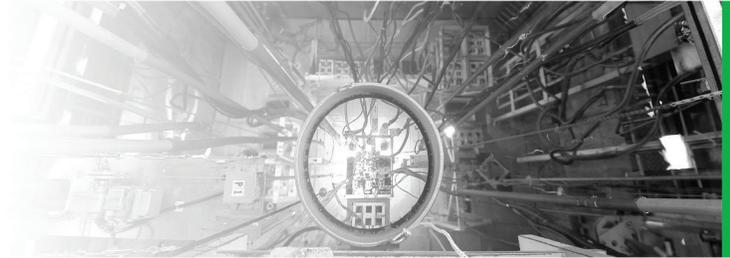


**Y-12** 2012 ANNUAL REPORT  
NATIONAL SECURITY COMPLEX



MAKING THE WORLD SAFER

# ABOUT Y-12



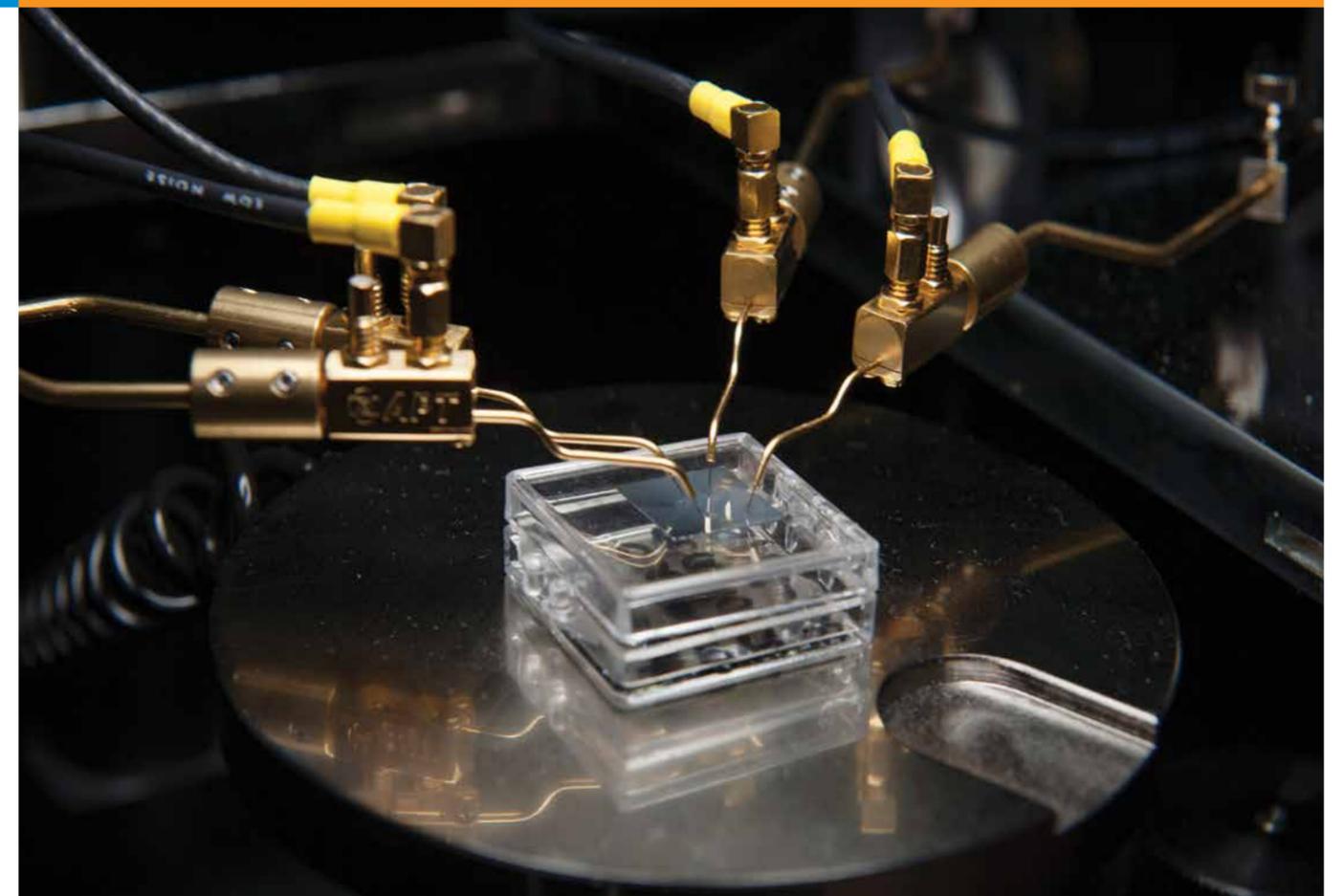
The Y-12 National Security Complex, in Oak Ridge, Tenn., has been a symbol of national strength and global security for 70 years. Originally part of the Manhattan Project, Y-12 was constructed to enrich uranium for an atomic weapon to end World War II.

Our distinct purpose from day one has been to make the world safer. Today, we have three missions: maintaining the safety, security and effectiveness of the United States' nuclear weapons stockpile; providing safe and effective nuclear propulsion systems for the U.S. Navy; and reducing the global threat posed by nuclear proliferation and terrorism.

