

Exposing the underground

ESD-developed system proves effective at finding ordnance, other hidden hazards

A state-of-the-art ordnance detection system developed by researchers in the Environmental Sciences Division may be used to find and dispose of underground and hidden explosives in post-war Iraq.

A team headed by ESD's David Bell and Bill Doll developed the Oak Ridge Airborne Geophysical System, or ORAGS, that uses low-flying helicopters to locate explosive materials and map their locations. The system provides a blueprint for de-mining and cleanup operations.

"We can fly these helicopters within three feet of the ground and locate material as deep as 30 feet into the ground," David says. "We can cover between 400 and 800 acres per day with this system."

Sophisticated airborne sensors located on booms mounted underneath the helicopter can detect, characterize and digitally map unexploded material, in most cases in a day's time.

David has had discussions with various organizations for surveillance of areas in Iraq suspected of containing weapons. Stainless steel, iron, metal drums, and weapons casings can be located with this system.

Stateside, sites that have been surveyed are

typically firing ranges, where unexploded shells often litter the ground, but are also buried from inches to several feet in the earth. The beauty of ESD's system, David says, is that the sensors can find many of those dangerous objects under the surface.

The system has applications at U.S. Department of Defense areas and other locations around the world where explosive material may have been buried or where it is suspected of having been buried. Bill Doll notes that the system has a broad scope of what it can find.

"We're looking for a variety of things—hidden bunkers, drums, unexploded ordnance (UXO), weapons caches, and cluster munitions," Bill says. "But beyond defense uses we can also use the system to assess brown-field sites and find old, unmapped infrastructures that lie underground."



Flying close to the surface, helicopters equipped with the Oak Ridge Airborne Geophysical System can locate unexploded ordnance and other hazards hidden beneath the surface.

In fact, the system was initially used to find undocumented waste sites on the Oak Ridge Reservation. Some records of early disposal sites were lost in a fire, and the airborne system identified unknown and otherwise undetectable pits and trenches.

The sensor systems are composed of either

(See ORAGS, page 4)



New facilities' first tenants get set for moving day.

It seems like it was only a year ago that the least parking lot was being emptied of cars and Bradford pear trees in preparation for construction of a complex of new buildings as part of ORNL's modernization campaign.

In fact, it pretty much was just a year ago. Construction began in the east lot in February 2002.

Next month will include "moving day" for hundreds of Lab employees as a major wing of the \$70 million privately funded facility will be ready for occupancy. Most of those new tenants will be staff of the Computing and Computational Sciences Directorate.

Tony Medley, of the Facilities and Operations Directorates Infrastructure Planning Division, is coordinating the myriad upcoming moves into the new facilities.

"Around 750 people will move into the private facilities eventually," Tony says. "About 600 of those will move in this year. These 'people moves' will start in July and run through October."

Those moves go into the section of the private complex called the Computational

Sciences Building, or CSB. The two other sections of the complex are the Engineering Technology Facility, or ETF, and the Research Office Building, or ROB.

Tony says that before it's over, about 1500 people will be affected by the moves around the Lab. Space at ORNL is being reused or renovated in buildings 4508, 5500 and 5510 and, eventually, in 4500-North, 6011, 6012 and 6025. Renovations are also in progress in

Few realize the magnitude of moving so many people at once and all the details involved.

buildings 1059 and 1061 on the west campus, near the new Mouse House.

Construction of the privately funded buildings, from the ground up, has progressed at a lightning pace. Tony says the finishing touches, which include furniture and other amenities, have also been on the fast track. With the finish line in sight, the pressure is on.

"The lynch pin to these moves is the installation of the mountable walls and

(See MOVE, page 2)

Gene Ice, Ben Larson, Ken Tobin named UT-Battelle corporate fellows

Three ORNL researchers have been named UT-Battelle corporate fellows. UT-Battelle corporate fellows are selected for their significant contributions over many years and are acknowledged by their peers throughout the United States and other nations.

