

the Y-12 times

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

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Managing Editors

Amy Alley:
alleyab@y12.doe.gov
Heidi Spurling:
spurlinghw@y12.doe.gov

Layout/Design

Lisa Harris

Contributors

Ellen Boatner
Ken Davis
Kathy Fahey
Kathryn King
Jamie Loveday
Cindy Moffett
Brett Pate
Kate Shaw
Ray Smith
Donna Watson
Lisa Xiques

P2 efforts on right track Y-12 wins environmental stewardship awards

The Y-12 National Security Complex recently received several national awards for its pollution prevention (P2) efforts to create a greener environment and become a more sustainable site.

Y-12 won a White House Closing the Circle Award in the waste/P2 category, three U.S. Department of Energy Environmental Sustainability Star (or EStar) awards for reducing site environmental impacts and costs, and a Federal Electronics Challenge Bronze Award for improving Y-12's practices when purchasing, managing and disposing of electronics.

Y-12 was one of 15 federal teams and the only U.S. Department of Energy site that won a 2009 White House Closing the Circle Award.

Y-12's recent pollution prevention efforts include replacing Freon with a non-ozone-depleting solvent in chip cleaning operations (\$277,000 annual savings), implementing a new crusher operation for drums contaminated from radioactive waste (\$249,000 annual savings), turning legacy materials into usable products (\$16,000 savings), developing a negligible-residue cleaning cloth (SIMW_Y-PEST[™]) and reusing surplus materials.

In addition, by donating 1941-vintage tanker cars to the Southern Appalachia Railway Museum, Y-12 preserved historic items and kept more than 47 tons of metal from disposal as waste.

"Our Pollution Prevention Program has been recognized many times for its positive impact on Y-12 and on the environment," President and General Manager Darrel Kohlhorst said. "I am proud that Y-12 employees are good environmental stewards and that they have implemented programs to address the site's most serious environmental concerns. Congratulations to all those who have worked so hard for many years to make Y-12 green."

"These awards wouldn't have been possible without the help and support from the many Y-12 employees and organizations who help Sustainability and Stewardship achieve its mission," added Jan Jackson of Sustainability and Stewardship.

This is the second time Y-12 has won a White House Closing the Circle Award; the first was in 2006.



Two 1941-vintage tanker cars are pulled by one of Southern Appalachia Railway Museum's locomotives. By donating the tanker cars to the museum, Y-12 preserved some of its history while preventing tons of metal from being disposed as waste. The tanker car relocation represents one of Y-12's many P2 efforts for which the site received national environmental awards.

Permanent barrier replaces yellow boxes

The boxes of legacy waste that were temporarily relocated to Bear Creek Road to beef up security after Sept. 11 have been replaced by a permanent concrete and razor wire barrier. “The new barrier system enhances security and allows us to remove and dispose of 112 B24 boxes containing legacy low-level radiological waste,” said Stan Richards, project manager.

The 112 B24 boxes were inspected and moved to an interim staging area for characterization before being processed for off-site disposal. “There is currently enough funding to characterize and dispose of 50 boxes,” said Jan Jackson, manager of Sustainability and Stewardship. “The remaining boxes will be staged on site until additional funds are available.”

To make room for the new barrier system, the center median on Bear Creek Road that extends from the central portal to the Highly Enriched Uranium Materials Facility was removed and the south lane was widened.

“Daily coordination among Facility Operations; Environmental Compliance; Waste Management; Safeguards, Security, and Emergency Services; WSI-Oak Ridge; Maintenance; Construction; Engineering; and Project Management personnel throughout the project ensured the continuous integrity of our security profile,” said one project team member.

Maintenance riggers removed the boxes ahead of schedule and without incident. Direct-hire construction forces completed construction of the new barrier and modification of Bear Creek Road two months ahead of schedule, significantly under budget, and with no accidents.



A B24 box containing low-level radiological waste is seen being removed from the security barrier after preliminary characterization. Before off-site disposal, further characterization will be performed.

