

Y-12's many photographers

Photography Manager Terry Marlar has been surprised during his tenure at Y-12, but one thing he didn't expect was the number of high-quality amateur photographers within the Complex.

"I was amazed at the great photos we received for the contest," Marlar said of the more than 1,000 photographs entered in the East Tennessee Nature Photography Contest. Winning photographs will be displayed in the Jack Case and New Hope centers.

Photographs were judged on technical and artistic aspects, the same process used in most professional photography contests. Judges looked at lighting, exposure and sharpness for the technical aspect; the difficulty of the shot, composition, color balance and lasting effect of the photo for the artistic aspect.

No names were associated with any photographs during the judging. "Kathy [Fahey] gave each photo a number. She was not involved in the actual judging, but she kept us organized throughout," Marlar added. Judges included Marlar and Photography members Linda Cantrell, Jamie Loveday, Brett Pate, Kevin Thornton and Carol Trentham.

Future issues of the *BWXTymes* will display all winning photographs. If you have questions, contact Marlar (m73; 574-1287).



Jeff Moore of Engineering received the best of show award for "Xanadu's Devisor," taken at East Fork Obey River in April 2006.

Why volunteer?

People usually say they volunteer because it feels good to help those who need an extra lift. This feeling was no exception for the more than 480 Y-12 employees and their family members who volunteered at 30 organizations during the company's recent Day of Volunteering.

Volunteers performed a variety of tasks—serving breakfast to the homeless, cleaning up landscapes and playing bingo at retirement centers. The rain made some tasks messier than others, but it was all for a good cause.

Volunteer Karen Dixon of Public Affairs and Communications said, "The Day of Volunteering is not about Y-12; it's about helping others. The people you help by volunteering may never know you, but they'll be grateful just the same." Feelings similar to Dixon's were felt by other volunteers.



Erin Rood, Planning, Integration and Control

Detecting cell phones

Catching personal cell phones at the portals may become a little easier thanks to a project Ed Stubbs of Engineering is working on to detect the phones electronically. A professional commercial device is being purchased for testing at a cost of about \$2,000.

The device operates by finding the intermittent signal a cell phone sends to the communications tower during the time the phone is turned on. The detector to be tested was chosen because of its state-of-the-art technology and low cost.

A big advantage is that it works passively so that no monitoring mechanism, such as a radio frequency identification label, needs to be attached to the phone. Obviously, for an RFID to work, people need to cooperate by attaching labels.

The detector to be tested can be set to alarm before a person passes the badge reader. It has good range of detection and no effect on medical implants like pacemakers.

When a phone is detected, a red light illuminates. A jamming device can be plugged into the voltage output so that the cell phone is immobilized. Sensitivity control allows adjusting the range at which the detector responds, and a switch can be used to trigger an audible alarm.

Information Technology's Kim Cobb is polling other Nuclear Weapons Complex sites to understand the effectiveness of other cell phone detection systems. Most of the sites use the more expensive (\$15,000 to \$20,000 per detector) RFID technology.

Stubbs said the model chosen for testing looks like a good choice for the Y-12 environment. "We knew we needed state-of-the-art capability, but we didn't want a huge engineering project—just something off the shelf that Maintenance could go plug in," he said.

Still, the detector isn't a substitute for personal responsibility to follow the security rules.

More photo contest winners

1st Place: Gene Stevens of Fire Protection Operations won first place for his photo "Cove Lake Majesty" taken at Cove Lake State Park.



2nd Place: Wes Sims of Information Technology received second place for his photo "Osprey Landing on Nest" taken at Watts Bar Lake.



3rd Place: First-place winner Stevens also received third place for "Dawning," a photo taken of Caryville Mountain in October 2001.



Why volunteer?

