BWXT Y-12 pledges $1 million to Oak Ridge High School

BWXT Y-12 has joined with other area businesses in contributing to the $12 million fund-raising campaign of the Oak Ridge Schools Education Foundation. A total of $8 million of that goal is targeted for the high school project.

BWXT Y-12 pledges to donate $1 million to the renovation project over a 5-year period. In addition, as BWXT Y-12 grows and expands, so could the donation—up to $2.5 million. “Why did we do it for Oak Ridge High School? Oak Ridge High School is located in our corporate community. Oak Ridge is known for top-level education, and there is an even greater vision for education, and the High School Renovation project is a huge part of that. The logic is there, and it is the right thing to do for the community.” said Dennis Ruddy.

Y-12 is also forming a partnership with the Oak Ridge School System to create a manufacturing academy to train students in 21st century job skills. The academy will combine academic programs located at Oak Ridge High School and the manufacturing expertise of the Y-12 National Security Complex.

“There is no substitute for hands-on experience.” said Dennis Ruddy. “Y-12 needs people with the right skills, critical skills, and we will be leading the charge—both to offer facilities and people to help provide that training,” said Ruddy.

BWXT Y-12 presented the pledged donation to Oak Ridge Schools Superintendent Tom Bailey and school board chair John Smith at a school board meeting in June. Since then, several other area businesses have joined in contributing toward the $8 million.

Smith said he thanks BWXT Y-12 in joining the other businesses that have already stepped forward.

Board member Tracy Larabee said it’s important that the community and businesses realize this is more than just remodeling a high school.

“I think you will find it will make Oak Ridge a more attractive location,” Larabee said.

The Oak Ridge school system is moving forward on the renovation project for the high school after a preliminary programming and engineering design effort provided by Heery International, a Nashville-based engineering firm. Three options were recommended by Heery, including a baseline renovation at the current site, a 21st century school at the current site and a 21st century school at a greenfield site—a new site. Ultimately, the Board chose to move forward with renovating the school at the current site making it a 21st century high school. The renovation could cost up to $58 million.

2004 Y-12 ALL-HANDS MEETING: SEPTEMBER 23

The 2004 All-Hands Business Meeting with President and General Manager Dennis Ruddy will be held on Thursday, September 23, from 1 to 3 p.m. at the Knoxville Civic Coliseum (500 Howard Baker Jr. Avenue).

Ruddy will present updates on the “state of the plant,” including statistics and performance data for the year, and will discuss future plans for Y-12. In addition to a review of the business outlook for Y-12, Ruddy will discuss feedback received from Y-12’s leading customer, the National Nuclear Security Administration, and employees.

At this year’s meeting, Ruddy plans to discuss factors contributing to Y-12’s FY 2004 successes and continuous improvement initiatives.

Bus transportation will be available. If preferred, employees may drive their personal vehicles. Free parking will be available to employees in the coliseum’s garages.

Attendance is not mandatory but encouraged. More than 2,500 employees were on hand for last year’s meeting at the Expo Center in Knoxville, and an even bigger turnout is expected this year. Refreshments will be served. See insert inside this issue for details.
What is behavior? Often people assume that when someone wants to talk to them about their behavior that it is going to be a negative experience. But within the realm of behavior-based safety, behavior is simply observable acts—acts that we do every day while at home and at work.

What a lot of people do not realize is that we often choose to behave in a manner that puts us at a greater risk for injury. These are “at-risk” behaviors. These at-risk behaviors can lead to and cause near misses, accidents and injuries at Y-12.

BWXT Y-12 has named its behavior-based safety process BEST...Building Everyone Safe Tomorrows. In this employee-driven process, each employee is represented by one of 16 steering committees.

The foundation of this process is that employees observe employees performing tasks, provide feedback and identify barriers to performing work safely. Increasing our safe behaviors and reducing our at-risk behaviors is what the BEST process is built upon.

Through the observation process, people on the floor or in the office serve as observers, collect data and then analyze those data to improve the workplace. This process is different from most safety initiatives because it focuses on “leading indicators,” before there is an injury.