As an enduring national asset, Y-12 consistently provides the most responsive, innovative and cost-effective solutions to meet our missions for the U.S. and its allies.

# KEY SUCCESSES IN 2012

- Achieved dismantlement goals on time for four weapons programs; exceeded goals for the B53.
- Met 100 percent of W76 Life Extension Program goals.
- Completed, on time or ahead of schedule, all stockpile systems surveillances and joint test assemblies.
- Supplied required fuel feedstock for the Naval Reactors Program.
- Exceeded goals for non-defense program growth of \$101 million with key new projects in nuclear materials and manufacturing.
- Assisted the National Nuclear Security Administration (NNSA) in removing 70 kg of enriched uranium from France, Mexico and Australia, supporting President Barack Obama's four-year goal to secure all vulnerable materials.
- Processed and shipped more than 3,500 kg of highly enriched uranium that will be downblended and used for peaceful nuclear applications.
- Supplied uranium-molybdenum source alloy to support the conversion of the five U.S. high-performance research reactors from using highly enriched uranium to using low-enriched uranium to reduce the threat of nuclear proliferation.
- Completed American Recovery and Reinvestment Act work, safely removing waste from World War II- and Cold War-era facilities, demolishing buildings, addressing mercury-contaminated areas and reducing migration of site soil contaminants to East Fork Poplar Creek.
- Received reaffirmation of project and cost plans from NNSA for the nation's Uranium Processing Facility.
- Achieved the Department of Energy Voluntary Protection Program Star Status.
- Trained more than 1,000 professionals to respond to threats involving nuclear and radiological materials, leveraging our unique security and nuclear materials expertise.
- Received an R&D 100 Award, 10 patents and 68 invention disclosures; signed 13 new licenses and have five active Cooperative Research and Development Agreements.
- Recycled more than three million pounds of waste material, diverting it from the landfill and conserving natural resources while ensuring cost-effective operations and environmental protection.
- Exceeded \$760,000 in corporate contributions, sponsorships, memberships and matching gifts and \$740,000 in employee contributions to United Way.
- Achieved \$63.6 million in efficiencies and cost avoidance, which was used to deliver additional work scope to NNSA. The site demonstrated \$22.6 million in hard savings through efficiencies gained by revising production processes, combining employee functions and reducing procurement costs.



## CONTENTS

Maintaining the Nuclear Weapons Stockpile	2
Powering the Nuclear Navy	4
Reducing Global Threats	5
Partnering with Others	10
Transforming the Site	12
Building the Uranium Processing Facility	14
Investing in Our Community	16



*Uranium, Y-12's lifeblood, is an essential element in medical imaging and treatment as well as in making the world safer.*

## LOOKING BACK AT 2012

This annual report highlights work performed by the Y-12 National Security Complex during fiscal 2012. As a key facility in the National Nuclear Security Administration's (NNSA's) Nuclear Security Enterprise, Y-12 safely accomplished significant production work, meeting or exceeding goals for life extension programs, dismantlements for key weapons programs, stockpile systems surveillances and joint test assemblies. We also supplied the required fuel feedstock for the Naval Reactors Program.

In 2012 alone, Y-12 downblended more than 3,500 kg of highly enriched uranium for peaceful nuclear applications; assisted NNSA in removing 70 kg of enriched uranium from three allied countries; and supplied uranium-molybdenum source alloy to support the conversion of the nation's research reactors to use low-enriched uranium. We also wrapped up the original projects funded by the American Recovery and Reinvestment Act of 2009 and with the money saved on these projects, began the Mercury Reduction Program. This program will be important for solving the problems of legacy mercury contamination both here and at other sites.

The Y-12 Construction team achieved two significant safety milestones: one million hours without a lost-time accident and zero Occupational Safety and Health Administration recordable injuries throughout 2012. The site also attained the Department of Energy's Voluntary Protection Program Star Status and had a strong year in technology research and development, reaping an R&D 100 Award, 10 patents and 68 invention disclosures.

We made improvements in security following a July incident in which three intruders entered the site and damaged Government property. Although the intruders did not access any uranium materials, the incident illustrated a need for improvements in security and other areas. Y-12 took immediate and substantial corrective actions — including installing additional concertina wire, adding more security patrols, prioritizing maintenance and repairs to security equipment, and restructuring the security organization and security contract. Actions taken were highly effective as evidenced in an August/September inspection by the Department of Energy, Office of Health, Safety and Security. Y-12 security systems and processes continue to be reviewed and upgraded to ensure they remain robust.

Throughout the year, Y-12 continued to meet its responsibilities as a corporate neighbor, donating more than \$760,000 in corporate contributions, sponsorships, memberships and matching gifts. In addition, Y-12 employees supported United Way organizations with more than \$740,000 in donations.

Continuing our focus on productivity and cost-savings, Y-12 achieved \$63.6 million in efficiencies and cost avoidance, which was used to deliver additional work scope to NNSA. The site demonstrated \$22.6 million in hard savings through efficiencies gained by revising production processes, combining employee functions and reducing procurement costs.

