BWXTymes JANUARY 2007

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

New Hope Center LEEDs the way

The construction sign at the New Hope Center says that it's a LEED project, but just what is LEED?

The Leadership in Energy and Environmental Design program falls under the U.S. Green Building Council and is used to guide building design toward a holistic approach to sustainability. Our country's need to construct smarter, more environmentally friendly buildings is the focus of the program, and Y-12 is following it in new construction projects.

With exterior finish work nearly complete and interior wall framing and drywall well under way, crews will begin laying carpet and assembling furniture in February.

The USGBC, a consensus-based, nonprofit organization, was established in 1994. Tennessee now has five certified buildings. Statewide, 22 projects have registered to become LEED certified. The LEED system is a nationally accepted benchmark for the design, construction and operation of high-performance "green" buildings. LEED supplies building owners and operators the tools needed to create an immediate, measurable impact on building performance and focuses on performance in five key areas: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

Jack Case and New Hope centers have incorporated a number of LEED-guided sustainable building practices and techniques, with New Hope pursuing LEED certification. From establishing parking spaces for alternative-fuel vehicles to low-flow water fixtures in the rest rooms to New Hope's four above-ground 12,000-gallon rainwater harvesting tanks, LEED has inspired an impressive list of green features throughout both facilities. Because the Jack Case Center is located within Y-12, it is not economically feasible to pursue LEED certification for that structure.

Mark West, Susman Tisdale Gayle architect and LEED accredited professional, said, "The LEED program at its core is a catalyst for regionally appropriate, energy-efficient, ecologically sustainable design—it is what all projects should strive to achieve. Whether the focus is on storm water quality, native landscaping, rainwater reclamation, reflective roof systems, low-volatile organic compound interior materials, indoor air quality, daylighting or mechanical and electrical design for energy efficiency, the complexity and forethought that has gone into the development of the LEED program is amazing. LEED forces projects to integrate sustainability into the foundation of the project, making it a nearly inextricable design component."

To learn more about LEED, visit the website at www.usgbc.org.

BWXT Y-12 earns 2006 fee award

"BWXT Y-12 has been notified that it earned $33.6 million in fee for the management and operation of Y-12 for fiscal year 2006, a $4.3 million increase over fee earned in fiscal year 2005.

"This is the fifth consecutive year that Y-12 has improved its performance and fee earnings. We gratefully acknowledge the dedication and hard work from Y-12 employees who made this success possible.

"The NNSA's evaluation of our performance is a testament to your dedication and commitment to excellence. We add our appreciation and congratulations for an outstanding year."

—George Dials, President and General Manager

Postcard from Russia, pg. 5 * The prophet speaks, pg. 6 * Peeper protectors, pg. 7

Objectives

Strategic Objective 2: Ensure the protection of the Y-12 National Security Complex.

Strategic Objective 3: Acquire and sustain a highly educated, skilled, experienced and collaborative workforce.

Strategic Objective 4: Meet our customers' cost, schedule, and quality expectations for products and services.

2. Protect Y-12

Butch Clements, Safeguards and Security division manager

"It should come as no surprise that protecting Y-12 is a strategic objective. Our customer and the nation depend on us to do nothing less. Security can and must be at the forefront of all of our activities. If not, we risk more than failing our company—we risk failing our country.

"Security at Y-12 … has to evaluate our security posture with regard to the probable threats. Following that evaluation, we must take action, thus the emphasis on design basis threat implementation.

"Through enhancements … and upgrades, we're working diligently to continue to ensure the security of our site.

"My implementation team and I want to hear from you. We know that no one is more dedicated to the security of this site and this nation than Y-12 employees. Watch YSource, the *BWXTymes* and other media to learn how you can help us ensure protection of the site because what you do counts."

3. Maintain a highly skilled workforce

Debbie Shecterle, Human Resources division manager

"Y-12 isn't successful because of our buildings, technologies and processes. It's successful because of our people. Without passionate, focused, versatile and highly capable employees, Y-12 cannot implement its strategic plan or meet the expectations of our customers.

