After meeting or exceeding several of its fiscal 2012 Defense Program goals, Y-12 is now engaged in activities to meet this year’s life extension, surveillance and dismantlement goals.

For fiscal 2013, the W78/88-1 Life Extension Program is funded at Y-12 for the first time. “The W78/88 1 LEP will secure work for the 2020s, so Y-12 can continue its major mission work after completion of the W76-1 and B61-12,” said Tom Thrasher, program manager. Y-12 has begun working with Lawrence Livermore and Los Alamos national laboratories on the manufacturability of the units. The conceptual designs include reuse technologies geared toward reducing the cost of LEPs.

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Get on board with 2013 goals

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CONTRACT NEWS: a message from Chuck Spencer

On Jan. 8, the National Nuclear Security Administration announced that Consolidated Nuclear Security, LLC, comprised of Bechtel National, Inc; Lockheed Martin Services, Inc; ATK Launch Systems, Inc; and SOC, LLC, was selected to be the management and operating contractor for Y-12 and the Pantex Plant.

Late the following week, the Babcock & Wilcox Company–led team of Nuclear Production Partners, LLC filed a protest with the Government Accounting Office, an agency within the legislative branch of the federal government that reviews contract award protests in matters like this. On Jan. 25, Integrated Nuclear Production Solutions, LLC, also protested the contract award. The GAO has 100 days in which to review the protests and render its decision on whether to deny or sustain the protests. You can learn more about the protest process by visiting the GAO’s website at www.gao.gov/legal/bids/bidprotest.html.
Team makes safety a design tool

Lynn’s style facilitates conversation, which is essential in achieving consensus among disparate and often deeply entrenched perspectives.

—Gary Hagan, Environment, Safety and Health

Designing controls for uranium and other hazardous materials can be particularly daunting. That’s why the Uranium Processing Facility has a Safety-in-Design Integration Team.

Lynn Harkey, who leads SDIT, admits it is a challenge to balance competing requirements, but the payoffs are significant. Integrating safety into UPF design allows the incorporation of engineered controls, like ventilation systems, which eliminate or reduce hazards to workers. These engineered controls are preferable to administrative controls, like procedures, which are subject to human error.

To understand the difference between these controls, think of an automobile. A driver may fail to comply with an administrative control by forgetting to lock his car door before leaving his driveway; but an automatic lock, an engineered control, will still secure the car doors when the vehicle starts moving.

Gary Hagan from Environment, Safety and Health explained that the SDIT team process is much like the holistic approach your family physician might take. “Specialists want to treat what they know, but your family physician ensures the whole patient is addressed to reduce overall risk.” This analogy is applicable to the competing requirements of criticality safety, fire protection and industrial safety. Hagan elaborated, “The criticality safety personnel may be assuming that no water will be used if the material ignites, while the fire department says, ‘If that catches on fire, we’re going to want to put water on it.’” By getting all the disciplines working together, SDIT can facilitate and expedite mutually acceptable solutions, such as using an inerting system to protect against fire and avoid a criticality.

Under Harkey’s leadership, SDIT encourages all disciplines to think outside the box, even if it’s well, a glovebox.

Calling attention

Y-12 has a unique work environment. Employees work long hours behind a fence, separating them from ‘the outside world.’ It seems natural that co-workers look out for one another — almost like family.

In early 2012, Radiological Control emergency responder Pete Wolard walked to a co-worker’s office to ask a question. The co-worker thought something was off about Wolard’s demeanor and followed him back his office to ask if he was okay. “I told her I didn’t know. Then I had a seizure,” said Wolard.

Fellow RADCON workers Donnie Green and Larry McHale responded to the co-worker’s cries for help. Green called 911, met the emergency medical technicians at the door and kept the hallway clear. McHale placed Wolard on the floor and began chest compressions while the co-worker kept the airway clear.

“He was in full cardiac arrest when we arrived,” said Brian Hodge, Fire Protection inspector and paramedic. “We took over compressions and shocked him.”