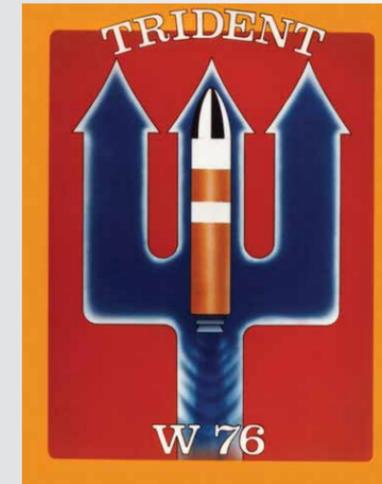
As this annual report illustrates, Y-12 continues its long tradition of service to our community, country and the world.

*Helping sustain the nation's nuclear weapons stockpile became Y-12's primary mission after the Cold War. Ensuring the safety, security and effectiveness of the U.S. nuclear deterrent — through a wide range of manufacturing, science and technology activities — is essential to that mission.*

Y-12 successfully met or exceeded key nuclear weapons dismantlement, surveillance and Life Extension Program (LEP) goals in fiscal 2012. The LEP, funded by Congress through NNSA Defense Programs, cares for and prolongs the safety and effectiveness of the nuclear stockpile. In 2012, the W76 LEP goals were met, including completion of 11 percent more work than funded. Dismantlement requirements for four programs were achieved on time, and goals for the B53 were exceeded. We also began dismantlement of the W69 at the end of fiscal 2012. With the installation of a new additional-capacity lathe and a new walk-in hood, dismantlement processes are becoming more efficient and less costly.

Surveillance testing, a process for evaluating various weapons in the active stockpile to determine how the units are aging, is another focus area for Y-12's Defense Programs. All 2012 stockpile systems surveillances were completed on time or ahead of schedule. The site also met deliverables for joint test assemblies, units built to simulate a specific weapon for system testing.

"Staying focused and safely and securely keeping our mission work the main thing has allowed us to reach our goals," said Steve Erhart, NNSA Production Office manager.



Y-12 introduced and qualified a new system that samples gases within a component. The automated Nondestructive Laser Gas Sampling (NDLGS) System combines the latest in laser processing and gas-sampling technologies. The laser processing technology is a joint Y-12/ Los Alamos National Laboratory innovation that received a prestigious R&D 100 Award in 2012.

The award-winning system demonstrated first use on a W76 Retrofit Evaluation Systems Test, or REST, unit in early May — approximately one month ahead of the compressed schedule. When a weapon system is part of an LEP, a set number of assembled units are randomly selected before being shipped to the Department of Defense. These REST units are returned to the production sites, where they are evaluated for their assembly and build quality. This new system offers a nondestructive means of evaluating the REST unit and allows the potential to reuse rather than rebuild.

NDLGS is expected to save several million dollars per year and also will be used for surveillance activities on systems in the active stockpile.

*“It’s exceptionally rewarding to be able to meet this important national defense mission and see our recycling efforts go full circle.”*

- Gary Person, Y-12 Program Management

**P**owering the nuclear Navy is one of Y-12’s core missions. Maintaining that long-standing, vital partnership with the U.S. Navy helps ensure our national security and keeps the nation’s fleet of submarines and aircraft carriers fueled to execute maritime missions worldwide.

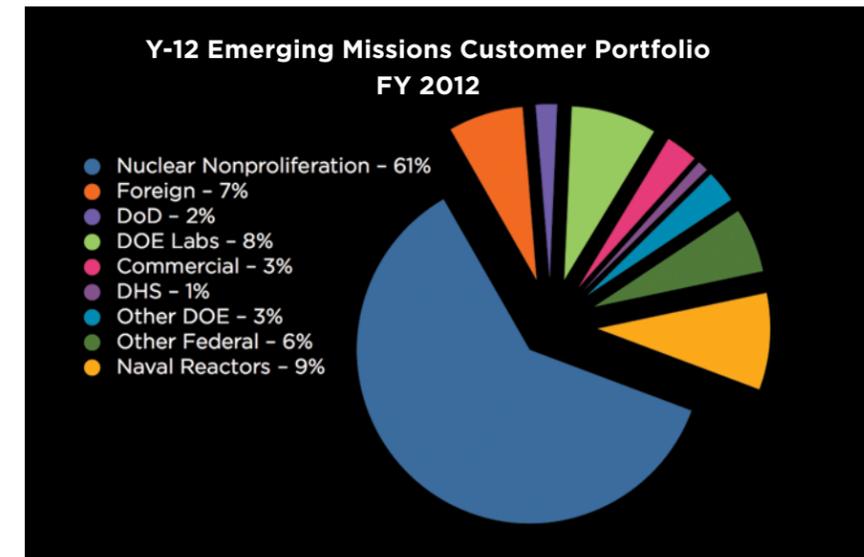
In 2012, Y-12 again supplied the required fuel feedstock for the Naval Reactors (NR) Program and satisfied NR’s delivery schedule. “We’re using dismantled weapons to provide feedstock, moving the material off site and reducing Y-12’s storage footprint,” said Steve Sanders, Y-12 Program Management.