"It's a community-oriented organization, and I admire their motivation to help people. I would like to become more involved in their volunteer services."
Judy Shaver, Planning, Integration and Control
Habitat for Humanity of Anderson County

"My motivation is to help young boys benefit from the scouting experience and to 'give back' what others gave me when I was a scout."
Paul Wasilko, Environment, Safety and Health
Boy Scout Troop 42

"For several years, I have visited with the homeless and abused children of Knoxville Area Rescue Ministries. It is a pleasure to work with the staff of the rescue ministry. The dedication and love they have for those who are less fortunate is inspiring."
Doug Mullins, Engineering
Knoxville Area Rescue Ministries

"I have a desire to help the Children's Defense Fund that operates the Alex Haley Farm. They pay particular attention to the needs of poor and minority children and those with disabilities."
Jim Barnes, Human Resources
Alex Haley Farm

Numerical control inspection engineers are into training

“Probably a lot of people, even in Engineering, don’t know much about what we do,” said Lonnie Cochran of Mechanical and Manufacturing Engineering. Both he and Rocky Walker, also of Engineering, are numerical control inspection engineers—experts in using coordinate measuring machines to test how well parts conform to specifications.

The main job of the two engineers is to write numerical control programs for inspectors to use in the certification of parts. But since the early 1990s, they have also collaborated with Product Certification to transfer their knowledge through formal training of the quality inspectors. As trainers, they prepare lesson plans, conduct instruction sessions and certify inspectors to two competency levels.

Level 1 training, which lasts a week, starts with text-based instruction and moves to hands-on. The inspectors learn about the capabilities of the CMMs and the QUINDOS software program that prompts them for a series of actions. After launching QUINDOS to begin the testing procedure, the inspector loads the part on the CMM and positions the testing probe according to program instructions. After the probe completes measurements, the test results are printed as a dimensional certification report.

In Level 2 training, a qualified inspector learns to do more than computer-prompted actions. For example, he or she could be asked to measure the diameter of a characteristic. The training takes a full month, and inspectors must be recertified annually.

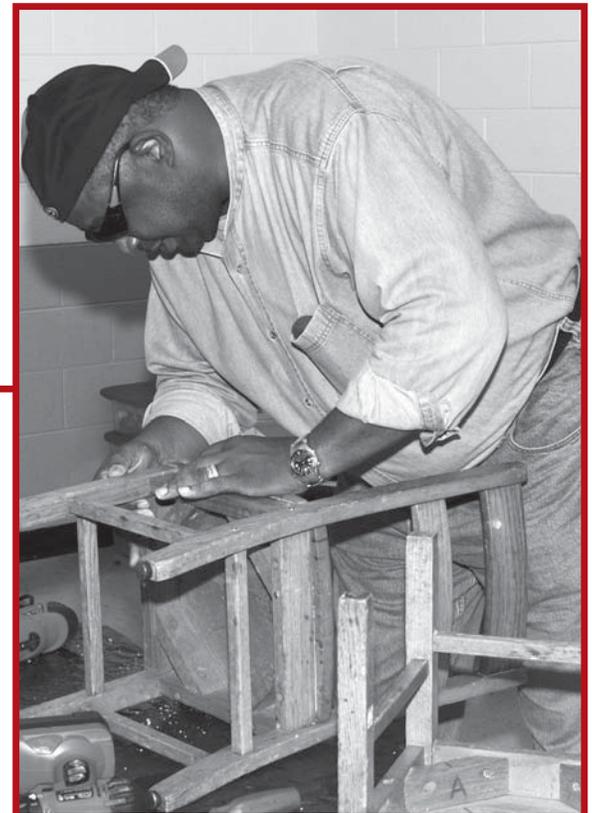
Whether testing is conducted by a Level 1 or Level 2 certified inspector, the resulting dimensional certification reports are signed by more than one person. “We must be confident that what the inspector has done is correct,” said Walker. “That’s why we still require multiple sign-offs.”