"Creating and sustaining a talented and motivated workforce doesn't just happen. It takes planning and work. Replacing critical skills lost to attrition, acquiring skills to support Complex 2030 and enhancing the skills of the existing workforce are critical to the success of Y-12.

"Human Resources is developing and implementing the bulk of the strategies required to achieve this objective and is asking for input and participation from a variety of internal resources. Many initiatives have already begun; others have yet to be started.

"Success will be achieved when Y-12 is recognized as the preferred employer in the region not only because we offer stable employment but also because Y-12 is an energizing, motivating and fulfilling place to work."

4. Meet cost, schedule, and quality goals

Bill W. Reis, Defense Programs Management director

"The U.S. Department of Energy and the National Nuclear Security Administration have developed an ambitious plan to transform the Nuclear Weapons Complex into a smaller, safer, more secure, responsive, efficient, flexible and cost-effective enterprise by 2030. At Y-12, this includes meeting our customers' cost, schedule and quality expectations.

"The Complex 2030 scenario recognizes that while building confidence in the transformation process the NWC must continue to deliver the highest quality products. We must continue to meet or exceed our customers' expectations as we execute site modernization. Our success will result from clear communication, teamwork, responsiveness and accountability of individuals and organizations across Y-12 and NNSA. Your individual and collective efforts will ensure our success.

"How will we recognize and measure success in meeting our customers' expectations? **We will**

- Deliver required B61 canned subassemblies on schedule.
- Deliver the W76 first production unit.
- Achieve a production throughput rate to meet all delivery requirements.
- Deploy improved production systems."

in the NEWS

Building a fresh face

In the heart of the Y-12 National Security Complex, a gigantic, three-story structure is being constructed in the shape of a "U." Considering that Y-12 enriched the uranium for the first atomic bomb in World War II, manufactured uranium parts for every weapon currently in the U.S. nuclear arsenal, and houses the nation's stockpile of bomb-grade uranium, there seems to be an obvious question:

Does that big U stand for uranium?

The answer is no. At least that's the word from Wayne Roquemore, president of Lawler-Wood LLC, who chuckled at the question. He swore it was the first time he'd heard anyone even suggest a uranium tie to the design.

"We had two big wings (each the size of a football field), and we had to connect them. That's what created the U," he said.

By the middle of next summer, these new facilities will house about 1,500 employees—about a third of the Y-12 work force—who are currently located in a couple of dozen buildings at the sprawling complex.

The new structures will put a fresh face on the aging Oak Ridge plant, which still reflects its World War II origins.

—Condensed from *The Knoxville News-Sentinel*, Jan. 2

A good year for Y-12

BWXT Y-12 has had a great year and accomplished many goals in 2006.

Deputy General Manager Steve Liedle said BWXT Y-12 is proud of a number of accomplishments involving safety and performance, as well as its successful efforts related to modernization and several other initiatives.

The Y-12 National Security Complex achieved the lowest number of on-the-job injuries since BWXT took over the operation. Several of the plant's goals were [also] achieved in 2006.

"The B61 was refurbished, and we delivered our first production unit," Liedle said.

But the real success in the national security program is bringing highly enriched uranium back to the United States from countries that don't have the protocol that America has, such as Libya, Liedle said.

Liedle stressed that the real efforts of BWXT Y-12 this year were in upgrading and modernizing Y-12.

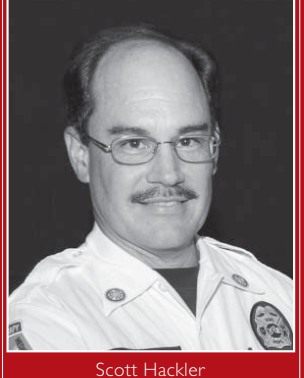
"It's being done in two parts," he said. "One, building new facilities, and two, taking down the old. We've taken down one million square feet since 2000."