The Navy/Y-12 working relationship helps ensure America’s security, helps the Navy remain preeminent at sea and benefits Y-12. Technologies and methodologies developed by Y-12 have been adopted as Navy standards, and on the flip side, Navy-funded projects also have benefited Y-12. Under a memorandum of agreement between the National Nuclear Security Administration’s (NNSA’s) Naval Reactors and Defense Programs, Y-12 will continue annual deliveries of fuel feedstock for the next four decades.

***As a crucial part of the Nuclear Security Enterprise, Y-12 executes broader nuclear security missions, or non-defense missions, to meet NNSA priorities in Defense Nuclear Nonproliferation, Work for Others and the private sector.***

In fiscal 2012, Y-12 generated approximately \$101 million in funding for non-defense missions, growing from \$40 million in 2004. These programs now account for approximately 10 percent of the overall site budget. This work leverages Y-12’s capabilities and enhances our ability to meet current and future national security mission requirements:

- Enhancement of Y-12’s continuing defense mission.
- Critical skills needed to accomplish Y-12’s mission (e.g., engineering, machining and systems development).
- Y-12’s unique subject matter expertise and infrastructure to address global security challenges.
- Productivity and reduced overhead borne by our Defense Programs customer.



Y-12’s core competencies in nuclear technology and materials, security and consequence management, and manufacturing and technical services provide efficient, effective solutions for many emerging global security challenges. In March 2012, Y-12 published its first *Emerging Missions Strategic Vision* document that looks to future Y-12 missions. This vision is essential to ensure Y-12 adapts and remains prepared for all mission requirements.

*“NNSA is truly moving from a nuclear weapons complex to a 21st century Nuclear Security Enterprise, addressing the nuclear and national security challenges of the 21st century.”*

-NNSA Strategic Plan, May 2011

**W**e apply our unique capabilities in five strategic areas: *Nuclear Materials, Global Security, Special Programs, Manufacturing and Technical Services, and Nuclear Forensics and Detection.*

**NUCLEAR MATERIALS**

The nuclear materials initiative involves the disposition and supply of nuclear and other special materials for use in naval, research and medical isotope reactors. Driven by global nuclear proliferation concerns and renewed interest in nuclear power, Y-12 focuses on research and development in specialty fuel fabrication, characterization and performance of advanced fuel, and materials for medical isotope production.

**SIGNIFICANT 2012 ACCOMPLISHMENTS**

- Supplied uranium-molybdenum source alloy to support the conversion of the five U.S. high-performance research reactors from using highly enriched uranium (HEU) to using low-enriched uranium to reduce the threat of nuclear proliferation.
- Completed nine foreign enriched uranium shipments (13 orders) supporting NNSA material contracts for research reactors and medical isotope production.
- Assisted NNSA in removing 70 kg of enriched uranium from France, Mexico and Australia, supporting President Barack Obama’s four-year goal to secure all vulnerable materials.
- Processed and shipped more than 3,500 kg of HEU that will be downblended and used for peaceful nuclear applications.
- Supplied the nation’s High Flux Isotope Reactor with uranium oxide fuel material.
- Received the Department of Energy Secretary’s 2012 Achievement Honor Award for significant contributions to the Seoul Nuclear Security Summit and for accomplishments in nuclear material removal.



**GLOBAL SECURITY**

Using our experience in the security and safeguards of nuclear and classified materials and information, Y-12 provides solutions for a variety of emerging global security challenges. We develop techniques and technologies for use in a high-consequence, high-risk operational environment and provide training, assessments and key knowledge in global security. The Global Security Initiative covers three areas: global security training, security applications, and arms control and verification.

- Trained more than 1,000 professionals to respond to threats involving nuclear and radiological materials, leveraging our unique security and nuclear materials expertise.
- Conducted 19 performance assurance visits, 13 security assessments, six sustainability visits and two security table-top exercises at sites across the southeast U.S. and in Puerto Rico.
- Worked cooperatively with the governments of Belarus, China, India and Russia to improve nuclear security.
- Led a National Institute of Standards and Technology assessment of Department of Defense (DoD) laboratories, leveraging our unique biometrics capabilities.
- Conducted 13 special monitoring visits and one long-term visit for the Russian HEU Transparency Program.
- Hosted the World Institute for Nuclear Security Workshop at Y-12, bringing together more than 20 countries, for the first time ever in the U.S., to discuss best practices in physical security.

**SPECIAL PROGRAMS**

With 70 years of experience in manufacturing components for U.S. nuclear weapons, Y-12 is the primary source of expertise in the applied science and manufacturability of HEU and other special materials. We are working on a variety of projects vital to the Intelligence Community, applying our experience, knowledge, and research and development capabilities.

