

the Y-12 times

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

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WHAT TO EXPECT from the on-site assessment

U.S. Department of Energy Voluntary Protection Program assessors will visit Y-12 and conduct our on-site assessment scheduled April 10–19. Are you ready? You may have some questions about what to expect. What will the team ask? How can I prepare?

“Eight to 10 assessors from DOE Headquarters, as well as people from across the complex, will make up the team,” said Sam Lariviere, Y-12 VPP facilitator. “The team will validate our application as well as observe our operations in a non-intrusive way.”

While we don't know what will be asked of us, we can share how other sites' assessments have been conducted. “At other sites, the team scheduled interviews of management personnel based on the organization charts provided. We should expect the same here,” said Lariviere.

These interviews will be focused on how we achieve what we credited in our application. “The team will be asking questions such as ‘show me how you ...,’ and ‘do you use Integrated Safety Management,’” Lariviere said. You can view samples of recent questions on the VPP website, accessible from YSource.

Doug LeVan, a member of the VPP Champions Committee, said, “We expect the assessors to observe us in our work environment once we cross the ‘blue line.’” Employees should expect to be asked what they know about VPP, what VPP means to them and how they address job hazards.

“Employees might even be asked what they would change about their work environment and if they feel comfortable involving management in the issue,” Lariviere added.

“Just because you may not be a hands-on worker, you may still be questioned,” LeVan said. “An assessor may stop and ask an employee he or she sees in the hall or cafeteria.”

“One thing the assessors emphasized,” Lariviere said, “is that they aren't a typical assessment team; they will be at Y-12 because we have asked them to come.”

If you have questions about the on-site assessment, contact Lariviere at 576-4905.

Employees should expect the Voluntary Protection Program assessors to observe them completing any task — even using equipment in one of the LIFE Centers. Athletic trainer Jenny Jefferis shows Stuart Wylie the correct way to use the bicep curl machine.

Start-up firm licenses two Y-12 technologies



Y-12 President and General Manager Darrel Kohlhorst, left, discusses operation of the newly licensed technologies with Sustainable Environment Technologies President Dan Hurst, center, and Lee Bzorgi, right, Y-12 inventor.

A Knoxville start-up firm has licensed two Y-12 technologies that delay entrance to controlled-access areas. The technologies provide a security solution for potential markets, including commercial nuclear facilities, pharmaceutical manufacturers, and large sporting venues as well as other U.S. Department of Energy sites.

Sustainable Environment Technologies LLC, signed the licensing agreements for the Access Rate Control System and the Delayed Latching Mechanism on Feb. 8.

Both devices are in use at Y-12 and were invented at the site to fulfill a need for systems that delay access to secure areas without requiring electrical power.

The ARCS is a kit designed for installation on existing or new full-height turnstiles. It generates resistance and slows entry if someone enters at faster-than-normal speed. Exit speeds are unaffected.

The DLM delays the unlatching of gates and doors, requiring a sequence of actions that retract the latch. The delay gives security personnel time to prevent the door or gate from opening if necessary. Personnel inside the gate can operate the latch without the delay feature.

Both devices were invented by Lee Bzorgi, Y-12 senior technical advisor and National Security Technology Center director.

The new technologies illustrate Y-12's goal of finding innovative ways to solve problems and making sure those solutions are broadly available. "Once we know that something we have invented works, we want to make it possible for someone else to use it," said Darrel Kohlhorst, president and general manager. "It's our job not only to facilitate a license but also to work with the licensee to get it off the ground."



STATUS on Y-12 respirator work

ES&H Survey Results

- Ten percent were found to have contamination above Y-12 requirements.
- The contamination was identified as enriched uranium.
- Breathing tubes were the most contaminated population of respiratory protection equipment items with 24 percent above Y-12 requirements.
- Eight percent of the masks surveyed were above Y-12 requirements.
- All reconditioned tubes and masks above the Y-12 requirements have been removed.

A Y-12 radiological control technician found contamination Feb. 9 on laundered supplied-air breathing tubes that were expected to be clean and ready for use. Y-12 suspended all work requiring reconditioned respiratory equipment laundered by a specific off-site vendor.