Liedle said that by 2020, the Y-12 plant will have only two facilities. One will be a support building and the other will encompass about 40 other buildings, which is down from about 700 buildings.

Liedle said 2006 has been a great year for working with small businesses. He said 45 percent of procurement is done with small businesses. Also, the company has 12 mentor-protege agreements.

—Condensed from *The Oak Ridger*, Jan. 3

What you do counts



Scott Hackler

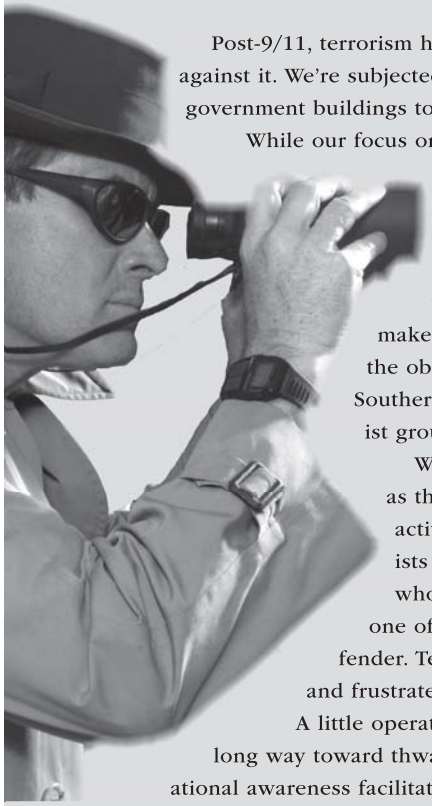
In a new feature of the *BWXTymes,* Y-12 employees will tell how their contributions count and make a difference. If you would like to be featured in this segment or know of someone who should be featured, please contact Melissa Leinart (6ml; 574-1621).

Y-12 Fire Chief Scott Hackler is one employee who knows what he and his organization do counts in meeting the Y-12 mission.

"[In] the next two to three years, we [Y-12 Fire Department] expect to be number one in the complex because of all the opportunities we have in front of us right now. With the changes in the facilities and all the upgrades, the staffing levels we have, and all the procedures we've put in place, we're now reaching that pinnacle that we've been looking for the past 10 years.

"The team that we have today, which is the Y-12 Fire Department, the division managers, the general manager and the Y-12 Site Office, are all working together for that common goal. That team is an integral part of Y-12's safe, secure and productive operations."

Use OPSEC to prevent terrorism



Post-9/11, terrorism has been a consistent focus. We're at war against it. We're subjected to increased restrictions on airlines and in government buildings to prevent it.

While our focus on eliminating terror is not a surprise, the location of some potential terrorists may be closer than we realize.

Several factors make East Tennessee appealing to terrorists. In addition to potential targets, our interstate and highway system make travel easy, and our rural environs provide the obscurity needed to plan an attack. In fact, the Southern Poverty Law Center recognizes 10 extremist groups in East Tennessee.

While encountering domestic terrorists, such as the Ku Klux Klan, is much more likely, their activities are more easily stopped. Lone terrorists are far more dangerous. Timothy McVeigh, who carried out the Oklahoma City bombing, is one of the deadliest examples of this type of offender. Terrorists like McVeigh are typically antisocial and frustrated.

A little operations security at home and at work will go a long way toward thwarting domestic terrorists. Maintaining situational awareness facilitates identification of suspicious activities, such as those in the eight categories shown at right.

All suspicious activities should be reported to local law enforcement. Information may also be provided to the Federal Bureau of Investigation by phone at 865-544-0751 or via the internet at https://tips.fbi.gov/.

OPSEC also applies to information. In fact, as noted in *The 9/11 Commission Report,* "the emergence of the World Wide Web has given terrorists a much easier means of acquiring information and exercising command and control over their operations." As an example, the 9/11 attackers used the internet to find information on U.S. flight schools as well as data on airline flights and schedules.