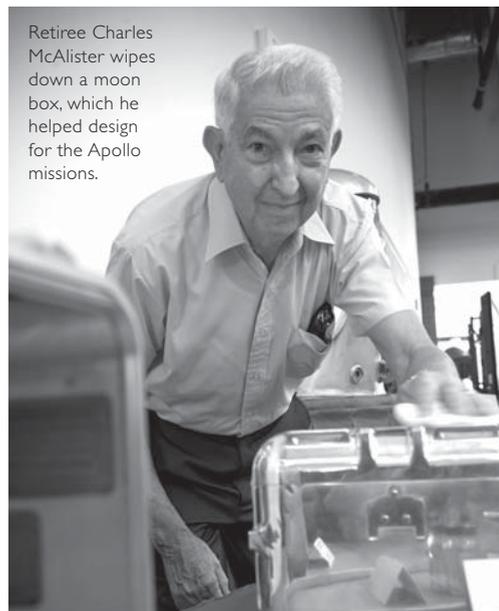
Retiree recalls cosmic memories

When astronauts first landed on the moon 40 years ago, part of their mission was to bring moon rocks and soil back to Earth for study. Because of Y-12's metal-working expertise, NASA asked Y-12 to supply Apollo Lunar Sample Return Containers, better known as moon boxes. The boxes were machined from a solid piece of aluminum and were seamless except for a lid opening with a metalized gasket. Four metal straps secured the lid.

Retired Y-12 engineer Paul Wilkinson remembers it was not an easy assignment. “The initial design was too heavy and the wrong color. We asked whether Apollo 11 would land in sunshine or the dark of night, and at first NASA didn't know. But that was important information. We had to protect the contents from boiling heat or freezing temperatures. We'd get a design approximately right, and they would tell us to go with it, and then whoops, they'd change their minds again.”

Six Apollo missions flew between 1969 and 1972, and they brought back a total of 842 pounds of lunar material, including 2,200 rocks, core samples, pebbles, sand and dust. The samples continue to be studied by various scientific groups around the world. Y-12 made several moon boxes over the years, and you can see one on display at the American Museum of Science and Energy and at Y-12's History Center at the New Hope Center.

Retiree Charles McAlister wipes down a moon box, which he helped design for the Apollo missions.



MEASURING SUCCESS one gauge at a time

Gauges, gauges—they're everywhere. Most of us watch the gas tank needle in our cars, and that's about it. But workers at the Oak Ridge Metrology Center (ORMC) know the importance of gauges of all kinds for monitoring operating conditions.

"We certify that measurement devices related to quality, safety or the environment are performing accurately," said Richard Jones, manager of the center.

With a jaw-dropping 26,000 items in the calibration program, ORMC has a lot of devices to test.

Thirty-five mechanical, electrical and industrial engineers and highly skilled crafts people work in the Dimensional Inspection Laboratory and the Physical and Electrical Standards Laboratory. The calibrators are especially versatile and may be asked to perform any test the laboratory handles.

The tests evaluate instruments that measure diameter and roundness, surface texture, hardness, voltage, moisture, temperature, weight, pressure and more. Accurate performance of coordinate measuring machines, for example, is essential to quality since 80 percent of all parts at Y-12 are measured on such a machine before getting a stamp of approval.

Calibration services provided by the center are traceable to National Institute of Standards and Technology (NIST) standards in 25 measurement disciplines.

"We provide what we've tested as NIST standards not just to Y-12 but also to other national and international government agencies and to private industry," said Bruce Cox, manager of Technical Support.

"The ORMC's high reputation relies in no small part on the expertise and commitment of our staff," said Jones, "and we will continue to implement innovative calibration technologies as we tackle new Y-12 missions, as well as work for others."



Machinist Al Griffith cleans gauge blocks before calibration. There are 26,000 items in the Oak Ridge Metrology Center's calibration program.

Protecting employees IS PRIORITY

The U.S. Department of Energy's (DOE's) evacuation procedures recently were highlighted in a *Knoxville News Sentinel* article ("If there's any debate, DOE opts to evacuate," May 6, 2009). In the article, columnist Frank Munger acknowledges "a considerable body of work that goes into emergency preparedness at the DOE facilities."

The focus of Y-12's Emergency Management program is to ensure maximum protection of employees, the public and the environment. "Our policy is that any actual or potential release of hazardous material will prompt an initial evacuation to avoid exposure of our employees," said Robert Gee, program manager with Emergency Management. "Evacuation is one of a number of protective actions we take to protect our workers."