A revision to the training plan is needed when the software that operates the CMM during testing changes. The most recent change, which was migration to the QUINDOS software, allowed networking (alleviating the need for removable media), improved file compatibility and saved time. QUINDOS was written by the company that manufactures the CMMs and was then modified to meet Y-12 requirements.

People other than inspectors also receive training. Supervisors, design agency representatives and viewers of printout results receive the CMM overview, and inspection engineers receive software training. Walker said, “It particularly helps for the designers to understand the testing process when they evaluate the tolerances associated with the part.”



Rocky Walker and Lonnie Cochran (left to right) inspect the coordinate measuring machine used for training.



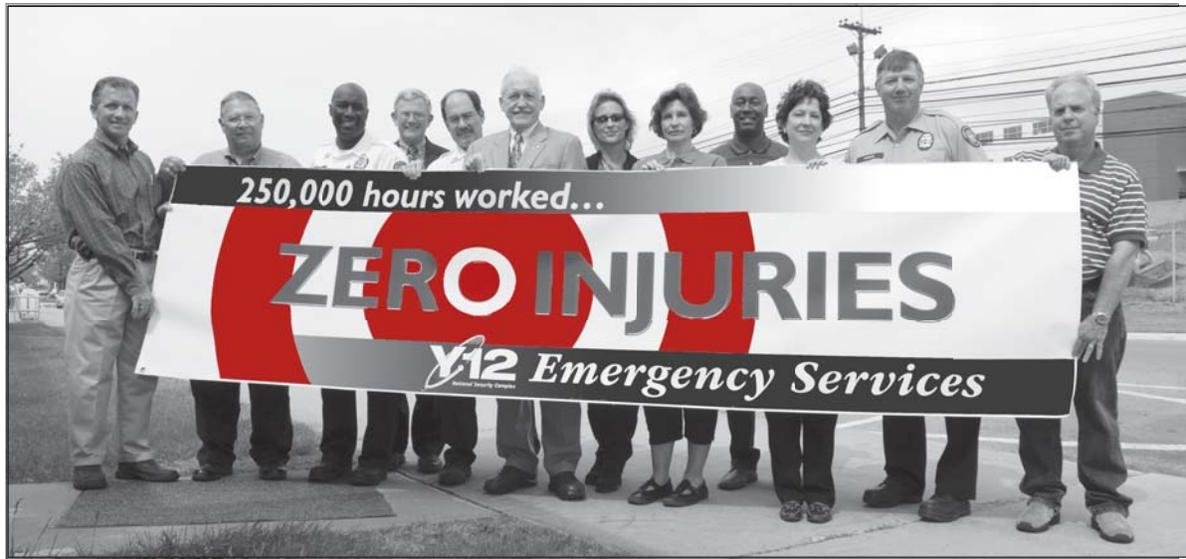
Bill Thornton, Information and Materials

“The log cabin classroom supports a larger outdoor ecological classroom designed around a wetland. Wetlands are an extremely important part of our ecosystem, providing an essential link in the life cycle for numerous species of fish, birds, amphibians and reptiles. One of the best ways to protect our wetlands is to educate our children about their value at an early age.”
Robert Spurling, Projects
Norris Elementary School log cabin construction

“We are able, we have energy and we recognize a need to give something back to the community.”
Peter White, Safeguards and Security
Oak Ridge Retirement Center

Emergency Services department hits target. Emergency Services employees recently achieved Target Zero by completing 250,000 hours of work with no injuries. This "banner" achievement may be noticed by employees passing the Plant Shift Superintendent's office or the Fire Hall.

As employees gathered to hang a celebratory banner, President and General Manager George Dials offered his appreciation for their willingness to step up to the Target Zero mark and noted it as a stellar example of "what you do counts." Robert Gee, Lorry Ruth, M.C. Goins, Butch Clements, Scott Hackler, George Dials, Pat Burrell, Kathie Hensley, Jerry Foster, Teresa Lawlor, David Byrge and Tim Morris hold the banner celebrating their success.