Y-12's Environment, Safety and Health organization concluded a survey of all potentially affected equipment. More than 6,000 laundered/reconditioned respiratory protection equipment items were surveyed. All remaining masks are acceptable for use from a radiological standpoint. Because doing the survey required opening the sealed bags containing the equipment, antiseptic wipes are available for use by employees who may have sanitization concerns. Only new tubes will be used until further notice.

After reviewing all equipment results, prior year dose information, and other screenings to date, there remains no evidence that workers were harmed by the contaminated respiratory equipment.

Deliveries from the vendor in question have been stopped, and the vendor's contract is under review. Radiological workers who wear respirators are in the bioassay program and are evaluated routinely. Employees who have questions should send an e-mail to respirator@y12.doe.gov.

2011 A banner year for defense work

Y-12's primary mission has always been U.S. defense work. Fiscal 2011 was a banner year for these efforts. Thanks to several new technologies developed at Y-12, the site executed 400 percent more surveillance work than in fiscal 2010 and realized more than \$4 million in efficiency improvements.

Y-12 also made great strides in the Life Extension Program for the W76 Trident warhead, which was last manufactured in the 1980s. Years ago, surveillance identified aging components in the warhead, and a Life Extension Program was established in 2000 to keep the W76s in working order. Although specific goals and numbers are classified, Y-12's work on the Life Extension Program in fiscal 2011 reduced individual unit costs by 15 percent, and 5 percent more units were completed within the program's existing budget.

As for reducing the nuclear stockpile, Y-12 dismantlement operations used about \$2 million gained from site efficiencies to disassemble more than the planned total number of units, continuing a trend begun in 2006. The last dismantled unit from the W70 Lance warhead program was completed, removing a full weapon system from the stockpile. Y-12 also initiated dismantlement of the B53 and B83 bombs, some of the biggest weapon systems ever built.

Building on fiscal 2011's surge, Y-12's scheduled plans remain aggressive, including increased surveillance work and a projected 20 percent jump in Life Extension Program work for the W76. Y-12 also will continue dismantling B61 warheads as well as ramp up the dismantlement of B53 and B83 bombs.



Y-12 executed 400 percent more surveillance work in fiscal 2011 than in fiscal 2010. Monies from efficiencies helped accelerate other projects, and plans for 2012 remain aggressive.

'Making our presence known'

Even though work at Y-12 happens behind the fence, it is more important than ever for criticality safety professionals to work with colleagues and to take part in the wider community of nuclear criticality safety activities. At the American Nuclear Society Winter Meeting in Washington, D.C., professionals heard about different aspects of criticality safety activities being performed at Y-12.

A Y-12 engineer said, "The special sessions were significant because they gave us an international forum to showcase our talents. When others are aware of what we are accomplishing and what challenges we are facing at Y-12, and when we are made aware of challenges and achievements at other sites, networking opportunities are created that can benefit multiple sites and the DOE [U.S. Department of Energy] complex as a whole."

"We're making our presence known," said another engineer. "We learn from our colleagues, and they learn from us."

Y-12 criticality safety professionals engage in both operational and research areas. Y-12 presents unique operational challenges that have to be met by proven criticality safety engineering approaches but also by drawing on the most current research in the field. "It isn't just that a facility like the UPF [Uranium Processing Facility] will be state of the art; how we apply nuclear criticality safety in this facility must also be state of the art," the second engineer said. "This need for proven approaches and research applies to all nuclear facilities at Y-12, new or old."



Criticality safety professionals from all over the world take the best of scientific efforts, evaluate how that knowledge applies to proven criticality safety methods and develop improved techniques and approaches.

Current meets with future

Y-12 sent nearly 60 engineers to 50 regional schools in late February. Later that week, area schools sent some 370 girls to Y-12's New Hope Center. This wasn't a mass exchange of personnel. It was all a part of National Engineers Week.

Volunteers from Y-12's Engineering division traveled to area schools to promote engineering careers to America's next generation. Mechanical and Manufacturing Engineering's Drew Winder returned to his alma mater, McMinn Central High, to discuss his passion for engineering. "When I was growing up, I didn't know what engineers did or that they were needed so much," he said. "I want kids growing up where I did to know that they have this career path available."