Gene Ice, a distinguished staff scientist and group leader, is recognized for his research in X-ray optics, microdiffraction and diffuse X-ray scattering. His pioneering work on wide-angle and microfocusing of synchrotron X-rays has earned numerous awards, including two R&D 100 awards.



Ice

Gene earned a bachelor's degree in physics from Harvey Mudd (Calif.) College and a doctorate in physics from the University of Oregon, where he completed a postdoctoral fellowship. Ice, who resides in Oak Ridge, is married and has two children.

Ben Larson, a group leader and a distinguished staff scientist, has earned an international reputation as a leader in the development and application of X-ray diffraction. He received the 1985 Bertram Warren Diffraction Physics Award for pioneering nanoscale time-resolved X-ray diffraction studies of laser melting.



Larson

Ben earned a bachelor's degree in physics from Concordia (Minn.) College, a master's

degree in physics from the University of North Dakota and a doctorate in physics from the University of Missouri. He and his wife are residents of Oak Ridge. They have two children.

Gene and Ben co-developed three-dimensional X-ray microscopy technology for investigating the microstructure of materials.

Ken Tobin has been the group leader in ORNL's Image Science and Machine Vision group since 1991. His work at ORNL has led to significant advances in the field of applied computer vision research, addressing important national issues in industrial and economic competitiveness, biomedical measurement science and national security. Ken has published more than 113 journal publications, book chapters, edited volumes and proceedings. He has been issued six patents, with three more pending.



Tobin

He has received numerous awards for his work in technology development and transfer, including six Federal Laboratory Consortium awards and an R&D 100 Award, was the Tennessee Academy of Sciences Industrial Scientist of the Year and is a fellow of the International Society for Optical Engineers.

Ken earned a bachelor's degree in physics and a master's degree in nuclear engineering from Virginia Polytechnic Institute and State University and a doctorate in nuclear engineering from the University of Virginia. He is a resident of Harriman, where he lives with his wife and three children.—Fred Strohl

Move

Continued from page 1

moving the furniture in. We'll be on a tight schedule throughout the summer," Tony says.

The new tenants won't have to, or be allowed to, haul a lot of old office furniture over. The complex's furniture will be mostly all new.

"No old stuff except your office chair, if you want to bring that over," says Tony, who explains that the office furniture will be standardized and coordinated. "You can ask for additional pieces, but you have to match what's there. Some file rooms are open space and filing cabinets must match. Old file cabinets that are brought over must be in closed spaces."

The building will include ice machines, refrigerators and microwaves in break areas. Employees will be able to lunch in the offices spaces and break areas, and Tony points out that the expansive walkway in the facility, dubbed "main street," will be a nice place to eat and gather.

To preserve the dignity and decorum of the new carpeting, however, the new tenants are being furnished with covered coffee mugs to prevent spills.

The Networking & Computing Technologies Division's Janet Dippo is coordinating her division's move to the new building. Planning started last June, close to the time construction on the building started. Janet says the moves have required thorough planning and lots of forethought.

"Keeping track of who wants what, who gets a keyboard tray, who gets a certain kind of phone—it's been a lot of spreadsheet work," she says. "For instance, we're verifying again that the 'going to' locations are correct and that the 'coming from' locations are also correct for all of these people."

Janet is responsible for around 100 of the 600 staff members who will migrate this year. NCTD, a computer services division that includes networking, telecommunications, computer support and business applications, is the first group to move in.

"We've worked very closely with Rick Forbes of Tony Medley's group and with Dan O'Connor, the facility manager. As related to the move, we'll be there to help the other people make sure that their computer needs are met," Janet says.