First civilian visit to Y-12

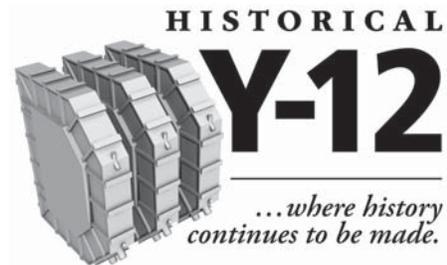
The first person other than a Manhattan Project employee or an Army soldier to see Y-12 was 78-year-old Henry L. Stimson, who was serving a second term as Secretary of War. Stimson had been briefed on the atomic bomb project in November 1941, and it was he who reported to President Franklin D. Roosevelt about the project. On April 25, 1945, two weeks after touring Y-12, Stimson gave President Harry S. Truman his first full briefing on the atomic bomb.

The following information is quoted from *The New World* by Richard G. Hewlett and Oscar E. Anderson Jr. "Shortly after noon on Tuesday, April 11, 1945, General Groves arrived at the Knoxville airport by plane with Stimson and his military aide. ... the party drove to K-25. To save the aging Secretary's failing strength, the motorcade proceeded around the sprawling K-25 building, down the cluttered roadway to the bottom of the 'U,' and then to the large service building where components were tested, assembled, and repaired. Entering the structure, the cars stopped for a few moments so that Stimson could examine some of the equipment.

"From K-25 the party drove over the back road to the X-10 area, where [he was presented] ... with a short talk and demonstration at the pile building. On the way back to Oak Ridge, the group stopped on the ridge near the filtration plant to give Stimson a bird's-eye view of Y-12 and the town.

"That evening, Colonel Nichols entertained the Secretary at a small reception in his home. ... the next morning there was a briefing on the Y-12 plant at the Guest House, an inspection of trailer and housing units in the town, a tour of three process buildings at Y-12 and the long, bumpy drive to the Knoxville airport."

Do you have a story to tell? Contact Ray Smith (srd; 576-7781) with suggestions for future stories of Y-12's unique history.



Why volunteer?

"I want to give back to the community a little of what I had as a child. I will always remember playing ball there, and I hope that the children of Claxton will have the same kind of memories I do." Shawn Estopp, Quality Assurance Claxton Ballpark

"I am a participating member of the troop and want to ensure that a program offers effective character, citizenship and personal fitness training." Mark Haskew, Environment, Safety and Health Boy Scout Troop 157

"Not only is Woodland Elementary where my sister is employed, but it is also in 'the Y-12 neighborhood.'" Tina Pippin, Chief Financial Officer Division Woodland Elementary School

"I truly love working with people and meeting new people, and the opportunity to use my gifts and talents to help others is so self-gratifying. This particular event delivers joy and happiness, and for what more can one ask?" Brenda Hunter, Internal Audit Knoxville Opera Board Rossini Festival

Y-12's twin water towers

Two new water towers are to be built just north of Bear Creek Road. The towers—sited across from the Jack Case Center—are part of a project to upgrade Y-12's potable water distribution system.

"Because of the gravity-fed flow system, the 200-foot-tall tanks will provide more water pressure over the whole site," said Jeff Coppala, the project engineer.

Although the water supply will still come from the city of Oak Ridge, the new tie-in to the main pipelines will allow higher available water pressure for the site. One tank will be designated for standby, and air gaps will protect the city of Oak Ridge tanks from backflow.

Why was this location chosen? The short answer is that it is where the main water lines are. The distribution system runs east-west along Bear Creek Road, and the proposed location makes connecting to this area of branching pipes cost effective.

The pivotal question at the beginning of the project was, Could the current three potable water tanks on Chestnut Ridge be refurbished? Cost analysis showed that to achieve the improved water distribution and higher available pressure, it was more cost effective to build new tanks. When the project is completed, the tanks on Chestnut Ridge, which are currently being used for backup potable water, will no longer be needed.