Ralph Honeycutt, Y-12 ambulance director, said, “When something happens, call 911 immediately to give yourself an opportunity to be a success story. If there’s any doubt, call 911.”

According to Wolard, one’s chances of surviving cardiac arrest decrease 10 percent every minute unless chest compressions are applied. “I’m a first responder, and I never thought it could happen to me,” he said.
Some projects can look overwhelming on paper with the multiple tasks and people involved. Thanks to the Readiness Assurance Group, which reviews the startup or restart of facilities, activities or operations, Y-12 projects now have a more efficient way to reach operational readiness goals.

The Readiness Certification Assurance Process Tracking System (RCAPTS) is a software program intended to replace or supplement paper-based administrative tasks performed by readiness personnel. It allows electronic interaction and saves time when completing steps and approvals.

For example, criteria and checklists are developed early in the process. Each involved person has access to the software and can chart progress. As items are completed, everyone can see the next step and move ahead. Documents are available to everyone on the system, and multiple users can have access. Reminder e-mails are sent, and reviews and approvals are recorded online; there is a huge increase in efficiency and cost savings. It gives users an objective view as the process unfolds by showing both progress and areas that need more attention.

Garrett Cook developed the software. He said, “RCAPTS was born out of a need to manage readiness projects that were too large to handle through the less-structured, paper-heavy processes being used.”

The successful operational readiness review for the Highly Enriched Uranium Processing Facility was completed in 2009 using the RCAPTS software. HEUMF’s success is now being echoed by other Y-12 groups. The software can be adapted for use by large or small projects by using a graded approach to capture, validate, present and review evidence.

Y-12 continues work on its primary LEP, the W76-1, which received $70 million in funding. In production since 2008, the W76-1 LEP recently implemented a new cost-saving technology that is estimated to save the program approximately $1.9 million. The nondestructive laser gas sampling, or NDLGS, system provides a nondestructive means of evaluating units and the potential for reuse rather than rebuild.

Another area of focus for Y-12’s Defense Program goals is surveillance testing, a process for evaluating various weapons in the active stockpile each year to determine how the units are aging. Y-12 just completed disassembly and inspection of a B83 surveillance unit during the first quarter of fiscal 2013, making it the first surveillance of this system at Y-12 in nearly a decade.

Finally, dismantlement of the W69 began at the end of fiscal 2012, so work continues on this short-range attack missile used by the Air Force. Dismantlement of two more complex systems, the B53 and B83, began in fiscal 2011 and progress is being made on both. With the installation of a new additional capacity lathe and a new walk-in hood, dismantlement processes are becoming more efficient and less costly.

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**Ready, Set, GO**

In practical terms, this means two things for B&W Y-12.

First, NNSA has directed us to stand down our transition activities. Many of you have done a lot of good work on this already, so we will put all that work on the shelf until we are given further direction from NNSA as to when to resume transition.

Second, we will continue with normal day-to-day operations at the site. While it will be natural to speculate about the possible outcome of the protests, I would ask that you stay focused on your work activities while you are here at Y-12. Injury and inadequate performance can result when we are not paying close attention to our tasks, and that’s not a result that any of us wants.

I realize that this delay in transitioning to a new contractor can be frustrating. Please be patient and let the protest process work; as soon as we are given direction from NNSA, we will let you know.

—Chuck Spencer, B&W Y-12 president and general manager
With more than 5,000 employees and nearly 2,000 subcontractors, the sheer magnitude of Y-12 has a significant economic impact on the surrounding community. By contributing billions of dollars to East Tennessee through operating revenues, wages, taxes and pensions, Y-12 helps generate thousands of area jobs. In fiscal 2012, Y-12 paid $419 million in wages, spent $333.2 million on goods and services and paid the state of Tennessee $12.3 million in taxes, a portion of which the state returns directly to Oak Ridge and to Roane and Anderson counties.

Y-12’s impact on surrounding communities doesn’t stop there. Corporate contributions, sponsorships, memberships and matching gifts for 2012 totaled more than $760,000. In addition, Y-12 employees, subcontractors and their families volunteered their time, talents and financial support to nonprofit organizations across East Tennessee. Some of Y-12’s 2012 community projects are highlighted here and in the story on page 12.