Gee stressed the priority placed on protection of employees. "Evacuation is done in order to move our employees from an area of known or potential danger to a safer location," he said.

Considering the complexity and size of operations, evacuations are rare occurrences. "The bottom line is that, if we believe our employees are potentially at risk, we will take the necessary action to move them," said Gee.

Protective actions

- **shelter-in-place**—go indoors and shut off outside sources of air; this is the primary protective action in response to hazardous material releases
- **take cover**—seek refuge in a strong, sheltered part of the building
- **evacuation**—relocate to another on- or off-site location
- **lock down**—a population control measure to facilitate response
- **curfew**—remain within building (or nearest building if outside); this is a population control measure

Losing is winning

Forty members of the Analytical Chemistry Organization recently celebrated the successful conclusion of a 12-week “Biggest Loser” contest and a total weight loss of more than 400 pounds.

“We erased over 130 years of cumulative weight gain,” reported participant John Hoffarth. Seven people lost more than 10 percent of their body weight: Bob Wagner, top male loser, shed 14.4 percent of his; Chris Mayes, top female, dropped 10.2 percent.

The weekly routine for participants included individual weigh-ins and tallies of cumulative weight loss.

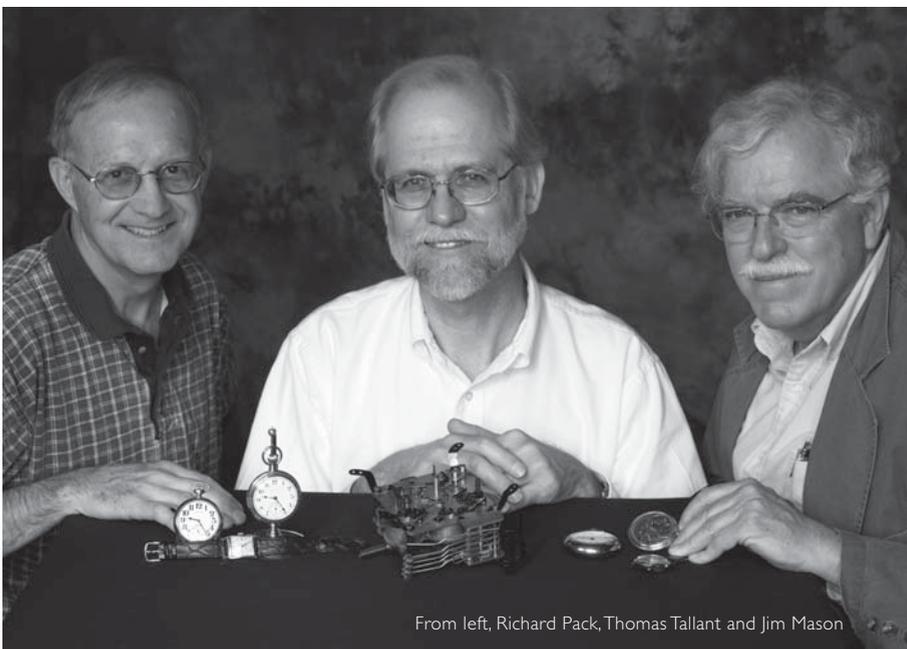
The weekly weigh-in was a major motivator. “It was a great opportunity to be accountable—to show some improvement every week,” said Wagner, who nixed cheese and sodas, drank more water and tackled the treadmill. “I sure feel a lot better than I did,” he said.

Mayes joined because she wanted to stay as young and healthy as possible.

A “5 Weeks to 500” contest is now under way for participants who want to either lose more or be held accountable as they try to maintain their goal weight.



Bob Wagner holds his trophy as the winner of Analytical Chemistry’s “Biggest Loser” contest. John Hoffarth (right) organized the contest for the group.



From left, Richard Pack, Thomas Tallant and Jim Mason

All in good time

Most of us use clocks to tell us when to come and go to work. But there are several Y-12 workers to whom clocks and watches are a time-consuming hobby.

Jim Mason (who works at Y-12 as a Science Applications International Corporation employee) has always liked things mechanical. He started with watches he inherited and has built a collection over the years.