The only safe assumption with regard to information is that terrorists are reading it. Terrorists mine the internet for information, such as floor plans, the format of employee badges, work schedules and escape routes. These deviants thrive on media attention, so they are desperate for any information that will ensure their malevolent acts obtain maximum exposure.

Don't feed the terrorists. Maintain awareness of your surroundings and be cognizant of the information you release. Our country's war on terror relies upon it.

Suspicious activities

- **Surveillance**
  Are you aware of anyone recording or monitoring activities, taking notes or using cameras, maps or binoculars near sensitive facilities?
- **Suspicious questioning**
  Are you aware of anyone attempting to gain information in person, by phone, mail, e-mail, etc., regarding a facility or its personnel?
- **Tests of security**
  Are you aware of any attempts to penetrate or test physical security and procedures at a key facility?
- **Acquiring supplies**
  Are you aware of anyone attempting to improperly acquire explosives, weapons, ammunition, dangerous chemicals, uniforms, badges, access cards or identification for key facilities or to legally obtain items under suspicious circumstances that could be used in a terrorist attack?
- **Suspicious persons**
  Are you aware of anyone who does not appear to belong in the workplace, neighborhood or near a high-profile facility?
- **Dry runs**
  Have you observed any behavior that appears to be practice for terrorist activity, such as mapping out routes, playing out scenarios with other people, monitoring key facilities, timing traffic lights or traffic flow or other suspicious activity?
- **Deploying assets**
  Have you observed any abandonment of vehicles, stockpiling of suspicious materials or persons deploying near a key facility?
- **Hate crimes**
  Have you witnessed crimes against individuals or groups based on religion, race or ethnicity?

S&S shares best practices in Russia

A Christmas tree in Red Square. That's one sight that Dexter Beard of Safeguards and Security thought he'd never see.

Noted Beard, "Walking through Red Square after growing up during the Cold War .... It was the trip of a lifetime."

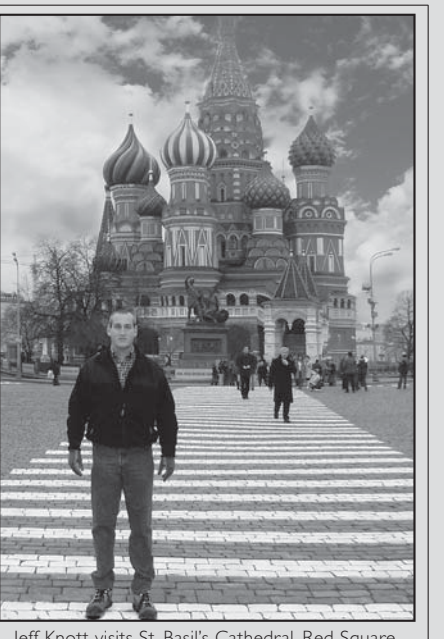
Indeed, to have gone from the Cold War to sharing best practices on material consolidation may seem like the transition of a lifetime.

Beard and Jeff Knott, also of S&S, traveled to Russia under the auspices of the Bratislava Nuclear Security Initiatives. This 2005 agreement, struck by Presidents George Bush and Vladimir Putin, committed both governments to securing nuclear weapons and fissile material to prevent the possibility that such items could fall into the hands of terrorists.

One of the initiatives involves sharing "best practices" on improving security at nuclear facilities. That's where the Y-12 National Security Complex comes in.

Beard and Knott presented information on Y-12's material consolidation effort at the 2006 U.S. Department of Energy and Russian Federation Best Security Practices Workshop in Moscow. Representatives from Rosatom (the Russian approximate equivalent to DOE) and the National Nuclear Security Administration's Office of International Material Protection and Cooperation and Defense Nuclear Security attended.