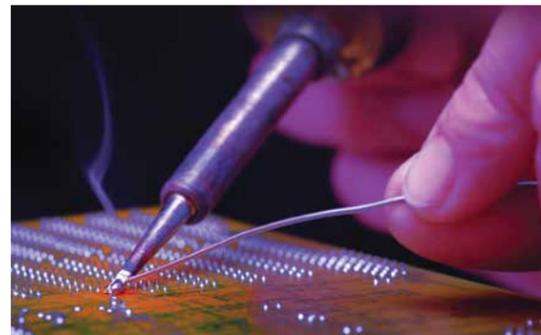
- Developed and conducted the first Production and Processes course for members of the Intelligence Community.
- Used Y-12's expertise to provide analytical support to organizations within the Intelligence Community.
- Conducted a feasibility study for operational elements within the DoD concerning techniques for rendering weapons material useless for weaponization.

**MANUFACTURING AND TECHNICAL SERVICES**

Y-12 has a number of unique manufacturing and technology development resources; many are integral parts of nuclear weapons production. We also use these resources to perform difficult manufacturing and development tasks in support of national security challenges for other government agencies as well as for private industry. The complexity of Y-12 manufacturing, processing and security work across the site requires state-of-the-art support systems. This expertise gives us the capability to develop real-world information technology solutions for national and international security challenges.

**SIGNIFICANT 2012 ACCOMPLISHMENTS**

- Provided the American Centrifuge Manufacturing Program with engineering, manufacturing and technical support.
- Provided the Office of Personnel Management continued development and maintenance of a software system for processing clearance requests and a system that processes fingerprint data associated with personnel security.
- Entered into a collaborative effort with Ceradyne Inc. for the synthesis and sintering of boron carbide and aluminum nitrate using high-temperature microwave technology.
- Developed the Manufacturing Innovation Network (MIN) concept and fostered new MIN partnerships with DOE and DoD to help invigorate innovation and networking among various U.S. manufacturing operations.
- Performed tin-whisker research for DoD ManTech to address lead-free solder challenges.



**NUCLEAR FORENSICS AND DETECTION**

Y-12's nuclear forensics program develops databases of signatures and observables for HEU production processes, a natural complement to our uranium characterization work supporting uranium production. We also are using methods developed for weapons component certification to analyze material from global sites. These efforts improve our response time for laboratory analysis and develop advanced computational methods for detection of special nuclear material (SNM) proliferation.

We are exploring radiation detection methodology that will sense enriched uranium in a variety of complex and shielded configurations. While this is an integral part of our mission, much of the effort also is relevant to detecting SNM globally.

- Partnered with Lawrence Livermore National Laboratory to conduct and analyze gamma-spectroscopy measurements on HEU weapons and materials.
- Opened the Nuclear Detection and Sensor Testing Center to researchers from national laboratories, universities and nuclear instrumentation companies for use in advanced radiation detection of HEU materials.



## PARTNERING WITH OTHERS

***Y-12 enters into productive partnerships with universities, businesses and community organizations, as well as with other federal agencies and national laboratories.***

Emerging Missions supports collaborations where Y-12's capabilities overlap with customer and market objectives. We are currently collaborating with the University of Tennessee (UT), Knoxville, and have a formal agreement that allows for joint appointments of key researchers, engineers, executives and staff. We also have collaborations in Huntsville, Ala., home to a concentration of U.S. government agencies with needs that span all five of the Emerging Missions strategic initiatives. And finally, we collaborate with other Department of Energy (DOE) entities, such as Oak Ridge National Laboratory (ORNL) and Oak Ridge Associated Universities (ORAU).

## SIGNIFICANT 2012 ACCOMPLISHMENTS

### *UT Partnership*

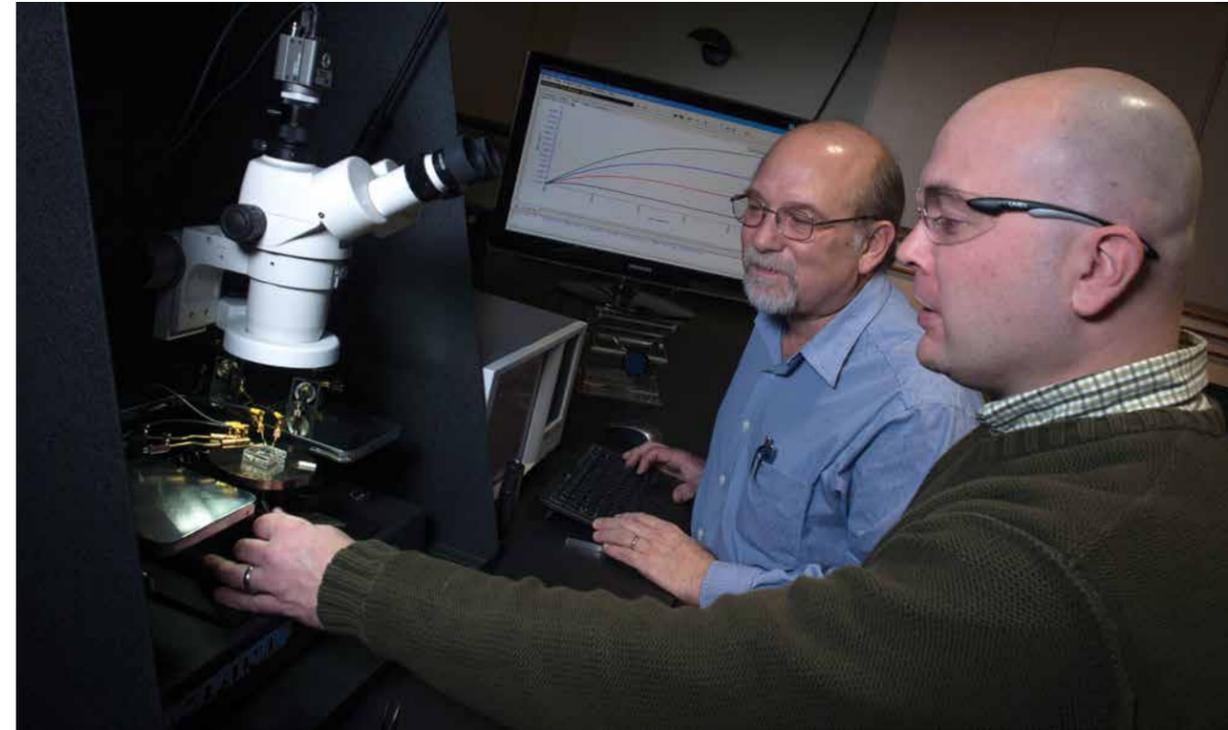
- Implemented the first university joint assignment agreement in the NNSA production complex to share research, science, technology, education and industrial development with UT.
- Developed seven joint Plant Directed Research and Development projects and implemented two UT technology development projects to jointly advance Y-12 technologies.
- Signed a commitment letter with UT — in collaboration with ORNL and ORAU — to establish the UT Institute for Nuclear Security.