Mason explains that watch repair requires experience taking things apart and putting them back together. It also requires magnifiers and very small screwdrivers and tweezers, plus other specialized tools. And, of course, the main requirement, Mason noted, is “patience.”

A couple of his favorite watches are a 1920s Sangamo Special by Illinois and a 1920s Bunn Special by Illinois in a see-through case (for a salesman to show off the works).

Richard Pack (Engineering) is not as involved in collecting as much as in building and repairing. He got his start learning to repair watches and clocks in his family’s shop. He began working on large pocket watches and progressed to repairing ladies’ wristwatches. Pack has built numerous clock cases and a few clock movements. He has a rolling ball clock and a gravity arm clock for which he machined all the parts, including the gears.

The skill required to develop the tools and machines to make and repair watches is parallel to some of the work done at Y-12 today, noted **Thomas Tallant** (Business Services). In addition to collecting and repairing watches, Tallant said he likes to think about “the technical achievements of the watch mechanism itself, which falls in line with Y-12’s being a center of precision manufacturing.”

Tallant said, “The American railroad watch was a laboratory-grade instrument, among the best time keepers in the world. And the watches were mostly mass produced.

“Watch collectors are preserving part of American manufacturing history,” he said.



Patterson's path to Y-12

Terry Patterson of Personnel Security is surprised to find himself at Y-12. He joined the military in 2005 when he was in 11th grade in Athens, Ga. He spent 12 months in Iraq and then had planned to attend Georgia Tech.

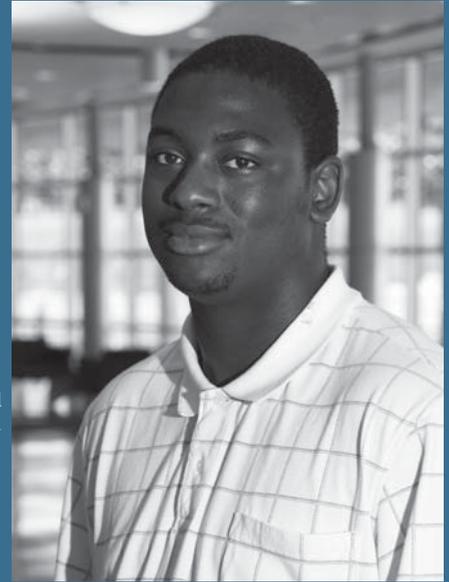
As he processed out of Iraq, he found himself talking to lots of people about the future. There were job counselors, U.S. Department of Labor representatives and company recruiters.

One counselor told him about the America's Veterans to Tennessee Engineers program and the STEM (Science, Technology, Engineering and Mathematics) program and gave him Kevin Smith's (Y-12 Site Office) card. "I had never heard of Y-12 or Oak Ridge," Patterson said, but he gave Smith a call.

Smith said Patterson was one of the initial STEM program selectees and is "off and running with both his academic degree and learning the Y-12 site. Terry is a very motivated veteran who has faithfully served his country. When he finishes his degree he will be ready to fill a full-time position."

Patterson, who is in the National Guard, is taking classes at Roane State Community College and will transfer to the University of Tennessee soon.

The Y-12 STEM program provides support to veterans by guaranteeing them a job during and after their completion of an engineering degree.



While the days are long with work, classes and homework, STEM participant Terry Patterson is glad to be a part of Y-12.



A sign for the future

Andy Henry is a Y-12 laborer with a second area of expertise: He designed and put together the new landscaping around the Y-12 entrance sign.

Brian Hutson of Facilities, Infrastructure and Services (FI&S) said that he is always looking for ways to improve the plant, so when Henry said he could design a flower bed to make the Y-12 sign look better, FI&S let him go with it.

"They let him design and take control of the project," said Keith Wilson of the Atomic Trades and Labor Council.

Henry has worked in landscaping for five years. He looked at the area, drew a sketch on paper and then finished the design by computer. Then he went to work digging and planting.

He chose a combination of color and greenery—daylilies, spirea, holly, nandina, crepe myrtle and juniper—to sculpt the bed. He designed the area with rounded edges to contrast with the square corners of the sign, and he included the flagpoles so that the bed flows over the entire area.