Investing in Education

Lab-in-a-Box – Area school systems received Lab-in-a-Box kits provided by the Rural Communities STEM Initiative, an Oak Ridge business/education partnership seeking to improve science, technology, engineering and math skills of regional K-12 students. The Lab-in-a-Box kits enable teachers to offer dynamic, hands-on learning experiences. The average cost of a Lab-in-a-Box set is $7,500, and Y-12 paid for kits sent to the Lenoir City School System.

Materials Camp – Twenty East Tennessee high school students participated in the ASM International Materials Camp sponsored by Y-12, Oak Ridge National Laboratory and the University of Tennessee. The week-long activities gave students an opportunity to learn about materials science, failure analysis and materials characterization through hands-on studies.

Oak Ridge Science Fair – Y-12 teamed with the Sunset Rotary Club of Oak Ridge to present the 3rd Annual Oak Ridge Science Fair at New Hope Center. The 2012 fair was Oak Ridge’s largest yet, expanding to include 106 third-, fourth- and fifth-graders from public and private schools and home schools in Oak Ridge and Roane County.

Oak Ridge Teachers’ Workshop – Thirty-six teachers from across Tennessee participated in hands-on science labs during a unique summer science camp at Y-12 and ORNL. The two-day camp allowed teachers to spend time with some of the nation’s top engineers and inventors, try out innovations and spark interests they will pass on to students.

Machinist Apprentice Program – Pellissippi State Community College welcomed its first class of 10 machinist apprentices from Y-12 for fall semester. Apprentices will receive classroom and hands-on training at Pellissippi State’s Hardin Valley Campus. During the four-year apprenticeship, they will have the opportunity to earn 45 credit hours toward an associate of applied science degree.
**STEM Scholarships** – In its ongoing support of science, technology, engineering and mathematics education, B&W Y-12 awarded $5,000 in scholarships split between Roane State Community College freshmen Wes Jenkins and Sara Lemmonds. Jenkins is a Harriman High School graduate and plans to major in biology. Lemmonds graduated from Oak Ridge High School and is enrolled in the college’s pre-med program.

**MEDIC Blood Drive** – Y-12 employees participated in four Medic blood drives during the year, ensuring a supply to all eight hospitals in Knoxville and to 20 other hospitals serving 21 counties in East Tennessee and southeastern Kentucky.

**March of Dimes** – The Atomic Trades and Labor Council and B&W Y-12 kicked off the 2012 combined March of Dimes campaign for Anderson, Roane and Loudon counties by hosting a luncheon at Y-12’s New Hope Center. B&W Y-12 contributed $20,000 to MOD representatives as B&W Y-12’s and the ATLC’s commitment to the organization.

**United Way** – Y-12 is one of the area’s largest United Way contributors, and the 2012 campaign employed silent auctions, bake sales, ice cream sales and other events to raise awareness and funds, in addition to payroll deductions and vacation time deductions. Y-12 donations in 2012 exceeded $800,000.

**Coat Drive** – A counterpart to the United Way fundraising campaign, the United Way Coat Drive yielded 948 coats and winter wear, 90 pairs of gloves, 111 scarves and 147 hats and toboggans. Y-12 donated the outerwear to the Volunteer Ministry Center, a nonprofit, interfaith agency serving the poor and homeless of Knoxville.

**Volunteering**

Each year, employees nominate projects for the Y-12 Day of Volunteering. Employees volunteer to lend a hand and B&W Y-12 provides $400 for each project to help cover the cost of materials. In 2012, more than 1,100 employees, their family members and other volunteers worked on 60 projects, marking the largest turnout in the 10 years of Y-12’s Day of Volunteering program. The work took place primarily over one weekend and included projects at homeless shelters, food banks, children’s organizations, animal shelters and many other vital, nonprofit groups.

**Helping Those in Need**

**Emory Valley Center** – Emory Valley Center, which serves disabled adults and children, received $50,000 toward construction of a new facility to replace their aging building slated for demolition.