"No one understands the magnitude of moving this many people at once, and all the details you have to remember—the phone lines, the fax lines, which numbers go to what offices. We've counted chairs, boxes, computers, data drops and voice lines they need. I've learned how to read floor plans and engineering drawings in the process," she says. "We want our people to be able to leave their old office and arrive at their new office the next business day—and pick right back up with their work."—Bill Cabage [ornl](#)



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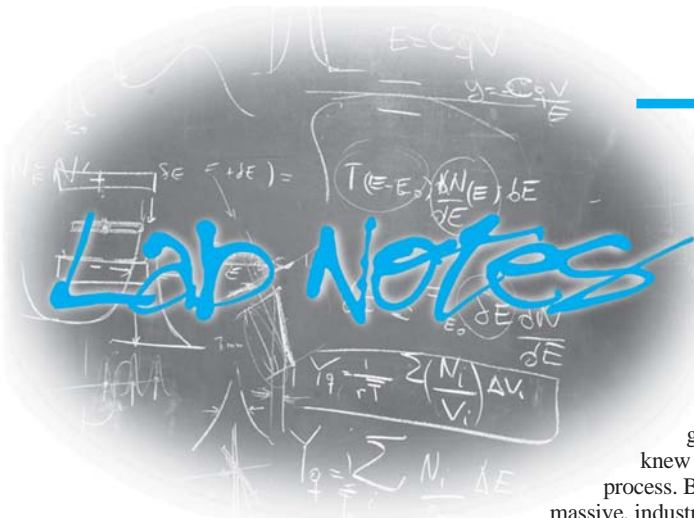
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Curtis Boles

The Environmental Sciences Division's Tony Palumbo spent one of his three Saturdays at the Team UT-Battelle and ATLC Habitat for Humanity build installing insulation. See page 5 for more about the project.



Groves: Indispensable instincts

Author Robert Norris wrapped up the latest series of Friends of ORNL Community Lectures with a talk on one of the key figures of the Manhattan Project and of the history of Oak Ridge—Gen. Leslie Groves.



Curtis Boles

Robert Norris signs his book.

There was more to the man than the common perception of a burly, truculent general who bulldozed both scientists and construction crews toward the greatest technical feat of the past century.

Norris talked about Groves at the May 8 lecture and that afternoon at the ORNL Library, where he signed the library’s copies of his book, *Racing for the Bomb: Leslie R. Groves, the Manhattan Project’s Indispensable Man*.

What were the general’s most remarkable

traits? “His decisiveness,” Norris says. Although the claim that he “bought Oak Ridge” two days after he got the Manhattan Project job may be apocryphal, “He made enormous choices on which uranium enrichment process to use. These were unproven technologies and great gambles. He knew Ernest Lawrence had a process. But would it work on a massive, industrial scale?”

Groves had a rocky relationship with many scientists, but one in particular, Robert Oppenheimer, owed his rise to the general, Norris says. “Groves chose Oppenheimer against everyone’s advice,” Norris says.

“It was a big gamble, but Groves could size anybody up in a minute,” says Norris of Groves’ other noteworthy trait. “He didn’t choose wrong many times.”

More spin on centrifuge

Former ORNL researcher Norman Anderson read last month’s *ORNL Reporter* article about gas centrifuge work with more than the usual interest. Dr. Anderson, who now lives in Maryland, invented another centrifuge-type device at ORNL in the 1960s. His Zonal Centrifuge, instead of enriching uranium, is used to purify vaccines.

“People who know how to build centrifuges build many kinds,” says Dr. Anderson. “It is the basic principle of making things spin—the physics, engineering and electronics have many things in common.”

Anderson recalls that the biomedical part of the gas centrifuge work done at K-25 in the 1960s was done in the power plant building, K-703. The basic centrifuge he developed was called K-II and is still in production and used worldwide.

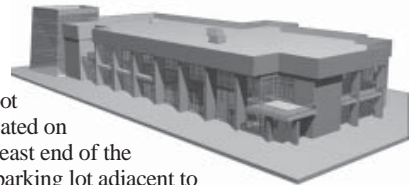
“More than 80 percent of flu vaccines are made with those machines,” he said during a call to the *Reporter*. Anderson also developed the Centrifugal Fast Analyzer for Clinical Chemistry, which did an estimated \$400 million in sales. “Those are the only programs I know of that demonstrably paid for themselves,” he says.