All the material used on this project was recycled from Y-12 except for the plants, which were purchased. The dirt came from the landfill and the potable water system upgrade project, and the mulch was made from recycled pallets and brush.

Henry has ideas for other areas of the site that could use some improvement, so we may see some more of his landscape art.

Designing and planting the flower beds around the Y-2 sign took Andy Henry about five weeks. The bed includes perennials that will continue to bloom year after year.

ASSIGNMENT: WASHINGTON, D.C.

David Beach, Brenda Hunter and Michael Thress have gone to Washington, D.C. All are on assignment to the National Nuclear Security Administration (NNSA) Headquarters and are providing expertise in their fields, funneling information and highlighting Y-12 capabilities.

Beach, from Technology Development, is technical adviser in the Advanced Materials Program of the Office of Nonproliferation Research and Development. The program focuses on discovering new materials for detecting radiation, and Beach is heavily involved in the selection of proposals to be funded. "I hope I'm able to convey that Y-12 can be an important player in nonproliferation," he said. "We have unique capabilities, access to nuclear materials, and the scientists and engineers to solve complex problems."

Hunter, who is in the Defense Programs Office, facilitates communication between Headquarters and both the Y-12 Site Office and Y-12. Her previous position as head of Internal Audit gave her experience in hooking up people to get the right information. Now her day includes many meetings that touch on the mission posture of Y-12. "It's exciting to put my hands into just about everything the site does," she said.

Making good use of his 23 years in weapons programs and production, Thress is a production plant technical advisor to the Office of Strategic Planning and Complex Transformation. His primary role has been to support the Uranium Operations Integrated Project Team in establishing Y-12 as the Uranium Center of Excellence. "My goal is to ensure that Y-12's capabilities are part of planning for the future of uranium production, research, use and storage," he said.

A reason to ride

Motorcycle riding looks like a solitary activity, but there's a lot of camaraderie involved, especially among Y-12 employees.

Theresa Hubbs, a captain with the Y-12 Fire Department, enjoys riding with other firefighters. "We spend a lot of time together at work, and getting out to do something fun bonds us together and makes good memories," she said.

Pam Layne, also a firefighter, agrees. She said, "Several of us ride together on trips on our days off."

Donnie Anderson of Facilities, Infrastructure and Services (FI&S) pointed out, "It's a good way to get to know fellow employees with similar interests."

"The people who ride are the real catalyst behind the sport," said Al Cate of Production.

There are other benefits to riding. Eric Garrison of FI&S said, "I ride to work whenever possible to save money on gas."

Scott Ammons of Environment, Safety and Health and W. B. Stephens Jr. and Mickey Woody, both of Production, like the advantage of being able to park near the gate.

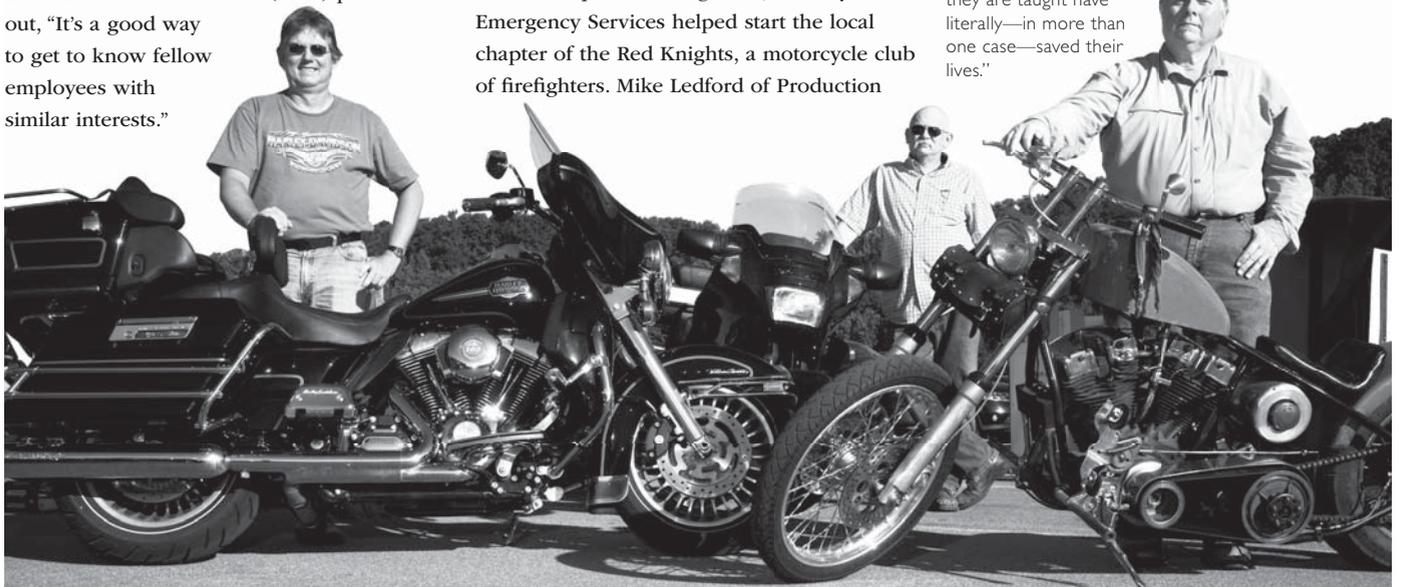
Ron Steward of Production is a member of the Kerbel Shriners Motorcycle Unit and participates in events to benefit area children.