Many of the volunteers received positive feedback from both students and teachers. David Linney, of Design Engineering, visited William Blount High, where he was "warmly received." He added, "The feedback was excellent, and one student told me afterward she wanted to talk to her dad about going into engineering as her major."

If the inaugural Introduce a Girl to Engineering event is any indication, that student won't be alone. The event welcomed more than 370 girls from 13 local high schools to NHC, where they mingled with Y-12 women engineers, guest speakers and exhibitors from the University of Tennessee and elsewhere. The girls had a chance to learn about pre-engineering curricula for high school, college planning, professional organizations, and the tangible rewards of an engineering career.

"Our students genuinely enjoyed the experience. They were talking about it non-stop to our teachers [when they got back to school]," said Oak Ridge High School Vice Principal Chris Scott. "We hope Y-12 will consider hosting the event again next year."



Top: Some of the more than 370 high school teens show off their engineering hard hats at the New Hope Center. Young ladies from schools all across East Tennessee spent the day at Y-12 Feb. 23 to meet and work with female engineers and scientists to whet their scientific appetites.

Bottom: Y-12's Carlos Houston (far right) takes advantage of the educational program Y-12 created with the University of Tennessee.



EDUCATION OPPORTUNITIES



Y-12 + UT = master's

Carlos Houston knew he wanted a graduate degree. He just wasn't sure which kind to get or where to get it. Then he heard about a new program Y-12 was creating with the University of Tennessee.

The new program, a master's degree in industrial engineering with a concentration in management, would offer classes in Oak Ridge on Fridays. "I was looking at Vanderbilt's program," Houston, a systems engineer, said. "But this one made perfect sense."

The graduate program is a product of Y-12 and UT's formal partnership. Y-12's UT Liaison Debbie Reed met with UT Program Coordinator Carla Arbogast and Rupy Sawhney, head of UT's Department of Industrial and Information Engineering. Working with Commercialization and Partnerships' Tom Berg and Ben Stephens, the group quickly adapted existing curricula to fit Y-12's needs.

"I couldn't ask for more," Houston said of the program. "It's been very good. The professors are considerate of the fact that we're all working 40 hours per week, and they've geared the curriculum toward the general work we do at Y-12."

Students and professors are already seeing concrete benefits from the program. "We've already had two student projects from our fall semester submitted for patent application at Y-12," said Lee Martin. "That's a revealing example of the value a program like this offers to Y-12."

Analytical Chemistry's Daniel Weller appreciates the personal benefits of the program. "It gives me an opportunity to get a master's degree without rearranging my work schedule, and I'll have greater career advancement opportunities" Weller said. "This program will give Y-12 people they can put into management positions who have both technical and managerial aspects. That's really valuable."



The path to education

Four years ago, Brandon Stooksbury thought he'd never get a college degree. "I had to withdraw from school due to being married and needing to work," recalled Stooksbury, who now works in Production. But then he attended a workshop at the Jack Case Center last year, where Roane State Community College advisors sit with Y-12 employees and figure out exactly what needs to be done to get them a degree. "I found out that I only needed two classes to graduate with an associate's degree," Stooksbury said.

Ben Stephens heads Y-12's Academic Partnership and Management program, which helped finalize a formal partnership between Y-12 and Roane State. "Roane State offers a path to get an associate's degree or to complete the first two years toward a four-year degree," Stephens said. "It's great for someone who is trying to get started." Stephens has worked with Roane State's Lou Rabinowitz, Jim McDaniel and President Gary Goff, who created "flexible, non-traditional course offerings" that fit Y-12 employees' schedules.

"Just giving the employees the opportunity to talk with college representatives, in a manner that's convenient to the employees because we are coming to them, has benefitted the employees," said Rabinowitz, Roane State's executive director of Workforce, Economic Development and Technology Programs.

It certainly benefitted Stooksbury. Further work with a Roane State advisor determined that Stooksbury actually needed just one more class, as he was able to get proficiency credit from prior work force experience. He is taking an evening class this semester and will graduate in May.

"My overall experience with Roane State has been great!" Stooksbury said. "I am just thankful for this opportunity to achieve my lost goal of graduating from Roane State with the help of Y-12."





