

41 years

Compensation Management: Dennis E. Ball
Production: James R. Ward
Program Management: Roger D. Keck
Projects: Eunice M. Hobbs

35 years

Analytical Chemistry: David D. Reid
Engineering: Arnetta H. Peters
Maintenance Support: Royce J. Stallions
Production: Freddy M. Bullock, Paul E.
Embleton, Estel C. Lane, David S. Miller,
Johnnie B. Moore, David D. Vann and
Rocklynn B. Whalen

Program Management: Dale M. Davis
Radiological Control: Robert J. McAlister Jr.
Resource Management: John C. Byrum,
William T. Gilkey and George M. Rimel Jr.

30 years

Document and Property Management:
Brenda S. Weaver Bailey
Emergency Services: Peggy E. Pope
Maintenance Support: Karen L. Lewis
Production: Robert M. Vaught
Resource Management: Jeffery E. Summers
Utilities Management: Michael I. Henley

20 years

Analytical Chemistry: Edker N. Daniel and
Mary C. Tucker-Watson
Training Management and Delivery: Sheila S.
Garrett

Voluntary Protection Program On-site Assessment

April 9–20

For more information, visit
the VPP website, available on
YSource.

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Matthew Melton of Facilities, Infrastructure and Services works on the roof of the Extreme Makeover: Home Edition work site. Melton was one of the many project volunteers from Y-12.

EXTREME MAKEOVER

As the Watson family of Knoxville prepared to see their new home, a project of the TV show “Extreme Makeover: Home Edition,” some of your co-workers were finally getting to see the results of their hard work.

Building a more than 4,000-square-foot home is difficult, but building it in seven days seemed near impossible. However, when the right resources meet thousands of willing volunteers, the impossible becomes possible. Not only was a new home built for Daniel and Mandy Watson and their three children, but also two duplexes for the nonprofit foundation they run.

“When I first arrived and saw how much needed to be done and the weather forecast, I didn’t think it would be possible,” said Doug Lawson, volunteer and Y-12 ironworkers and riggers supervisor. “It has made me believe that, if everyone works together toward the same goal, anything is possible.”

Gary Hagan, Environment, Safety and Health manager for the Uranium Processing Facility project, was also a part of the build. Among other things, he set roof trusses, framed doors and built decks during his three days of volunteering.

“All sorts of difficulties were encountered — from thunderstorms to mismatched materials — but the whole spirit of the project was that each person and team was focused on one job and you stayed until that job was finished,” Hagan said.

The television reveal will air in November. Although these two Y-12 volunteers couldn’t divulge too much information, they both said the house is beautiful. When the time comes, watch closely, because you might see some of your fellow Y-12ers.