Fred Tipton of Safeguards, Security and Emergency Services helped start the local chapter of the Red Knights, a motorcycle club of firefighters. Mike Ledford of Production

participates with this group. Every year they hold a Sept. 11 remembrance ride and give the proceeds to local volunteer fire departments.

Y-12 motorcycle enthusiasts have a variety of reasons to ride. The rows of shiny bikes in the parking lot prove it's a popular hobby.

Martin Davis (right, with Ron Steward, left, and James Harvey) is a certified motorcycle safety instructor. He has taught more than 3,300 students since 2000. He said, "It is extremely gratifying to help others and to know that the skills they are taught have literally—in more than one case—saved their lives."



Around Y-12 ...

- More than 600 visitors toured the Y-12 site as part of the **2009 Secret City Festival** held in Oak Ridge June 19 and 20. B&W Y-12 was the largest corporate sponsor of the festival.
- The **Oak Ridge Site Office** was the **highlighted site of the month** in the U.S. Department of Energy's June 2009 *Office of Environmental Management American Recovery and Reinvestment Act Newsletter*.
- The Y-12 National Security Complex and the University of Tennessee Center for Industrial Services Procurement Technical Assistance Center and several other East Tennessee agencies are sponsoring the **third annual East Tennessee Veterans Business Conference** at the New Hope Center, Aug. 4. The theme of this conference is "Increasing Opportunities for Veteran-Owned Businesses."
- Y-12's Health Promotions coordinator Mary Benton encourages employee teams to participate in the **Walk Across Tennessee** event, held through Aug. 31. Benton said, "We are encouraging everyone to get more exercise; it's important to your health and well-being." Contact Benton (health@y12.doe.gov; 576-7251) for more information.
- Join the Y-12 Stompers team and **Step Out: Walk to Fight Diabetes**. Your support will help the American Diabetes Association. The walk is Oct. 17 at The Cove at Concord Park. For more information, contact Donna Bennett (dfh; 574-5839).
- Trent Andes received the U.S. Department of Energy's Recognition Award for **outstanding contributions to national and global security**. As part of the Science, Technology and Partnerships organization, Andes leads the U.S.-Origin and Gap Nuclear Material Programs.

SERVICE



ANNIVERSARIES

JULY

44 years

Production: Harvey L. Stevens

41 years

Production: Millard N. Wilkerson Jr.
Quality Assurance: Ronald P. Allen

40 years

Compensation Management: Daniel D. Cottrell
Facilities, Infrastructure and Services: Victoria Steward and Garry M. Whitley

35 years

Applied Technologies: Edwin F. Babelay Jr.
Communications Services: John T. Maxwell Jr.
Facilities, Infrastructure and Services: Gordon K. Adkisson and Edward S. Bishop Jr.
Production: Thomas L. Feezell, Steve E. Garner and Paul Redmon