CODE NAME:

PROJECT SAPPHIRE



Y-12 THROUGH THE DECADES—1990s

Y-12 progressed through the turbulent times of the early 1990s struggling to maintain its place in the Nuclear Weapons Complex. As downsizing began, some sites were completely shut down and their buildings demolished. Y-12, however, continued to operate.

In the early 1990s, the world grew increasingly concerned with the security of leftover Cold War nuclear materials in former Soviet countries. The United States and Russia addressed this concern head on in February 1993, when the U.S. agreed to purchase highly enriched uranium from Russia's dismantled nuclear weapons.

In 1994, a team from Y-12 and ORNL went to Kazakhstan on a secret mission known as "Project Sapphire" to retrieve a large amount of nuclear materials. This was the first mission to come out of the U.S.-Russian agreement, and its success soon led to a number of other similar efforts to ensure the HEU was located, purchased and downblended to a grade suitable for nuclear reactors, but not for nuclear weapons.

Then, on September 23, 1994, after a series of errors and increased oversight concern, Y-12 underwent its most dramatic operational shutdown ever. This infamous date began a series of events that is unsurpassed in the history of Y-12. The contractor hoped the action would send a message and regain the confidence of oversight officials and internal management, and that operations would quickly resume. However, they soon realized this was not a simple stop and start back up. Some processes at Y-12 did not restart for 10 years!

There are a number of reasons for the delayed restart, but the primary concern was something we now know as "conduct of operations," which Y-12 has since implemented more rigorously. The 1990s was a time of learning new terms, new thought processes and new relationships. But through it all, Y-12 workers continued to operate safely and securely and to meet the production demands placed on them.



Around Y-12 ...

- Join the Y-12 Gatekeepers team to raise money for the American Cancer Society by participating in the 1st Annual Bass Fishing Tournament at Ladd Landing in Kingston April 7 from 7 a.m. to 3 p.m. The event will be held rain or shine. See YSource for more information on the tournament and other upcoming American Cancer Society fundraising events. "No one is promised tomorrow, but without a cure, some are not even promised today!" said Y-12 Gatekeepers team captain Jan Mincey.
- Are you working on the Voluntary Protection Program Roadmap activities? If you complete the activities and have your roadmap validated by the VPP Champions Committee by close of business April 30, you will receive a \$50 Visa gift card. Remember, the roadmap is our employee involvement piece of the journey, Safety for Life. See YSource for more information.
- The Atomic Trades and Labor Council's annual golf tournament will be held at Centennial Golf Course May 12 beginning at 8:30 a.m. "The tournament provides us a chance to get to know our contractors outside of the workplace, and retirees seem to enjoy seeing friends and catching up," said the ATLC's Kimberly Mitchell.
- This year's Y-12 Day of Volunteering will be May 19. See YSource to sign up to serve on a project team for your favorite cause. Sponsored by Public and Governmental Affairs, the annual event is one of Y-12's most rewarding community outreach activities.
- Terri Slack, Site Counsel for the Y-12 Site Office, has been named "NNSA Attorney of the Year." Slack received the award during a ceremony held at the Savannah River Site in February as part of the annual National Nuclear Security Administration Office of General Counsel conference. The award was presented by Bruce Diamond, NNSA general counsel. "Terri has been a terrific asset to Y-12 and to NNSA as a whole," Diamond said. "She is often sought out by other NNSA attorneys for advice on a variety of subjects. She has done just an outstanding job for an extended period of time and richly deserves this recognition."
- Y-12's Jane Nations and Y-12 Site Office's Christy Holt were named Energy Sustainability Superstars for forming a sustainability team at Y-12. The team's goal is to increase communication across the site and promote a coordinated approach for meeting sustainability requirements.
- The Y-12 National Security Complex and the Sunset Rotary Club of Oak Ridge presented the 3rd Annual Oak Ridge Science Fair at Y-12's New Hope Center Feb. 25-26. This year's event included 106 third-, fourth- and fifth-graders from public, private and home schools in Oak Ridge and Roane County. Debbie Shechterle, Y-12's vice president of Human Resources, was one of the judges. "The students invested a great deal of time and energy in completing their experiments and putting together their entries," said Rotarian and Y-12 employee Jason Duncan.
- National Nuclear Security Administration Administrator Tom D'Agostino visited Y-12 Feb. 15 and toured Building 9201-5 (Alpha-5). Funding provided to Y-12 through the American Recovery and Reinvestment Act allowed workers to remove legacy waste materials from the 613,000-square-foot former production facility. The building is scheduled for demolition.