Knott said material consolidation makes sense. Having fewer sites to protect allows a better focus of security resources and reduces the risk of material falling into the wrong hands. Consolidation may also reduce the cost of securing the material. "If you have $100 million to protect five sites and consolidate to three sites, you either have more resources ... or you realize that you don't need $100 million to adequately protect the sites," he said.



Jeff Knott visits St. Basil's Cathedral, Red Square.

Both men said that the Russians seemed appreciative of the information presented. Beard said the fact that they were asked to present says a lot about Y-12. Referencing Y-12's progress in security upgrades and material consolidation during the last three years, he said, "This opportunity to highlight our innovative and effective response to security challenges reflects Y-12's leadership in nuclear security and supports Strategic Objective 2."

Process monitoring aids security

Ensuring the protection of Y-12 rests, in some manner, on all our shoulders. For Nuclear Materials Control and Accountability, shouldering that responsibility is all about knowing what goes in and what comes out.

Through its process monitoring system, NMC&A helps ensure the materials used in Y-12 processes are accounted for always. The system detects process irregularities that could indicate the loss of special nuclear material. It helps NMC&A identify and reconcile these irregularities faster, ultimately saving money and helping implement the strategic objective of protecting Y-12.

"In the nuclear material accounting world, it gives us a better idea of how our processes are working," said Rachel Hayes, NMC&A's inventory analysis manager. "We're looking for things directly related to a specific process that seem out of the ordinary."

When Hayes' group investigates the "out of the ordinary," what it finds helps reconcile inventory differences. In casting, for example, the amount of metal going in and coming out of the process must correlate. Sometimes, however, more is lost in the process than expected, for a variety of reasons. NMC&A watches for these output differences and works to resolve them.

The group collects input data and looks at all possible outputs from a process. The process monitoring system enables NMC&A to draw balances (i.e., look at inputs minus outputs) around certain process units more quickly than waiting for scheduled inventories.

"We look at a process to see when to draw a balance in nuclear material quantity," Hayes said. "We'll look at the material as it's being worked, making sure it's being protected. We make sure it goes through the process and comes out as expected, within reason," she said.

As data are collected, NMC&A sets inventory control limits that help speed inventory reconciliation because some issues are resolved before inventory even begins.

"We have limits that say, 'This looks funny—go do something,'" Hayes said. "For example, a furnace may have gone down and resulted in a loss of more material than expected."

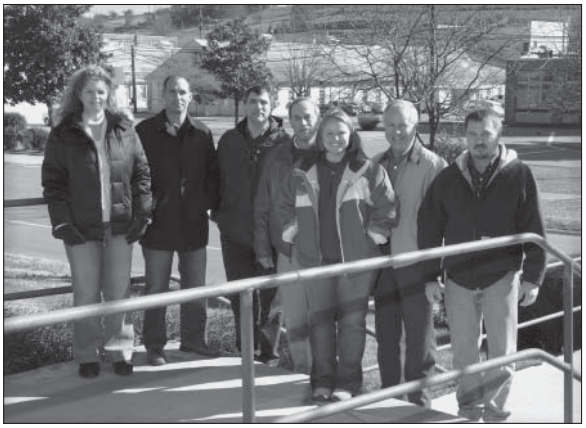
Process monitoring is either in place or is aggressively being developed for all special nuclear material processes at Y-12.

Teamwork produces winning outcome

When something doesn't work right, you fix it. That's just what the Proactive Maintenance Pilot Program team did to help National Security and Development Programs meet its deliverables in the Enriched Uranium Special Processing Production.

"We could not process enough product to meet our customer's (Oak Ride National Laboratory's) commitments because the equipment in EUSPP was often down for maintenance," Brent Wilhoit, NS&DP project manager, explained.

To address the issue, Wilhoit formed a qualified team with representatives from various Y-12 organizations, including Engineering; EUSPP; Environment, Safety and Health; Facilities, Infrastructure and Services; and Planning, Integration and Control.