### *Oak Ridge Huntsville Partnership Office*

- Collaborated with Alabama A&M University, which won an NNSA Minority Serving Institution Partnership Program (MSIPP) award, to conduct research in "Detection and Analysis of Chemicals and Radionuclides."
- Collaborated with Hampton University, which won an MSIPP award for work to support advanced manufacturing and to develop a pipeline of skilled workers.

### *National Laboratory Collaborations*

- Received a joint R&D 100 Award with Los Alamos National Laboratory for the Nondestructive Laser Gas Sampling System.
- Collaborated with ORNL to develop a 25-kg Radiological Signature Training Device for the Department of Homeland Security.
- Partnered with Lawrence Livermore National Laboratory on a Department of Homeland Security project to conduct gamma spectroscopy measurements on highly enriched uranium weapons and materials.



### **TECHNOLOGY TRANSFER**

Y-12 continues to lead the way in stimulating and recognizing innovation. In the fall of 2012, we honored our inventors and contributors, highlighting a record-breaking number of patents for new materials, ingenious systems, creative methods, components, sensors and approaches to increasing safety and productivity. Special recognition went to:

- 74 individuals for 68 fiscal 2012 invention disclosures and Idea-EZ forms.
- 10 inventors for 10 new patents.
- Six first-time patent recipients.
- Six individuals for Government Use Awards.
- Two individuals for Technology Support Awards.

Y-12 worked with a range of small and large businesses to commercialize the technologies developed. These technologies ranged from security technologies to special materials. Through technology licensing and joint research efforts, Y-12 enhanced the performance and use of these technologies for consumers, private business and within Y-12. We also conducted our first customer survey for technology transfer partners and received overwhelmingly positive feedback.

Y-12 signed 13 new licenses and has five active Cooperative Research and Development Agreements. In support of the local economy, we executed two licenses with a local start-up company for security access control technologies, using our exclusive Xpress Terms Licensing. Another license was signed with a local small business for a beryllium-cleaning technology currently used on-site. We are supporting the DOE initiative to increase the flexibility of commercializing government technology by developing and executing our first patent option agreement made available through the Next Top Energy Innovator Initiative.

***Y-12 has taken significant steps toward becoming a lean, more modern and efficient site that is less costly to operate. In fiscal 2012, we received closeout approval for most of the original projects funded by the American Recovery and Reinvestment Act (ARRA) of 2009. ARRA projects at Y-12 demolished approximately 250,000 square feet of unneeded World War II- or Cold War-era facilities, disposed of two million cubic feet of legacy waste and remediated environmental contamination.***

By the end of fiscal 2012, ARRA projects had created a cumulative total of 2,177 full-time equivalent jobs—more than 200 with the management and operating contractor (M&O) and nearly 2,000 with subcontractors. More than 90 percent of the M&O workers secured regular full-time jobs, saving the site the expense of hiring, training and clearing new employees, reducing the learning curve and, most importantly, keeping those new workers employed with work critical to Y-12’s missions. Y-12 ARRA projects awarded a total of \$90 million in procurements through fiscal 2012. Sixty-six percent of those awards were to small businesses, significantly exceeding the 45-percent goal.

ARRA work at Y-12 not only created jobs but also reduced the risk to the environment and paved the way for further site modernization activities.