APRIL

43 years

Material Management: Douglas Chandler
 Production: Susie M. Collier
 Uranium Processing Facility: Brian A. Shanks
 Quality Control Inspection & Testing: Emmett J. Walker

42 years

Production: Duane L. Craig
 Engineering: John R. Jackson
 Information Technology: Richard D. Jarrell
 Utilities Management: James A. Montgomery

41 years

Emergency Services: Stanley R. Burney
 Resource Management: Rufus Bowen Jr.
 Quality Control Inspection & Testing: Sherrill L. Cook

35 years

Analytical Chemistry: Ronald Arnold
 Communications Services: Jimmie E. Travis
 Facility Management and Programs: John D. May Jr.
 Labor and Employee Relations: Janet L. Sexton

Maintenance Execution: Charles V. Whitson Jr.
 Maintenance Support: Patricia S. Carroll
 Material Management: John W. Ward
 Production: Terry V. Carpenter, Debra A. Morgan and Jeffrey R. Williams
 Program Planning: Terry W. Carroll and Jannis C. Cline

Quality Control Inspection & Testing: John L. Mincey

Resource Management: Michael V. Hensley

30 years

Resource Management: Donnie L. Lynn
 Safety: George L. Potprocky

25 years

Industrial Hygiene: James L. Jenkins Jr.
 Information Technology: Kathy J. Smith
 Waste Management: Holly A. Valentine

20 years

Analytical Chemistry: Leah A. Opsitnikcourtney
 Emergency Services: Michael L. Miller and Debby R. Webster
 Information Technology: Timmy L. Hill
 Projects, Sustainability and Facilities: Vivian K. Evans
 Waste Management: Timothy C. Tharp



Y-12 outside machinist Brandon Peters explains the benefits of Roane State Community College's partnership with B&W Y-12 to Second Lady Jill Biden during a panel discussion at the Tennessee Technology Center in Harriman, Tenn., Feb. 23. Also pictured is Secretary of Labor Hilda Solis (left).

In memoriam

Carl Hess of Program Management passed away Feb. 27. He had 9 years of company service.

"I met Carl on my second day working at Y-12. Within the first minute we had exchanged wisecracks," said co-worker Tom Hanlon. "From then on, I could always count on Carl for a fresh perspective, a joke or a conversation on anything from baseball to the cosmos."

"He showed us all how to live your life with grace in the midst of overwhelming odds," added co-worker Dale Davis.

Day of Volunteering

May 18-19

See the YSource index (D or V)
For more information, to suggest
a project or to volunteer for
a project.

Contact: Ashley Harris
574-2917

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Together, these three photographers (from left Terry Marlar, Brett Pate and Ed Westcott) and their co-workers have documented Y-12's historic missions.

visits gallery for the first time

Ed Westcott, whose well known photos documented Y-12 during the Manhattan Project, recently revisited the place he photographed for 40 years. In February, employees who worked with Westcott welcomed him back for a tour of Photography and Video Services as well as the Westcott Gallery, which lines the hallway near the Jack Case Center cafeteria. The gallery includes some of Westcott's most recognized photos from the 1940s.

Westcott was accompanied by his daughter and son-in-law, Emily and Don Hunnicutt; his son, John Westcott; and a family friend, Barbara Lynch Martin. As they toured the gallery, Emily Hunnicutt described a childhood in Oak Ridge during the Manhattan Project. "Dad worked all of the time. We'd come in for dinner, and he would be somewhere taking photographs. My mother was truly a war wife, raising five children and carrying the weight so he could support the war effort. We were so happy as children, and that says everything," Hunnicutt said.

Darrel Kohlhorst walked the gallery with Westcott and spoke about the mix of human and worksite images in the photos. "Oak Ridge was never just about the work. This was a community too, and these photographs capture that," Kohlhorst said.

Between 1942 and 1946, Westcott took 15,000 images. He stayed at Y-12 until 1966 and then transferred to Germantown to work for the Department of Energy. After retiring, Westcott returned to Oak Ridge in 1977 and worked as a subcontractor for Y-12 and K-25.