For example, BWXT Pantex in Amarillo, Texas, started its behavior-based safety process in late 2001 and subsequently made notable improvements in the site’s overall recordable injury rates. After behavior-based safety was introduced, the total recordable case rate dropped by almost 50 percent the first year and another 24 percent the second year. The lost-time injury cases, the most serious injuries, dropped by almost 65 percent during this time.

We hope to achieve the same success with our BEST process. The 16 steering committees have been selected, with training and observations now in progress. Moreover, the BEST process is being rolled out beyond the steering committee members.

This process is a challenge for all employees. We work in a 60-year-old facility in sometimes less-than-perfect conditions. Barriers have been identified that need to be mitigated and removed; management is committed to doing just that.

For example, an employee was required to climb a ladder twice a day and enter a utility room to check a tamper seal. Through the observation process, this activity was identified as an unnecessary risk, and the barrier was removed. How? Security was contacted to help determine a way to eliminate the need to check the seal. Now, employees in that area are not climbing a ladder twice a day.

My expectation is that each of us be responsible for working safely. Participation in the BEST process is an essential tool that will enable us to have injury-free careers.

At the end of the day, we all want to return safely to our families.

BWXT Y-12 awards contract for HEUMF

BWXT Y-12 has awarded a construction contract totaling approximately $120 million to Caddell/Blaine, a joint venture of Caddell Construction of Montgomery, Alabama, and Blaine Construction of Knoxville, to build a state-of-the-art nuclear materials storage facility at the Y-12 National Security Complex.

Bill Brumley, Y-12 site manager for the National Nuclear Security Administration, in an Aug. 25 letter to Dennis Ruddy granted authorization to allow final facility construction for the Highly Enriched Uranium Materials Facility (HEUMF) to begin.

“Construction of the new storage facility is the keystone of our modernization effort. This is a significant step to beginning construction of this facility,” Ruddy said.

The total project cost for the facility is estimated at $313 million. As part of this overall project, a number of small business contract awards also are being made. The project will create an estimated 400 construction jobs for 20 to 24 months.

The HEUMF represents the largest design effort at Y-12 in more than a decade. The new facility will allow Y-12 to consolidate storage of nuclear materials, improve the security posture and make managing nuclear assets more efficient and less expensive.

Site preparation and other related preliminary construction activities are well under way. Construction is scheduled to be finished in 2007.
President George W. Bush visited Oak Ridge July 12 and recognized Oak Ridge’s role in the war on terrorism, allowing people in the audience to better understand their connection to the global effort.

The crowd of about 200 inside Oak Ridge National Laboratory’s Wigner Auditorium applauded many times during the president’s half-hour speech, even standing to cheer at one point. During his address, Bush thanked Oak Ridge workers, telling them “America is safer for your efforts” and urged them to keep at it.

Oak Ridge Mayor David Bradshaw said he appreciated the recognition Oak Ridge got for helping fight the war on terrorism. “I think the president wanted to simply come and thank us for that, but also put our efforts in a larger context. This is an international fight. There are enemies we’re fighting on the horizon. And the efforts here in Oak Ridge play an important role in all of that,” Bradshaw said.

Others in the crowd were pleased to hear how Oak Ridge fits in with the larger picture. Facilities in Oak Ridge have received components of nuclear weapons from Iraq, Libya and Kazakhstan. Many people said they feel safer with Bush leading the country.

“It just kind of put it all together. Some of the information contained on other countries was surprising to me. You see a lot of different angles on the news. But it put it into context . . . very informative,” said Anderson County Chief Deputy Lewis Ridenour.
Productivity and Process Improvement

DOE, contractors win EEOICPA award

Due in part to Legal’s process improvement project, in June the U.S. Department of Energy’s Office of Worker Advocacy awarded the Oak Ridge Operations Energy Employees Occupational Injury Compensation Program Act staff and its contractor teams, including Y-12, with an Exceptional Service Award.