**Storm Relief** – Y-12 employees, subcontractors and National Nuclear Security Administration Program Office employees donated $3,807 to benefit area families affected by recent storms.
During its 70 years of business, Y-12 has had proud employees. As we celebrate the 70th anniversary, current employees share their Y-12 heritage.

“I am a third generation U.S. Department of Energy worker and proud of my family’s heritage of supporting our nation. My grandfather was a World War I Marine and one of the first guards at K-25. My mother worked for the Atomic Energy Commission as a secretary and met my father, a World War II vet, on a blind date. He was a pipefitter working for Oak Ridge National Laboratory but located at Y-12. I remember riding with my mother to pick my father up when he worked overtime. We would park near the old ‘hamburger stand’ guard post (see below). I can remember how excited I was to watch for his silhouette to appear as he walked up the sidewalk. Now, all that remains are the small parking lot and happy memories of a simpler time when a young daughter eagerly waited with her mom for dad’s warm welcome.

“Y-12 has really been good to me; it’s more than where I work — it’s part of who I am.”
—Donna Hunt Bennett, hired 1978

“I’m proud to work at a place that continually finds a way to meet new missions. My grandmother is proud that I am working where my grandfather worked after World War II, which makes me proud. He died when I was 8 years old, so I didn’t get to know him very well, but now I feel like I have something in common with him.”
—Heather Pridemore, hired 2010
Close your eyes. Imagine the noises and scenery that were part of Y-12 70 years ago. Hammering and drilling. Bulldozers and thousands of workers. Workers broke ground in February 1943 for the first production building. The valley was soon filled with equipment and people working on a secret mission. Seventy years later, Y-12 remains a national asset in manufacturing, processing and storing special materials vital to our national security.

Another thing that hasn’t changed since the 1940s is our focus on operations security, as shown by these billboards — the bottom one from the 1940s and the top one from 2007.
Inventors receive awards

Let the accolades begin! At its Technology Transfer Awards Ceremony, Y-12 honored:

- 74 individuals for 68 fiscal 2012 invention disclosures and Idea-EZ forms;
- 12 inventors for 11 new patents;
- six first-time patent recipients, who took home the Silver Acorn Award;
- eight individuals for Government Use Awards, given for inventions that add significant value to DOE or other agencies and
- two individuals for Technology Support Awards, which recognize going above and beyond the call of duty in contributing to technology development support, promotion and/or licensing.

At this ninth annual celebration, held in Oak Ridge, it was hats off to Y-12’s inventors and contributors and a special evening to celebrate a record-breaking number of patents for new materials, ingenious systems, creative methods, components, sensors and handy gadgets. “Y-12 excels at tackling tough technical problems and developing practical solutions. The real message is that Y-12’s efforts in technology transfer demonstrate the creativity of our folks and stimulate innovation within the plant,” said Van Mauney, vice president for Program Management. “Examples of innovations showcased during the awards ceremony demonstrate what we can do to directly benefits NNSA and the private sector.”

“I’m excited to receive a patent; it’s something most people don’t get to experience,” said Paul Vanatta, a nine-year employee of Y-12. “Rusty Hallman and I began work on the Intrinsically Safe Moisture Blending System in 2007 as a solution to a need within Y-12. Now we’ve received a patent and are working to transfer the technology to the private sector.”

Congratulations to each award recipient!

Another successful journey

Jeremy Brewer was just 18 years old and three months out of high school when he began his boilermaker apprenticeship. Four years later, Brewer is now one of seven new journeymen who received graduation certificates at a recent ceremony, marking just the second new class of apprentice graduates since the Y-12 Apprentice Program was resurrected in 2008 after a 26-year hiatus.

“The program was very interesting,” Brewer said. “I learned a lot about plant operations but also just about working with my hands. I can fix things now, something I never thought I’d be able to do.”

The Apprentice Program, fully sanctioned by the U.S. Department of Labor, requires 2,000 hours of on-the-job training and between 144 and 246 hours in the classroom each year, according to John Whalen, chairman for the ATLC Joint Apprenticeship and Training Committee.