30 years

Compensation Management: Roberta A. Chin
Emergency Services: Perry D. Pruitt
Engineering: David B. Fielden, David B. Freels, Ronald H. Wantland and Hermie J. Waters
Facilities, Infrastructure and Services: Mitchell D. Tackett
Production: Jerry L. Gallaher, John M. Royster and Russell C. Woody
Quality Assurance: Scotty L. Griffith, Earl R. Hinton Jr., Samuel T. Kelley, Roger D. Lovegrove, Robert L. Luttrell, Harlan W. Lynch, Terry A. Shrader, Karen A. Sparks, Stanley L. Tilley, Ronald W. Tipton and Wayne B. Woods

Safety: Ronald A. Evans

25 years

Benefits Service Center: Lora L. Wilcher
Chief Financial Officer Division: Robert T. Whitehead
Engineering: Gregg S. Bass, Pamela B. Deathridge and Mary J. French
Environmental Compliance: Clarence C. Hill
Facilities, Infrastructure and Services: David Farmer and Sharon G. Mellon
Industrial Hygiene: Wayne O. Lawless
Information Technology: Paul M. Parris
Production: Lavonne D. Golden
Programs and Quality: Steven C. Laggis
Strategic Planning and Transformation: Michael G. Thress

20 years

Chief Financial Officer Division: Sandra G. Elliott
Communications Services: Larry D. Gibbs
Facilities, Infrastructure and Services: Pamela J. Blankenship, Iva J. Green, Johnny G. McCulley, Timothy S. Minga, Barbara J. Moles and Larry R. West
Industrial Hygiene: Kenneth G. Steele
Information Security: Owen J. Sheppard
Production: Fonda J. Hampton, Noble L. Sinor and Donald W. Turner
Radiological Control: Laura S. Oxley and Charles W. Smith
Security Systems Engineering: Michael D. Lowe

Yes

To celebrate all Y-12 employees, the Y-12 Employees' Society (YES) will be serving free snow cones and cotton candy in the Jack Case Center courtyard (near cafeteria) from 10:30 a.m. to 1 p.m. Aug. 12. Drop by, satisfy



your munchies and learn more about YES and the many activities, discounts and trips the group offers to employees.

In memoriam

Karen Graves, a chemical operator in Production, passed away July 7. She had 25 years of company service.

Supervisor Bill Ragsdale said, "Karen was a person with good family and work ethics. She had such a great sense of humor."

Volunteer Ministry Center Run and Fun Walk

Aug. 8, 8 a.m.
Volunteer Landing in Knoxville

Contact Elaine Warren
241-4541

Y-12 Employees' Society New York City Trip

Sept. 3-6

Contact Charlotte Schaefer
576-8908

Scheduled speakers

- Pat Summitt
Coach, University of Tennessee LadyVols
- Gen. Fred Roggero
Chief of Safety, U.S. Air Force
- Tom D'Agostino
Administrator, National Nuclear Security
Administration

Register at <http://ism.y12.doe.gov/>

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August is traditionally a hot month in Tennessee, but to members of the health and safety field, Aug. 24-27 will be even hotter when the Knoxville Convention Center hosts the 2009 U.S. Department of Energy (DOE) Integrated Safety Management Summit. B&W Y-12 is the principal sponsor of the summit.

"We're excited to be a part of this summit," said Paul Wasilko, Y-12 lead for the event.

Secretary of Energy Steven Chu is tentatively scheduled to attend, and many high-profile speakers are lined up. "Each speaker will have his or her own advice to offer on our theme of Reaching New Heights," said Wasilko. The theme demonstrates how workers are making efforts to take Integrated Safety Management to the next level by strengthening a safety culture through leadership, worker engagement and organizational learning.

"Several Y-12 employees are presenting at the summit. More than 120 abstracts for technical papers have been submitted, and 32 vendors have registered for display booths," Wasilko said.

The workshop is sponsored by the DOE Oak Ridge Office and the National Nuclear Security Administration Y-12 Site Office. In addition to B&W Y-12, corporate sponsors include Bechtel Jacobs Company, Oak Ridge National Laboratory, WSI-Oak Ridge, EnergX, Oak Ridge Associated Universities, Isotek Systems, Battelle and URS Washington Division.