Anderson, who left ORNL in 1973, runs the Viral Defense Foundation, a nonprofit organization. He is now working on a project to do global screening for pathogenic viruses in humans—currently a hot field. He says a paper will be published in a *Centers for Disease Control* journal soon that refers to the Oak Ridge centrifuge project. “I’ve been asking the question, ‘Who has technical backup to help us now?’”

RSC rounds out east complex

The final piece of the new east campus fell into place last month with the awarding of a \$10.7 million contract to a Brentwood, Tenn., firm to construct the Research Support Center. The RSC is the DOE-funded arm of the new campus that also includes the privately funded complex, which about ready for tenants, and the state-funded Joint Institute for Computer Sciences.

The 55,000-square-foot RSC, located on the northeast end of the old east parking lot adjacent to the swan pond, will feature a new cafeteria, a visitor center and conference facilities. It will serve as the first impression a visitor or new employee will have of the Lab once they’ve cleared the vehicle entrances. Completion is slated for late summer of next year.



Reported by Bill Cabage

Science lab gifts: Louder than words

Middle and high school science students at the the Tennessee School for the Deaf dedicated their new science lab equipment on May 22. The equipment was purchased through a corporate gift from UT-Battelle, one of 16 such educational “legacy” gifts the company has made to regional schools.

The school used the funds to open and stock a science laboratory for high school and middle school students. Microscopes, specimens, videos, field guides, dissecting pans and dissecting kits are some of the learning tools the students now have in their science lab.

Through a sign-language interpreter, ORNL Communications and Community Outreach Director Billy Stair explained to the gathered students and faculty of the school that UT-Battelle has presented a number of \$10,000 gifts to area schools as an investment in the region’s educational future. Faculty members present included high school and middle school science teachers Sharon Brown and Kaye West and high school and middle school principals Mark Battles and Chris Nipper.

The TSD science teachers noted that a majority of the TSD students who took this year’s state Gateway exam passed on their first try, which was an extraordinary success rate for the school for sensory-impaired students.

“These scores are indicative of what you have done for us. This lab will make a tremendous difference in the lives of these kids,” said TSD Superintendent Alan Mealka.—*Erin DeMuth*



Curtis Boles

Tennessee School for the Deaf science students show some of their new science lab supplies to CCO Director Billy Stair.

Reputation for excellence

ESD's outstanding history, research drew Rebecca Efroymson to ORNL

Rebecca Efroymson isn't looking for fame, but she is looking to make a difference to the environment and in people's lives.

That quest to make things better was evident early, as Rebecca tutored prisoners in mathematics while she was earning a bachelor's degree in biology and English from La Salle University in Pennsylvania.



Rebecca Efroymson recently received the Environmental Sciences Division's Distinguished Scientific Achievement Award.

"Math comes easily to me, but it isn't easy for everybody," says Rebecca, who received master's and doctorate degrees in environmental toxicology from Cornell University. "I was also intrigued by the prison environment—what it feels like to have the door shut behind you, the social hierarchy of prisoners—and by the main person I tutored."

Also while in college, Rebecca and others in a Methodist volunteer group remodeled a house and built an outhouse for a family in southwest Virginia. In more recent years, she helped build a UT-Battelle-sponsored Habitat for Humanity house and has served as a judge

for science fairs and the Tennessee Science Bowl.

In her life as a researcher, she is a co-author of *Ecological Risk Assessment for Contaminated Sites*, has published about 20 papers and dozens of reports and has played a significant role in developing a multimedia model for assessing risk from hazardous air pollutants.

The task combined her interests in the application of mathematical modeling to environmental problems.

Rebecca recently saw her dedication and talent rewarded as she received the Environmental Sciences Division's Distinguished Scientific Achievement Award for 2002. The award recognizes her many achievements that ESD Director Steve Hildebrand noted "have enhanced the national reputation of the Environmental Sciences Division and Oak Ridge National Laboratory for excellence in ecological risk assessment."