The award recognized the group for their efforts to eliminate a substantial backlog of claims for tens of thousands of applicant workers and their families who are seeking federal compensation for medical benefits under the EEOICPA of 2000.

The Yellow Belt PIP was initiated by Y-12 Legal to evaluate and modify the EEOICPA records retrieval process. The PIP team reduced the average processing time from 41 days to 19 days, more than half of DOE’s requested 60-day turnaround time. Reducing the average number of processing days allows more requests to be processed and is expected to yield an anticipated cost savings of more than $1.5 million through FY 2005.

With assistance from Productivity and Process Improvement Black Belts Debbie Sumner and Debbie Hunter, Yellow Belts Barbara Byrum and DeAnna Gardner evaluated and improved the claims process, which includes retrieving employee employment records, personnel records, exposure data, medical records as well as industrial health records for the facilities where the employee worked. The claims process also includes assembling the case file in preparation for review by a federally appointed Physicians Panel.

Byrum and Gardner were assisted by a variety of project team members, including Marcia Chandler, Steve Wiley and Janet Wood (all of Legal) and Paul Tilson of Science Applications International Corporation. The project was championed by Acting Managing Attorney Ken Brown and is one of many that are improving work process performance and yielding significant cost savings for Y-12.

EEOICPA claims records from 14 file cabinets and 52 drawers will be scanned and stored electronically thanks to a recent Yellow Belt project to improve the average processing time for federal energy employees compensation claims. Yellow Belts Barbara Byrum, left, and DeAnna Gardner, second from left, joined with fellow EEOICPA staff member Marcia Chandler, right, to eliminate processing steps, streamline paperwork and develop a new computer database.

Since January 2004, DOE, DOL and NIOSH have submitted 3,000 requests to the Y-12 EEOICPA Office. Of these, 2,661 requests, or 272,489 pages, have been processed.

Productivity 101

Talking about process improvements can be confusing. Below are explanations of common terms.

**Productivity and Process Improvement** – the Y-12 organization that is the focal point for productivity or process improvements. The organization is a site-wide resource within the Engineering division.

**Productivity (or Process) Improvement Project** – an industry-recognized designation for Six Sigma Black Belt, Yellow Belt or Green Belt projects specifically aimed at productivity or process improvements.

**Primary Metric** – a standard measurement that is the primary indication of how well a project is performing to its goal. A time series graph is the most common format.

**Six Sigma** – a data-driven approach to identifying, measuring and sustaining improvements. Six Sigma is a statistically based, customer-focused methodology that uses a systematic approach to allow an organization to solve business problems and improve results. Six Sigma focuses on the activities that comprise a process rather than the final outcome.

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**By identifying, measuring and eliminating defects and errors, Six Sigma leads to:**

- improved customer satisfaction (by exceeding quality expectations),
- improved delivery of goods and services (reduced defects),
- reduced cycle times,
- improved profit margins and
- increased pride and satisfaction.

Six Sigma is one of the tools that Y-12 uses to improve work process performance and yield significant cost savings.
EUO advances work management

With nearly 100 jobs processed each week, personnel of the Enriched Uranium Operations Work Management Center (EUO WMC) are busy coordinating preventative maintenance, corrective maintenance and calibrations that account for the scheduled work for 50 crafts people in two west-end buildings that process the majority of the enriched uranium material for the Complex.

Martha Polston of Manufacturing teamed Manufacturing co-op student Garrett Cook with Lloyd Jollay, a Six Sigma Black Belt, to improve the processes at the EUO WMC. Cook, who returned to Y-12 in May for his third work-term, is training to be a Yellow Belt for the EUO WMC.

"Work management is a classic industrial engineering challenge. We knew that evaluation of the data we were collecting was valuable, but there wasn’t time for us to do it. That’s where Six Sigma is great—it allows us to continue to do the work, while the Yellow Belt establishes the data collection and analysis process, and begins to implement the continuous improvements to streamline a complex system," says Polston, a facilities specialist.

Jollay agrees, "This is a classic example of how Six Sigma should work."