**From 1953 to 1962, millions of pounds of mercury were required to support Y-12’s post-World War II mission of separating lithium isotopes. Through process spills, system leaks and surface runoff, some 700,000 pounds of mercury were lost to the environment. Cleaning up the toxic heavy metal poses many challenges, but what Y-12 is learning could help conquer mercury pollution worldwide.**



**MERCURY CLEANUP**

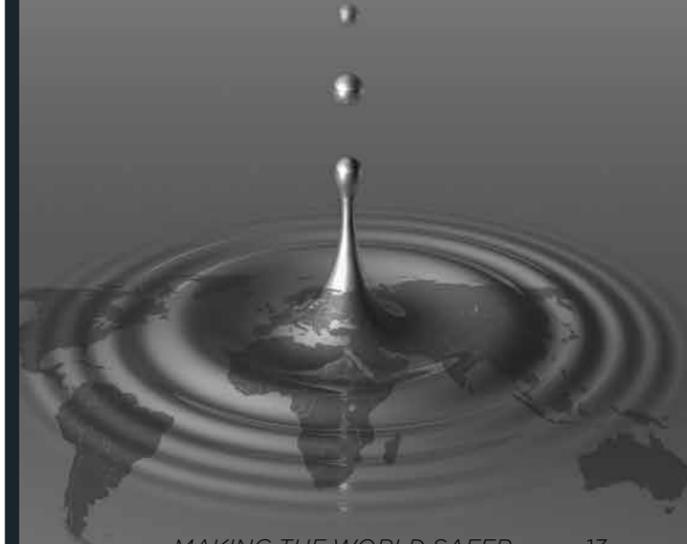
Y-12 began the Mercury Reduction project in May 2012. Funded with money saved from original ARRA work completed under budget, this new ARRA project will identify and remove legacy mercury from locations across our site, complete a conceptual design for an advanced water treatment facility and isolate secondary pathways where mercury could reach the groundwater and sewers within Y-12.

In 2012, the Y-12 Mercury Reduction Project team (engineering, projects and construction) completed the design and installation of two storm-drain traps that capture mercury before it can reach the various outfalls that discharge to East Fork Poplar Creek, which originates on-site and flows off-site through the City of Oak Ridge.

This year, a regionally rare fish species, the tangerine darter, was again found in East Fork Poplar Creek. Although the presence of this rare species does not mean that a population will soon be established, it is a sign that the overall health of the creek is improving.

*“This isn’t just about Y-12; mercury is recognized internationally as a toxic contaminant. With our cleanup and remediation experience, there’s a real opportunity for us to share our work and findings.”*

– Diane McDaniel, Readiness in Technical Base and Facilities



**BUILDING THE URANIUM PROCESSING FACILITY**

A new Uranium Processing Facility (UPF) at Y-12 is essential to ensuring the nation’s nuclear deterrent and for fueling our Navy’s nuclear fleet. Affirming their commitment to accelerating the project, in January 2012, President Barack Obama and Congress nearly doubled UPF funding for fiscal 2013 to \$340 million.

As old nuclear weapons are retired, UPF will serve an integral role in the National Nuclear Security Administration’s (NNSA’s) commitment to dismantle and process nuclear material from these weapons for use in peacetime missions, such as fueling next-generation commercial power reactors and in research reactors for medical isotope production.

The project focus for 2012 was facility design. In February, NNSA asked the project team to make transferring operations from Building 9212 a top priority, which centered the project on 9212 capabilities while providing space for future installation of remaining processes.

In April, the West End Protected Area Reduction project was integrated into the UPF project, which will reduce the size of Y-12’s Protected Area and enable UPF to be constructed more cost-effectively.

To ensure areas designated for process equipment are optimal for operation and maintenance, the UPF team replanned the design in 2012 and adjusted the facility size and layout. Even with the changes, the overall design for UPF stood at 66 percent complete at the end of 2012.

“Delivering a high-confidence cost and schedule baseline before the construction of UPF is essential,” said UPF Federal Project Director John Eschenberg. “This will yield huge dividends to the overall success of the project.”

In June, NNSA reaffirmed project and cost plans for UPF, and site readiness on the project is slated to begin in 2013.

Currently, UPF employs approximately 650 workers. At the peak of construction, an estimated 1,500 workers will be involved in the project – the largest construction effort in the state of Tennessee since World War II.



**What will it take to build UPF?**

- CONCRETE** → 30,000 cement trucks. Lined up bumper to bumper, they would stretch from Knoxville to Nashville by way of Chattanooga.
- STRUCTURAL STEEL** → Enough to build another Eiffel Tower
- WIRE AND CABLE** → Enough to run from Oak Ridge to Washington, D.C.

The core of the nation’s nuclear processing operations is housed in one of the site’s oldest World War II-era structures, Building 9212, which was constructed in 1945. UPF will consolidate all enriched uranium operations into a facility 35 percent of the size of the current space at Y-12. This consolidation will substantially shrink the site’s security footprint and lower operational costs and energy consumption. UPF also will include upgraded process technologies and will improve worker safety.

*In December, UPF Construction built a mock wall and performed tests to improve construction methodology, quality and safety.*

**IMPACTING THE ECONOMY**

With more than 5,000 employees and nearly 2,000 subcontractors, the sheer magnitude of Y-12 has a significant economic impact on surrounding communities. By contributing billions of dollars to East Tennessee through operating revenues, wages, taxes and pensions, Y-12 helps generate thousands of area jobs. In 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 Roane and Anderson counties.