That national reputation for excellence is one of the primary reasons the Pennsylvania native came to work at ORNL in 1994.

"This division has a long history of outstanding assessment work," Rebecca says. "People like Glenn Suter, Larry Barnhouse and Bob O'Neill helped make this one of the most respected groups in the country."

The chance to work with talented people and have the flexibility to work on several projects at a time were just too good to pass up.

What makes for a good day, Rebecca says, is learning something new, synthesizing new information or "writing a good chunk of a paper." All of this is driven by her desire to ensure that the best science is available to

support policies that affect the environment and people's lives.

"Where remediation is concerned, for example, we need to do a better job of evaluating risks and benefits of a particular action," Rebecca says. "Sometimes digging up a site and hauling off dirt does more harm than good because it destroys vegetation, can cause erosion and can lead to longer recovery times than it would take the chemical contaminants to degrade."

Among her many honors and offices, Rebecca has served on several Environmental Protection Agency committees and subcommittees, was a recipient of a National Science Foundation graduate fellowship as well as a fellowship from the American Association for the Advancement of Science.

Rebecca and her husband, Bill Hargrove, also a researcher in ESD, are expecting a child this month. When she's not working, Rebecca enjoys listening to music, hiking and writing fiction. She's a member of the Knoxville Writers Guild and received the group's Leslie Garrett award for fiction in 2000.—Ron Walli [ornl](#)

ORAGS

Continued from page 1

cesium vapor magnetometers or transmitter/receiver coils. The cesium vapor sensors operate by detecting alterations in the earth's magnetic field. The transmitter/receiver coils use electronic signals that are transmitted from the helicopter to the ground.

While most of the systems have been assembled from commercially available components, many of the electromagnetic components that can detect ferrous or nonferrous materials were developed at ORNL.

The helicopter—which is the preferred airframe for the sensors—can conduct its surveillance at speeds of up to 60 mph at heights from three to six feet above the ground. In surveys conducted in the desert southwest, the choppers have flown their grid patterns at ground-hugging, terrain-following levels.

Images as clear as those that would be seen from a ground search are produced in 3-D. Data gathering is conducted during the day and analyzed overnight by a separate mapping team, giving field teams almost real-time survey results with geographic positioning system accuracy.

"We're well beyond the prototype stage," David says. "These systems are field proven and in the deployment stage. We'd like to apply it to something as important as rebuilding Iraq."—Fred Strohl, with Bill Cabage [ornl](#)

Travelers get new, 'friendlier' settlement system

ORNL travelers' "new, improved" travel expense system, TravX, is being implemented this month. TravX incorporates many new features to help the Lab's travelers get through the settlement process as quickly and painlessly as possible.

"We have a more user friendly system, which will result in a more efficient system," says Accounting's DeAnn Ingram. "Those features include the ability to electronically import charges from your USBank VISA card and a greatly improved, one-page expense screen."

The new system also automatically references *per diem* expense allowances for business cities, a handy feature for filing expense reports. The TravX reservation system will be the first part of the new system implemented. "The only major change relative to this piece of the implementation is that all travelers *must* have an active personnel

number in SAP," says DeAnn.

For full-time employees, this will be automatic. For nonemployees such as subcontractors, the Nonemployee Processing, or NEP, system will be used. Training sessions will be held on the slight change to the NEP system.

Travelers, approvers and assistants should be aware that an SAP account is necessary to access the online system. "This does not require an SAP GUI (graphical user interface) to be installed on your machine," DeAnn says. "If you are a fiscal year 2003 traveler or approver, Travel Services will take care of getting this account for you. Anyone traveling without an SAP account will receive an e-mail notice on how to get the account through UCAMS."

Small group training sessions may be scheduled by contacting DeAnn, ingrammd@ornl.gov or 241-4463. [ornl](#)



F&O Director
Herb Debban



Jamie and Jeanette Nolan

The house that *you* built

Team UT-Battelle, ATLC join to help undo damage from last fall's tornadoes

As cleanup continues from the latest round of tornadoes to strike East Tennessee, members of a Morgan County family left homeless by last fall's storms have moved into a brand-new house, thanks to the efforts of ORNL volunteers.