The goal of EUO WMC is to have 80 percent of resources dedicated to scheduled work, with 20 percent allotted for unplanned “hot”—or in EUO lingo “SPOC” (single-point-of-contact)—work. The process improvement project team continues to evaluate collected data to see how to keep progress toward the goal on track.

As EUO WMC aims for its 80/20 goal, the analysis and improvements offered from the PIP team will continue to play an important part in the center’s improvement.

The plasma screens in the Enriched Uranium Operations Work Management Center represent the sizeable advancement in the way work is processed. Six Sigma Black Belt Lloyd Jollay, Martha Polston and Garrett Cook (shown left to right) are integral contributors to EUO WMC continued improvement.

Get a (new and improved) grip

"This is a much-needed improvement that hasn’t cost extra money and shows what cooperation among operators, engineers, supervisors and Six Sigma people can accomplish."

–Lee Bzorgi, engineer

When Scott Tapley, a chemical operator, mentioned to Debbie Sumner, a Six Sigma Black Belt, that part of his job causes pain in his hand and wrist, she contacted engineer Lee Bzorgi, who set to work to model an ergonomic grip to slip around the key.

Part of Tapley’s job requires him to turn a key hundreds of times an hour. He has to hold a padlock in one hand and turn the key with the other hand. Bzorgi came up with a low-torque tool that fits over the key and sits comfortably in a person’s hand. He took his design to the 9201-1 machine shop, where he hoped a prototype could be fabricated. In a real show of teamwork and cost savings, Ernie Roberts and Carl Linginfelter, supervisors in 9201-1, came up with the idea of manufacturing the key addition as part of operator training on a new cutting tool.

Soon after, a prototype was ready for Tapley to try out. And his reaction? "I’m very happy with the look and feel of what we’ve got so far," he says.

The effort has been a multi-success. According to Bzorgi, "This is a much-needed improvement that hasn’t cost extra money and shows what cooperation among operators, engineers, supervisors and Six Sigma people can accomplish."

The real success will be use of the final grip, which will also be fabricated by the 9201-1 shop.

Tapley says, “From seeing the prototype, I believe the key grip will work well, but we won’t know how well until we use it in the field. Still, even a little ergonomic improvement will make a big difference.”
Y-12’s Jane Miller wins seat on Oak Ridge City Council

The newest elected member to Oak Ridge City Council happens to be a Y-12er who works in Public and Governmental Affairs as community relations and visit protocol specialist.

Oak Ridge voters elected Jane Miller to City Council by a large margin; she received more than 46 percent of all votes. Miller was appointed to Council last fall to replace Jerry Kuhaida who went on a work assignment in Iraq.

Miller has been a resident of Oak Ridge since the age of three, attended Oak Ridge public schools and graduated from the University of Tennessee. She has been active in the community for many years, serving two terms as the Board of Directors Chair of the Oak Ridge Convention and Visitors Bureau, and as an alumnus of Leadership Oak Ridge’s Class of 1999. Miller currently serves on the Leadership Oak Ridge board of directors and is an alumnus of the East Tennessee Leadership Class of 2003.

Y-12 has two other members serving the Oak Ridge City Council. Leonard Abbatiello of Applied Technologies and David Mosby of Projects also serve on City Council.

Another Y-12 employee, Winfred “Wimp” Shoopman of Operations, currently serves as mayor of Clinton.

Emergency Management Program wins awards

Members of Y-12’s Emergency Management Program recently accepted awards on behalf of Y-12 during the 19th Annual Meeting of the Department of Energy’s Emergency Management Issues Special Interest Group held this past May in Washington, D.C.

Emergency Management Program Manager John Bolling joined Terry Nore, Janet Murrill and Robert Gee in accepting awards for Best Display and Sharing of Technical Information. Bolling serves as the EMI SIG Steering Committee chairman and opened the meeting along with Joseph Krol, National Nuclear Security Administration Associate Administrator for Emergency Operations.