According to Rebecca Spiva, project manager, the new tanks will look like sleek cylinders with a dome on top. "They are

fairly elegant structures as far as tanks go," she said. The cylinder portion will be an open area for access—by way of ladders, not stairs—to the water stored in the top chamber. Pumps serving both tanks will be located inside one of the cylinders.

Dale Hatcher, mechanical engineering manager for the project, said the project team is preparing for design and procurement. Team members have made field trips to Shelbyville and Murfreesboro to see two types of tanks in use: concrete and steel. Concrete may be more expensive but is maintenance free. A composite material is another option.

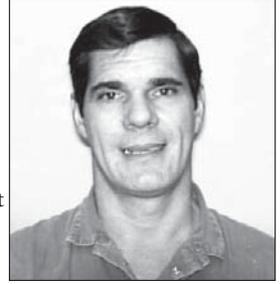
The project will be executed as design-build, which means it's likely that one company will be chosen to design and either build or oversee building of the tanks. The request-for-proposals is being written, and engineers are drafting conceptual drawings showing location and connecting underground piping at Y-12. "We also have performance specifications for the tanks that will be used to evaluate potential vendors," said Hatcher.

The two-year construction schedule calls for breaking ground about February 2008.

Although the top of the tanks will probably be seen from Oak Ridge, Spiva debunks any truth to jokes that they will be seen from I-40. "The main visibility will be here in the valley between Pine Ridge and Chestnut Ridge," she said.

Obituary

David Treadway of Facilities, Infrastructure and Services passed away April 13. He was a locksmith and had worked at Y-12 for 31 years.



David Treadway

Treadway is survived by his fiancée, Debbie Roche; daughter and son-in-law, Katrina and Donny Burt; sister and brother-in-law, Val and Tom Purdy; brother and sister-in-law, Tony and Patricia Treadway; stepfather, Kirk McCarty; stepdaughter, Heather Roche; and stepson, Sean Roche. Memorials may be made to the Victory Junction Gang through NASCAR and/or the American Cancer Society.

“My desire to help is based on needs I saw there when

my son attended. This is a chance to use BWXT Y-12's worthwhile Volunteer Day program to improve conditions in the school that would otherwise not get done and give something back to our community.”

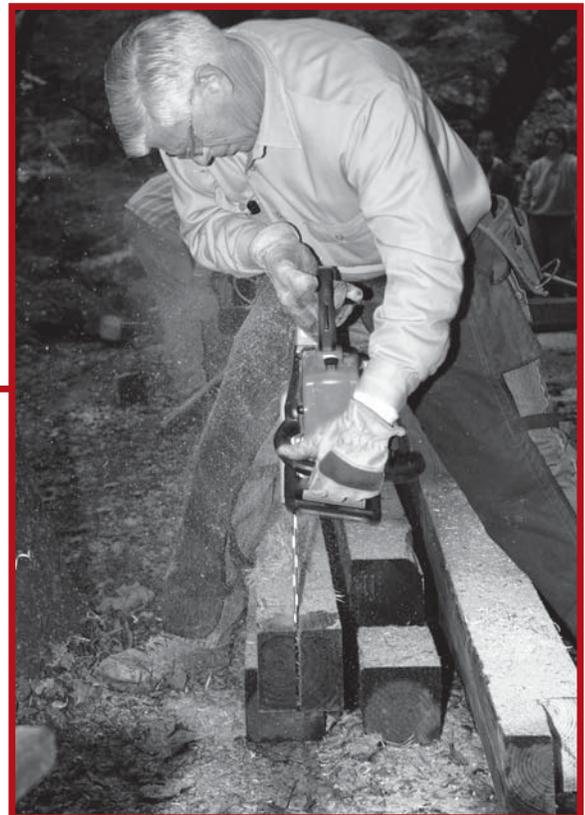
William Smith, Manufacturing
Robertsville Middle School

“The current sandbox fills with water after rains and makes the area unusable

to the children. The principal and staff at the preschool cannot wait until we come and fix their sandbox. Gratitude and enthusiasm like this make volunteering very easy!”