“We started this program four years ago with the hopes of providing Y-12’s future work force,” Atomic Trades and Labor Council President Steve Jones said at the ceremony. “That future begins today.”

As a boilermaker, Brewer will work on all steam, heat and pressurized vessels at Y-12. Other 2012 graduates, who began their pro-

2012 Apprentice Program graduates (left to right): John Whalen (chairman for the ATLC Joint Apprenticeship and Training Committee), Chad Bishop (boilermaker), Jeremy Brewer (boilermaker), Darren Lane (ironworker/rigger), James Durham II (ironworker/rigger), Kenneth Davis (ironworker/rigger), Brett Spradlen (carpenter), Brandon Turner (carpenter), Beth Green (director of Resource Management)
Working for Y-12's future

Exciting changes are in store for Y-12, and its 2012 Emerging Missions Strategic Vision document describes the pathway to the future.

“The strategic vision document examines how we can serve a broader national security mission at Y-12,” said Morris Hassler, Director, Program and Strategy Development. “Its purpose is to more clearly communicate our comprehensive national security missions and address ways we can grow and perform these missions.”

From Y-12’s three core competency areas — Nuclear Technology and Materials, Security and Consequence Management, and Manufacturing and Technical Services — grew our strategic program development initiatives. Our five strategic initiatives are:

• **Nuclear Materials** – Y-12 is dedicated to the conversion and removal of at-risk nuclear and radiological materials. We also will ensure the supply of uranium and other nuclear materials for use in naval, research and medical isotope reactors, and other special applications.

• **Global Security** – Y-12 provides immediate and deployable solutions to mitigate global threats, including security technology applications and special training.

• **Nuclear Forensics and Detection** – Y-12 is a principal facility for uranium forensics and maintains the National Uranium Archive for the Department of Energy. We’ve also established the Nuclear Detection and Sensor Testing Center.

• **Manufacturing and Technical Services** – A strong manufacturing and technical computing capability is vital to ensuring ongoing Y-12 and NNSA leadership in innovation.

• **Special Programs** – Y-12 is a sought-after source of current and continuing expertise in the applied science and manufacturability of highly enriched uranium and other materials.

Strategic thinking for Y-12's emerging missions

The Emerging Missions Strategic Vision was a collective effort by some of Y-12's strategic thinkers. That's because the journey to create this vision started with input from across the Y-12 community. Sixty people from different divisions and varying age groups participated in focus groups where they shared ideas about the future. These focus groups were asked to identify Y-12's strengths, weaknesses, threats and opportunities for the future. Specific questions also were asked about the site's future missions and customers.

All the input from the focus groups was compiled — along with information from other strategic documents — and the Emerging Missions Strategic Vision began to take shape. According to Morris Hassler, Director, Program and Strategy Development, “It was important to build on what we do well and where our core capabilities lie. Then, we looked at the needs of our potential national security customer and matched these with our capabilities. This is how we developed our strategic initiative areas.” To complete the vision, a detailed implementation plan and five individual strategy plans were created to execute the initiatives. “The final product would not have been possible without input from our own people,” Hassler said.

Knowing our strengths also means knowing that the people of Y-12 are its greatest resource. So, it was vitally important for them to have a hand in creating the plan for their future.
In memoriam

Michael Greene of Engineering passed away Dec. 20. He had 33 years of company service.

“Mike was a ‘good’ man, with traits and daily living to shore up that description,” said co-worker Lloyd Duke. “He loved his family, loved his work, and most of all loved his church.”

In memoriam

Cindy K. Martin of Business Services and Performance Assurance passed away Dec. 26. She had 22 years of company service.

“Cindy was the most unselfish person I’ve ever known,” said co-worker Jack Loveday. “And if you were having a gray day, a visit from Cindy, with her positive attitude and big smile, would somehow change that. It was as if someone had turned up a dimmer switch when she would enter the office.”

“Cindy will be missed by many of her family and friends. She never met a stranger and could always find good in everyone she met,” said co-worker Laverta Hardin.