The Habitat for Humanity house, located in the Beech Fork community near Petros, was constructed in just six weeks by a group made up of ORNL members of the Atomic Trades and Labor Council and Team UT-Battelle volunteers.

More than 100 Lab employees worked to build the home for Jamie and Jeanette Nolan and their four children. Members of the ATLC provided most of the skilled labor for construction of the four-bedroom rancher.

"This has been a labor of love for our folks," says Ed Mee, ATLC vice president. "It has been a good opportunity for us to assist some of our East Tennessee neighbors and also to work with our fellow employees in Team UT-Battelle."

Brenda Hackworth, the Lab's Community Outreach manager, says the project was extremely gratifying for the participants. "We appreciate all the people who volunteered, particularly those ATLC members who handled so much of the carpentry, wiring and other tasks requiring their specific skills," Brenda says.

UT-Battelle also donated \$15,000 to Appalachia Habitat for Humanity to cover construction expenses.

Keys were presented to the Nolans May 17 in a ceremony dedicating and blessing the new house. During the event, covered by WBIR-TV, Jeanette called the afternoon "the happiest day of my life." And she and Jamie definitely helped make it happen. Determined to contribute their personal "sweat equity" to the construction process, the couple handled most of the roofing chores themselves.

Karen Garrett of Communications and Community Outreach, who coordinated logistics for the build, recalls that Jeanette was right there helping to carry stacks of roofing tiles for Jamie. "And she probably doesn't weigh as much as they do," Karen adds.—*Cindy Lundy omi*



F&O's George Baber



ATLC's Ed Mee with volunteer Beulah Jackson



Al Fraker



Crews ate well thanks to volunteers who brought lots of food.

Photos by Curtis Boles



The Nolans with ATLC's Jim Blankenship (left) and Ed Mee

Cosmic thing

ORNL physicists help students tune in to the stars

ORNL physicists are helping a group of University of Tennessee physics students build cosmic ray detectors that will be placed at Knoxville area high schools.

ORNL is providing the equipment for the 110-by-20-inch detectors. The Laboratory previously used the equipment for monitoring and to detect particles at high-energy accelerators.

Soren Sorenson, head of the UT Department of Physics and Astronomy, who also conducts research at ORNL, said the program is a positive opportunity for high school and college students interested in cosmic rays.

"This is a project the UT Physics Club took



Fred Strohl

UT physics major Rachel White, who plans a career as a teacher, shows students from Farragut High School how a cosmic ray detector is put together. Farragut will be one of nine sites for cosmic ray detectors that will be erected in the Knoxville area.

upon its own, and I've told them the key is to have fun building these detectors and doing research," Soren says. "This gives our department a chance to work with the local high schools and for UT's physics students to work with high school students who are interested in a physics-related career. They can share knowledge. Plus, we are excited to do this as one of our contributions to the mission

The students have a major research opportunity that could continue far into the future.

of the state university."

Glenn Young, director of ORNL's Physics Division, and Vince Cianciolo—also of the division—provided the equipment to the UT students to start the program. Yuri Efremenko, an ORNL/UT joint faculty member, is the technical coordinator for the project.

Farragut and Catholic high schools have already committed to the program and will set up the indoor detectors either this summer or very early after students return for fall classes.

ORNL's participation in this project is part

of the Laboratory's continuous effort to increase opportunities that provide hands-on science education experience to high school students in East Tennessee. DOE's Office of Science encourages its national laboratories to undertake similar science education initiatives.

Cosmic rays hit any spot on the earth up to 40 times per second. Most cosmic rays come from outside the solar system and perhaps even the galaxy. Many are thought to be protons as they travel through interstellar space. When a proton hits a nitrogen or oxygen atomic nucleus high in the atmosphere, it creates a shower of particles across the earth. The particles "live" for about one microsecond and then decay. They are too small for the naked eye to notice.