Jim Zonar, Productivity and Process Improvement
Oak Ridge Preschool

Dick Love, Manufacturing



What you do counts



Jim Pate

In the mass lab at the Oak Ridge Metrology Center, metrologist Jim Pate's tools include gleaming stainless steel weights stored in beautiful wooden boxes. Calibrated by the National Institute of Standards Technology, they are the standard for comparison in the process of mass measurement. The smallest mass comparator used in this process has readability to a tenth of a microgram.

"There is a big difference in how precise you have to be if you're weighing garbage rather than gold," said Pate. "When you're weighing the types of things this plant has to weigh, you have to be precise."

In addition to calibrating weights for Y-12 organizations such as Analytical Chemistry, the ORMC field calibration lab calibrates scales throughout the plant. Even the scales that weigh your salad in the cafeteria are calibrated by the Metrology Center and are traceable to NIST standards.

"ORMC sends us to training at NIST in Gaithersburg, Md.," said Pate. "You're being shown exactly how NIST does its measurements and how NIST expects you to do yours."

Though Pate's work in the mass lab focuses on calibrating weights for scales, divisions within Y-12 depend on the Metrology Center to calibrate all measuring equipment, including devices that measure current voltage, time and frequency, resistance, temperature, pressure, gas flow, vacuum, torque, force and others.

"Generally speaking, people don't understand what goes on here," said Pate. "We're the ones making sure the processes are done the way they're supposed to be. We're not trying to keep people from getting their work done, but we are trying to make sure it's done in a correct fashion."

Pate has worked at Y-12 for 16 years. "I started in the computer shop in this building and then went to K-25 for five years in radiation instrument calibration before returning here."

You will find Pate in the Metrology Lab measuring mass and weight to world-class standards, a responsibility crucial to the successful operation of the Y-12 National Security Complex.



"T

he people who make a difference in our lives are not the ones with the most credentials, the most money or the most awards. They are the ones who simply care."

Sissy Durden-McGhee, Projects
Briarcliff Health Care Center

Why volunteer?

"I believe that in some small way, I am helping those who

are alone, whose spouses may have passed away since the last time I saw them, whose children may have forgotten them. I, and the team, bring a little bit of sunshine, hope and fun into their lives, and they bring us joy too."

Arlene Tapp, Manufacturing
Wellington Place

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"God has a lot to do with it; I just want to

help people."

Andy Owen, Environment, Safety and Health
GooD DeeDs of Oak Ridge

"It's nice to do something for someone who

is usually on the providing side rather than on the receiving side."

Barbara King, Information Technology
YWCA

"Ben Arnold and I both have children who attend Oak Ridge

Nursery School. The school was started by a group of parents at the height of the Manhattan Project during World War II, and it is still owned and operated by parents of enrolled children."

Beth Schultz, Environment, Safety and Health
Oak Ridge Nursery School

May 2007

New vehicle policy in effect

Environment, Safety and Health has established a new motor vehicle policy, Y72-008, to help achieve Target Zero and make Y-12 a safer place for drivers and passengers of vehicles and equipment and for pedestrians. Parking lot observations and employee concerns were also a basis for the new policy that became effective May 1.

“We wrote the policy with the expectation that employees, subcontractors, vendors and visitors will comply with established driving rules, Y-12 guidelines and other applicable policies,” said Justin Davis of ES&H’s Continuous Safety Performance Improvement.

All employees, subcontractors, vendors and visitors are expected to operate motor

vehicles in a safe manner according to applicable *Tennessee Rules of the Road* and state laws and regulations, in addition to requirements established by Y-12.