In memoriam

Tommy Thompson of Production passed away Nov. 17. He had 61 years of company service.

Co-worker Robert Runkles said, “Tommy had a passion for Y-12 and dedicated his life to his work. He enjoyed talking about his family, friends, camping and fishing, but every conversation would eventually lead back to his work. If you had a question, he had the answer. Tommy had one of the sharpest minds that I have ever encountered. You could not come up with a work-related question that he couldn’t answer. The Y-12 family has lost a great patriot who has served all of us faithfully for 61 years.”
Four area charities were chosen for a $200 donation from Y-12’s Aluminum Beverage Can Committee. In December, members of Projects, Sustainability and Facilities visited the chosen organizations to distribute the funds. Employees who nominated the chosen organizations also attended: Linda Clark, Tabitha’s Table, Oak Ridge; Wayne McMahon, Family Promise of Knoxville; Alma Carter, Sunshine Industries; and Pam Wright, PPAW (People Promoting Animal Welfare) Spay/Neuter Clinic. The ABC Committee has donated more than $81,000 since the program began in 1994. Shown below (from left) are Annie Graham and Judy Wohlwend (Sunshine Industries), and Durand Carmany and Alma Carter (Y-12).

When we move from one place to another, we’re only one step away from an accident. To help prevent slips, trips and falls, Environment, Safety and Health is presenting the One Step Away Campaign.

In the coming weeks, you’ll hear more about this campaign; it’s a way to help us be more alert to our walking patterns and the walking surfaces. “We’re using this multifaceted approach to eliminate slip, trip, and fall injuries and want employee teams to get involved,” Doug LeVan of ES&H Technical Services said.

The One Step Away Campaign is to help you and your co-workers reduce the number of fall injuries. In fact, the idea came from a non-ES&H employee, Steve Kyle of Security and Emergency Services.

Kyle said, “I became interested in slips, trips and falls when I saw the statistics were not going down. I looked around for causes and noticed that people frequently took their eyes off path to answer cell phones or read pagers. I even saw one co-worker walking and reading a book!”

Because of the walkers’ inattention to the pathways, Kyle said, “They became distracted walkers. … Co-workers were just one step away from a potentially catastrophic slip, trip or fall.”

Why does Kyle care? “With the very rare exception, there is nothing in a phone call or pager that is more important than my co-workers’ safety. Then (and now), I would ask people if they needed to talk on the cell phone or read a page, to stop in a safe place and do what they needed to do, then continue safely on as an undistracted walkers.”

So let’s take the first step and make the One Step Away Campaign a success in reducing slips, trips and falls.
Building generosity: 
9995 raises $1,800 for Angel Tree bicycles

“It started as nickels and dimes and turned into a massive outpouring of generosity,” Nikkii Cody said.

Quality Assurance employees in Building 9995 raised more than $1,800 to purchase bicycles for the Angel Tree program. The fundraising effort began with a “Christmas in July” candy sale. Donate one dollar to the Angel Tree and receive three snack-size candy bars.

With that simple idea, the collection effort took off. Ice cream was offered during the summer, raising $100. Bake sales were held in August, October and November. “Each bake sale cleared more than $200,” Mary Lane Moore said.

Cathy Burdette is credited with the idea. “Last year I heard that there was a need for money to purchase the Angel Tree bikes, so I started thinking about ways we could raise money. In mid-September we started selling candy and raised more than $1,000 in 2011,” Cathy said. “This year I’m thrilled that we’ve collected more than last year.”

The women praised the generosity of their co-workers. “It’s a really good feeling when people come up to you and hand you money for the Angel Tree,” Nikkii said. “People are excited to find out how much is raised.”

In addition to cash, their co-workers have pitched in additional bags of candy, ice cream, breakfast bars and Crystal Light drink packets to sell.

“We hope our efforts will encourage other organizations to initiate similar fundraising events,” Mary Lane said. The Y-12 Employees’ Society purchased new children’s bicycles in an assortment of sizes as well as helmets with the donation. “We feel that we are blessed to have good jobs and are able to do this,” Cathy said.