Y-12's connection to community 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 our 2012 community projects are highlighted on the following pages.



*Attendees enjoy one of the children's events at the 2012 Secret City Festival in Oak Ridge. The Oak Ridge Convention and Visitors Bureau estimates 20,000 people attended the festival, which received \$25,000 in sponsorship money.*

**INVESTING IN EDUCATION**

**America's Veterans to Tennessee Engineers** — Through America's Veterans to Tennessee Engineers, a partnership with the Department of Energy and participating universities and employers, Y-12 is helping develop tomorrow's engineers. Y-12 employed six veterans working toward engineering degrees in 2012; two of these veterans graduated and accepted positions with Y-12.

**Knoxville STEM Academy** — The Knoxville STEM Academy (Science, Technology, Engineering and Mathematics) received \$100,000 in support of its new chemistry laboratory.

**Machinist Apprentice Program** — In fall 2012, Pellissippi State Technical Community College welcomed its first class of 10 machinist apprentices from Y-12. 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.



*East Tennessee high school students participate in the ASM International (formerly known as the American Society for Metals) 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.*

**HELPING PEOPLE IN NEED**

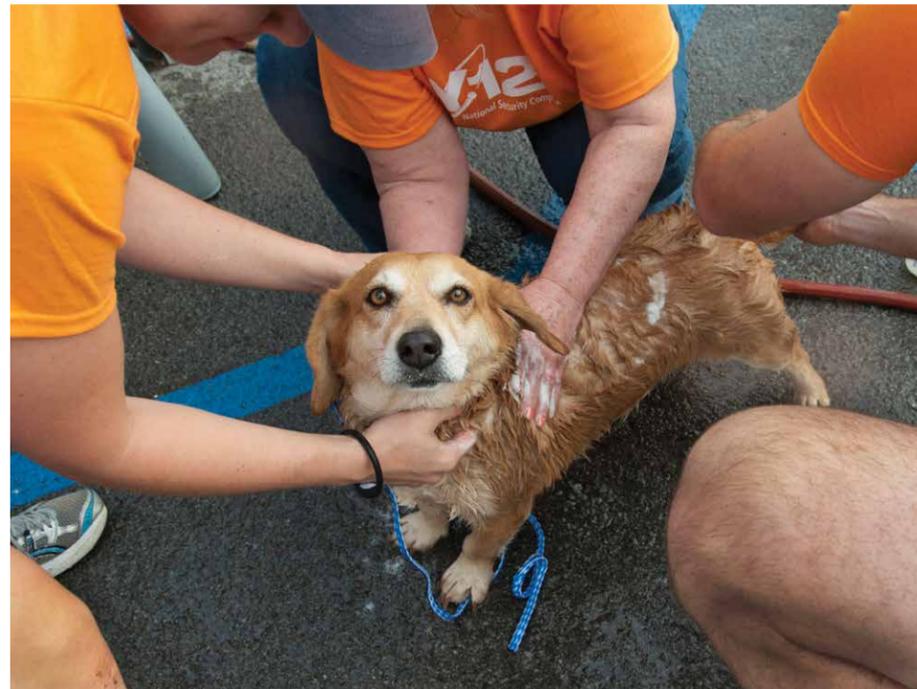
**Emory Valley Center** — Emory Valley Center, which serves disabled adults and children, received \$50,000 toward construction of a new facility to replace its aging building that is slated for demolition.

**March of Dimes** — The Atomic Trades and Labor Council (ATLC) and Y-12 hosted the 2012 campaign kick-off for the March of Dimes for Anderson, Roane and Loudon counties. The ATLC, which is in its 14th year of raising awareness and funds for the March of Dimes, joined the M&O contractor to donate \$24,000 to this organization.

**United Way** — Y-12 is one of the area’s largest United Way contributors, and our 2012 campaign included silent auctions, bake sales and other events to raise awareness and funds, in addition to payroll deductions and vacation-time donations. Y-12 employees donated more than \$740,000 to United Way in 2012.

**VOLUNTEERING**

During the annual Y-12 Day of Volunteering, employees lend a hand to homeless shelters, food banks, children’s organizations, animal shelters and many other vital nonprofit groups. 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 the Day of Volunteering Program.



*Y-12 volunteers bathe a rescue dog at the Shelter Animal Rescue Group. SARG is dedicated to giving animals from the Oak Ridge Animal Shelter a second chance at life.*



*Tiffany Malone of Engineering (right) assists Oak Ridge High School students during the Introduce a Girl to Engineering event, a first-time Y-12 event in recognition of National Engineers Week.*





## Y-12 NATIONAL SECURITY COMPLEX

### DISCLAIMER

This work of authorship and those incorporated herein were prepared by Contractor as accounts of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor Contractor, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, use made, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency or Contractor thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency or Contractor thereof.

Y/CS-030 YGG 13-0002



PRINTED WITH SOY INK ON RECYCLED PAPER