The motor vehicle policy is a result of U.S. Department of Energy rule 10 CFR 851, Worker Safety and Health Program.

Mark Haskew of ES&H’s Safety department said, “Another aspect of the policy is to remind pedestrians to be alert to hazards posed by vehicle traffic and use crosswalks where provided.”

Davis and Haskew remind drivers and pedestrians that pedestrians have the right-of-way, but pedestrians should make eye contact with drivers to ensure the vehicle stops before crossing a roadway.

The policy is a basic driving/rules-of-the-road document and is meant to reduce potential risks that may come to drivers and pedestrians within Y-12. “The policy is about helping Y-12 achieve the goal of Target Zero. It is also enforced, so we are focused on the safety of all employees,” Haskew added.

Driving behaviors will be routinely monitored and tracked by ES&H and other organizations (for example, Safeguards and Security). Observations will be communicated to division managers and Labor/Employee Relations.

If you have questions or comments about the policy, contact Davis (jd2; 574-9900).

Got a question or concern?



The Employee Concerns Program and Q&A Connection are Y-12’s primary web-based question-and-answer communication forums. These

websites can be accessed under the tabs on YSource.

Use the Employee Concerns Program to submit environment, safety and health; ethics; or equal opportunity/employee concerns (for example, potential hazards to employees and other personnel, potential discrimination

and/or harassment, or inappropriate behavior in subcontracting activities).

Use Q&A Connection for questions about the general operation of Y-12 (for example, business travel, shuttle services, staffing, government property, company drives, badging and clearances, compensation, cell phones, allowable costs, or site planning and modernization).

The Employee Concerns Program and Q&A Connection do not replace the one-on-one communication you should have with your supervisor or manager; the tools are supplemental

resources to get personalized, accurate, thorough and timely answers to your questions or concerns.

“The center’s goal is to get more people off the streets and into housing and help prevent chronic homelessness. The center offers counseling and the basic necessities to help people turn their lives around. I admire the dedicated staff and the work they do to make a difference.”
Elaine Warren, Public Affairs and Communications Volunteer Ministry Center, People’s Clinic

“My wife and I don’t consider ourselves artists, yet we appreciate the incredible artistic talent in our community and want to see it sustained.”
Larry Metcalf, Planning, Integration and Control
Oak Ridge Art Center



Alvin McGhee, husband of Sissy Durden-McGhee, Projects

The countdown continues

With the perimeter construction fencing removed for landscaping and paving purposes, employees can get a much better view of the Jack Case (as shown in photo) and New Hope centers. The buildings look very inviting, but please remember that these are still active construction sites and off limits to all without prior authorization. Safety continues to be the No. 1 priority. Please DO NOT enter the construction sites for any reason. Please do not even approach the guard shack to request entrance. If having a tour is an absolute must, contact Randy Spickard, Cynthia Woodward or Ron Wantland. They will work with you and will provide guidelines for appropriate footwear, hardhats, safety glasses and safety vests.

Moves will be under way in two months; be prepared. Don't move anything you don't need. Clean out your office and files now and be ready for your scheduled move date.

Following are a few items of interest related to construction and the Mega Move:

- Overall construction on the two sites is now 95 percent complete.
- Kitchen equipment has been installed in the Jack Case cafeteria.
- Moving boxes will be provided by the move subcontractor. Each employee who is

moving will receive 10 boxes, each approximately the size of a copier paper box, for regular office moves.

- Keyboard trays have wrist rests.
- Watch the Mega Move website on YSource as new information and updates are added weekly. It contains information created to date related to Jack Case and New Hope construction and move guidance.
- Enjoy a photo tour of Jack Case or New Hope from your computer by visiting the Mega Move website. These tours can be taken without prior authorization and without safety gear.



Watch YSource, YLights, *The Y-12 Report* and the *BWXTymes* for more construction and move updates.

BWXTymes

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<http://www.y12.doe.gov/news/bwxtymes.php>

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