Currently Nore is the chairman of EMI SIG’s Exercise and Drill Subcommittee, which focuses on sharing findings, information and good practices relevant to effective conduct of emergency response exercises involving DOE sites. Gee just completed a term as chairman of the Hazards Assessment Subcommittee. This subcommittee focuses on sharing findings, information and good practices relevant to hazards identification, screening and assessments that facilitate event characterization and other elements of site/facility emergency management programs.

Ambassador Linton Brooks, NNSA Administrator and the Under Secretary of Energy for Nuclear Security, was the special guest speaker for the meeting. Ambassador Brooks told the group that “emergency management is the last line of defense for our various operations when natural phenomena strike, equipment malfunctions, engineering safety systems fail, humans make mistakes and terrorists and malcontents attempt to cause mass casualties or significant lifestyle disruptions by various means.”

Bad Signs!

Are you seeing the signs? Some signs posted at Y-12 are confusing and/or outdated. We are making a concerted effort to remove unnecessary signage from Y-12.

The winner of this month’s Bad Sign contest is Wilma McNabb of Engineering. She writes:

“I am fairly new to Y-12, and every day I thought about the meaning of this sign as I walked by it to get to and from my work location. I asked several employees what the sign meant before I found one who knew. It has something to do with clearance for train operators hanging on the outside of a locomotive engine that used to run past the dock. They say the train hasn’t run in years, and the tracks were paved over in the 1980s.”

If you notice a “bad sign,” forward the location and/or wording to Melissa Leinart (6ml) of Public Affairs, or via telephone at 574-1621. If we use your example in the BWXTjmes, you will receive a Y-12 golf umbrella.
Travel and social events
Mark your calendar and plan on joining the Y-12 Employees’ Society for a lot of fun and socializing. All Y-12 employees, family and retirees are invited to participate in the travel and social events listed below. Contact Al Montgomery (574-0493) or Sylvia Davis (576-7296) or e-mail yes@y12.doe.gov.

October 23 – Fall shopping trip to Atlanta
Enjoy a day of fun and shopping in Atlanta on Saturday, October 23. The bus will leave Oak Ridge Mall at 6:30 a.m. and return at approximately 10 p.m. Shopping stops will include some of the popular clothing and furniture discount stores and a mall in the area. Cost is $35 per person. Bus amenities include TV/VCR, spacious seating and restrooms.

November 13 – Bus trip to Biltmore Estate
Join YES at Biltmore Estate for holiday festivities. The bus will depart from Oak Ridge Mall at 7 a.m. with an estimated return time of 7 p.m. Cost is $58 for adults and $50 for children; the cost includes transportation and admission to Biltmore.

December 7 – Holiday celebration
This event will be held at the Oak Ridge Mall. More details will be provided later.

Fall volleyball
YES and the city of Oak Ridge offer fall league volleyball.
• Open and co-ed leagues
• 10 matches with single elimination tournament
• $20 non-resident fee for players not Oak Ridge residents; proof of residency for Oak Ridge residents
• Games played on Monday and Tuesday evenings at the Civic Center
• Schedules available at coaches’ meeting on September 23 at 6:30 p.m.
• League play begins September 27
All fees must be paid, rosters signed and proof of residency in for registration to be accepted. For more information, contact Paula Zarestky at 425-3440.

Super Kukla’s role in nuclear nonproliferation
Making the world a safer place.
Y-12 dispositions surplus highly enriched uranium. This HEU is designated as surplus because it is no longer needed for national security, and it has been set aside for down blending in support of U.S. nonproliferation efforts. One piece of this program is the Super Kukla Disposition Project.

The Super Kukla Prompt Burst Reactor operated at the Nevada Test Site from 1964 to 1978. The reactor was used for neutron irradiation of test specimens, including material used in weapons. The reactor configuration included rods, disks and rings made of a uranium alloy.

All the uranium components of the reactor were manufactured at Y-12 during the 1960s. The rings, weighing almost 600 pounds each, are among the largest HEU items ever produced at Y-12. In 1979, the reactor’s HEU components were returned to Y-12 for storage. In 1995, it was declared surplus.