The Proactive Maintenance Pilot Program team has seen firsthand that what they do counts. Pictured from left to right are Cyndi Helle, Brent Wilhoit, Jim Barber, Paul Standifer, Hollie Bernard, Paul Wasilko and Mark Galyon. Team members not pictured are Kenny Collier, Gary Guge, Virgil Hart, Robert Hawthorne, Richard Hodges, Ron Hubbard, Billy Hurst, Tim Hutson, Leona Lewis, Steve Little and Terry Shope.

Teamwork is always a factor in making any job successful, and Gary Guge of Planning, Integration and Control saw firsthand that teamwork affects the outcome. "Working on this team helps on the front end to build a relationship between Operations and Maintenance to see that Y-12's mission is completed," Guge said.

The team's recommended solution was to prepare and issue detailed model work packages for predicted maintenance. They also recommended that all the necessary parts required to execute these packages be ordered and staged.

By having pre-planned work packages and parts on hand, EUSPP might reduce its downtime by 70 percent (based on records from the previous year). When a piece of critical equipment fails, the work package is already planned and in the work control center.

The team's recommendation proved its worth when a furnace failed to reach the required temperature one afternoon. The next morning, the work center issued the model package, and the electricians fixed the problem that same day—nothing like what would have previously happened.

"The model work packages identified by the team allowed the tube furnace to return to service in one day," said Steve Little of FI&S. Paul Standifer, also of FI&S, added, "Prior to this team's efforts, the same job would have required nine days of cycle time from initial identification of the problem to task completion."

John Hendrix kept no secrets

Y-12 is more than mere historical fact. John Hendrix, the "prophet of Oak Ridge," knew about it long before anyone else and kept no secrets about it. Hendrix was born in 1865 on a farm located in Bear Creek Valley—right where Y-12 sits today.

The story is told he had a religious experience, following a bout of depression after his wife left him and took their children to Arkansas. After hearing a voice that told him to "sleep on the ground for 40 nights" to learn the future, Hendrix made several predictions about events in the community.

Hendrix's predictions were made 40 years before the events occurred; they became reality 28 years after his death in 1915. So, while the work at Y-12 continues, Hendrix told anyone who would listen about it long before they happened.

Some of Hendrix's uncannily accurate predictions about Y-12 and the "Secret City" of Oak Ridge include the following.

- A railroad spur will run right by his property.
- A city will be built on Black Oak Ridge.
- Bear Creek Valley some day will be filled with great buildings and factories with big engines and ditches, and thousands of people will build things there that will help win the greatest war there will ever be.

HISTORICAL Y-12

...where history continues to be made.

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

Sheet metal workers put on their shades

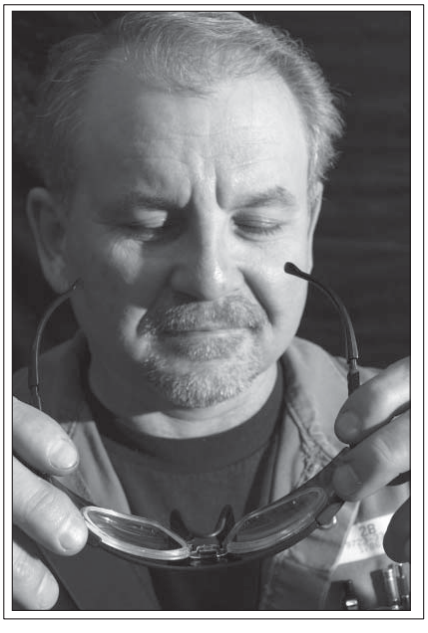
The Sheet Metal Workers of Local 5 in Building 9201-1 spend a great deal of time supporting welders in the General Manufacturing Organization by fitting up, grinding and filing items to be welded. A recent Behavior-Based Safety observation revealed the potential for these workers to receive painful flash burns to their eyes during routine daily activities. This risk was clearly a barrier to completing their jobs safely.