In September 2003, Y-12 machinists began cutting the Super Kukla reactor components into smaller pieces to be recast into shapes better suited for off-site shipment and down blending. The Super Kukla material will be down blended to low enriched uranium and sold to commercial nuclear utilities or research reactors for use as fuel.

Super Kukla represents a small portion of the surplus HEU residing at Y-12. As the HEU Disposition Program Office carries out its mission, the legacy stockpile of surplus HEU at Y-12 will be significantly reduced, making the world a safer place.

Tabletop precipitator mockup: Y-12 ingenuity at work
A little duct tape, a little cardboard, a little Y-12 ingenuity . . . the makings of a $250,000 savings in National Security Programs. Y-12 needed the capability to process small batches of nitrate solutions into solids, and existing systems were not suitable. The targeted processing materials included solutions drained from shut down equipment and analytical laboratory operations as well as dissolved fines from metalworking and other operations.

A tabletop precipitation system was to be installed in an existing and operable exhaust hood within the production facility. However, there were significant concerns that the system could not be designed and built to fit within the design envelope and still meet the human factors issues required for safe and efficient operation.

The project team proposed the construction of an exhaust hood and precipitator system mockup that could address the design concerns in a nonradiological environment.

Using readily available materials—cardboard, duct tape, standard office tables, etc.—a full-scale replica of the exhaust hood was assembled and a fully operational precipitator was installed. The mockup facilitated the final design process and provided a nonradiological area to support the primary system installation, procedure development, testing, operator training and startup. This ingenious system was inexpensive and provides an accurate, real-time operational simulation.

The mockup provided proof of design and showed where upgrades were needed, saved money by using uncleared personnel and saved an estimated $250,000 in rework costs and 8 weeks in schedule. Several design changes associated with human factors were identified and integrated into the design prior to installation of the production unit.

During this entire process, the production facility was free for ongoing production and maintenance activities, and after startup approval, the mockup unit will be used as a spare-parts inventory. The system is expected to be operational by late September 2004.
Kevin Carroll receives EFCOG Award of Excellence for Leadership

Congratulations are in order for Kevin Carroll, whose contributions recently were recognized by the Energy Facility Contractors Group. Pam Horning, manager of the Engineering organization and member of the EFCOG Board of Directors, presented the award to Carroll.

EFCOG, a volunteer organization that is directed by senior-level executives from Department of Energy contractors, was formed in 1991. The contractors (management and operating, management and integration, and laboratories) wanted to better promote, coordinate and facilitate the active exchange of successful programs, practices, procedures, lessons learned and other pertinent information of common interest.

Y-12 takes a leadership role in support of EFCOG. An area of concentration for this year is improved communication and interface between the Facility Safety and the Criticality Safety communities. As part of this initiative, Carroll, Y-12’s manager of Safety Analysis Engineering, took a leadership role in coordinating efforts between the EFCOG Safety Analysis Working Group and the DOE Headquarters Criticality Safety Support Group.

For his efforts, Carroll was given the Award of Excellence for outstanding leadership and devoted service in contribution to the EFCOG mission.

Thomas Stevens, chairman of EFCOG, commended Carroll in a letter stating, “Your leadership and devoted service to the Criticality Safety Support Group has been exemplary and serves as a model for all of EFCOG’s volunteers.”

Horning echoed Stevens’ sentiment—“Kevin’s outstanding efforts are to be commended,” she said. “EFCOG is a resource that fosters cooperation and learning throughout the DOE complex. Y-12 can contribute so much to it. We also benefit a great deal from the other participants, as well.”

To learn more about EFCOG, check out their Web page at http://www.efcog.org/.

Kevin Carroll, Y-12’s manager of Safety Analysis Engineering, receives EFCOG Award of Excellence from Pam Horning, EFCOG Board of Directors.

Quote

“Ten hours a day, we live behind gates guarded by men with guns, work behind walls with no windows and surrender our dignity to cameras, detection devices, personal searches and lists of names and badges that define who we are. All to ensure that no one else ever has to.”

– Alonza Campbell, Pantex