The Local 5/384/453 steering committee, facilitated by George Lee, began a search for the appropriate personal protective equipment that would minimize or eliminate the potential for injury. Lennie Winston and David Gibbs, members of the steering committee, worked with personnel from Industrial Safety and a local vendor to find a solution to the problem.

They discovered light-weight Shade 3 non-prescription safety glasses that can hold prescription glass lenses (if necessary) and allow enough light through to see surroundings clearly but are dark enough to minimize the potential of flash burns. The new PPE keeps sheet metal workers from being distracted by the reflection from the welder's arc and allows for safe work practices while working close to welding activities.

This particular PPE could not have been a reality if not for the combined efforts of the steering committee and management sponsor Beth Schaad, who worked with Industrial Safety to find the proper solution.

Identifying and putting into use these new safety glasses is a perfect example of how teamwork, communication and the BBS process created a safer working environment.



Mike Bell of Manufacturing is glad to add these new safety glasses to his personal protective equipment.

7 ways to lose your clutter

That clutter in your home or office may stump you. What should you do with it? Here are seven options.

1. Dispose of it. Much of clutter is trash you either thought you would need or figured you'd throw out later.
2. Put it away. About half of the remaining clutter in most homes consists of items that simply haven't been put away. Fill a laundry basket then deliver the items to the proper rooms. Avoid this trap by making things easy to put away and by enforcing a family "use it and put it away" rule.
3. Donate it. If you don't use it (if it's not a treasured decorative item or memento, and if it's not an important piece of paper) get rid of it. Pass it along to someone who can use it.
4. Refer it. The novel you've been saving for your pal, the recipe you copied for your sister and the gloves borrowed from your uncle need to be sent or delivered to their rightful owners. Gather them and make your rounds tomorrow.
5. File it. Set up a "hold" file for wedding invitations and concert tickets (after you note them in your calendar). Set up a "to file" file for all important papers.
6. Fix it or have it repaired today. Those buttons aren't going to sew themselves. Either mend them or take them to a seamstress. The same goes for the broken toys, watches and electronics.
7. Give it a home. Everything else is something that belongs in your home but you don't know what to do with it. Where DO you put extra batteries and your kids' artwork? Designate a permanent place in your home for each group of items you find in a clutter pile. Simplify by making a list of items and where they belong.

TIPS!

Find more organizing tips online at www.ineedmoretime.com or www.onlineorganizing.com.

Did you know?

Our move into the Jack Case and New Hope centers is less than six months away. Following are a few tidbits that will answer questions and help you prepare for moving day.

- Jack Case construction is now approximately 72 percent complete. Roofing is 98 percent complete, interior rough-in work is 99 percent complete and interior wall framing and drywall are 70 percent complete.
- New Hope construction is approximately 70 percent complete. Roofing is 90 percent complete, interior rough-in work is 95 percent complete and interior wall framing and drywall are 65 percent complete.
- Paving and sidewalks are under construction at both sites, and carpeting and furniture work will begin in February.
- Occupancy for both buildings is expected to begin in July and will take place over a five-week period.
- Move coordinators have been working diligently to assign employees to offices, gather information about chair needs and encourage cleanup and consolidation of files.
- No extra file cabinets or bookshelves will be moved into workstations or offices. The possibility exists for additional lateral file and bookshelves in corridors. These furniture pieces will be purchased (new) by individual departments, not moved from existing buildings.
- It's time to carefully sort through files and dispose, shred or store items that will not be moved.
- Conference rooms are wired for computer/Proxima setups.
- The new telephones will have speaker capabilities, but use will be limited outside of the hard-walled offices.
- Each workstation will have one chair and one guest seat (a mobile pedestal) with a 250-pound weight limit. Moving additional chairs into the new buildings is not permitted.
- Employees can personalize wall space within workstations. Hallways and common areas will follow display guidelines.
- Trash cans will be provided.
- Water coolers, heaters and fans will not be moved from existing buildings.
- Oliver's will provide food service under a revised contract. A remote food service will be provided at New Hope Center.

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

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