Participating schools in this study—which will be focused in a 25-mile radius around Knoxville—will give students a better understanding of cosmic rays. Studies of these rays gives scientists and astronomers a better understanding of energy making its way through our solar system.

"This network of scintillator detectors will not only help measure cosmic ray showers, but will also allow us to estimate the approximate size and possibly even the energies of the detected cosmic rays," says Olga Ovchinnikov, president of the UT Society of Physics Students, which is spearheading the project. "This project will provide the opportunity for undergraduate students to participate in a real-time experiment that could lead to new information in the field of cosmic rays."

Four cosmic ray detectors will be built, including one on the UT campus and the other three at area high schools. Data collected from each location will be transmitted to a central computer center at the UT Physics Department, where the initial energy of the cosmic rays will be determined.

The project will provide UT undergraduate students the opportunity to participate in a major research project that can continue far into the future.

"The detectors will be used to identify the initial energies of the cosmic rays, which will also be used to compare the existing theoretical and experimental data," Ovchinnikov says. "We see this project as not only an opportunity to conduct research, but also for community outreach."

Other schools interested in participating in the program can contact Ovchinnikov at (865)671-0573 (e-mail: oovchinn@utk.edu).—Fred Strohl 

ORNL people

Several researchers and administrative staff members were on hand for a forum in Washington, May 28–29, titled "BES Science 2018: A Future Retrospective." The session was dedicated to the late Iran Thomas, who directed the DOE Basic Energy Science Division of Materials Science and Engineering until his death in February. Thomas's career included time as a research chemist at ORNL. At BES he was credited with establishing many of DOE's major scientific user facilities and was a major supporter of the Spallation Neutron Source, now under construction. "His most enduring legacy will be his philosophy and spirit of innovation, which he passed on to many of us both inside and outside of his DOE home," said BES Director Pat Dehmer.



Aaron



D. Johnson



Freels

Several children of ORNL staff members received honors from their schools. Michael Little Freels, son of James D. Freels (Research Reactors Division) and Elizabeth L. Freels, has been named Valedictorian of Clinton High School's class of 2003. Michael will be attending Tennessee Technological University on a scholarship in TTU's honors program. Lynn Aaron, daughter of Ann and Scott Aaron (Research Reactors Division and Nuclear Science and Technology Division respectively) is Valedictorian of the 2003 graduating class at Oliver Springs High School. The University of Tennessee recently awarded her the Reeder-Siler Academic Scholarship. Amanda Ellis, daughter of Judy Hargis and step-daughter of Ryan Hargis (Laboratory Protection Division), graduated with high honors in academics from Roane County High School. David Johnson, son of Paul (Computational Sciences and Engineering Division) and Karen Johnson of Knoxville, has been named the Valedictorian of Karns High School's Class of 2003. He is a National Merit Commended student and was voted "Most Likely to Succeed" in his class. David's older brother and former ORNL summer student, Kevin, received his bachelor's degree and graduated *magna cum laude* from UT. Wes Kohring, son of Operational Safety Services Division's Mark Kohring, was named to *Who's Who* among graduating seniors at Lipscomb University in Nashville. UT student Austin Shaver, son of RTSSD's Sarah Shaver, received a scholarship from Adidas Partners in Sports.

Changes ahead for savings program

Effective June 23, the investment options within the Savings Program will be enhanced. You should have received a newsletter that outlines the enhancements, recaps all funds available, and provides a timeline for how the changes will take place. Below is a summary of the changes. Please refer to your newsletter for full details on this important enhancement.

Changes at a glance

Everyone has different and changing needs when it comes to planning for retirement. So, to help you better prepare for your retirement goals, we're making some changes to the investment options offered through the Savings Program.

What's changing?

You'll have a new investment option—a Small Cap Value Fund. The Goldman Sachs Small Cap Value Fund is being added to allow for further diversity among the investment options. A small cap value fund seeks to provide long-term growth through investments in smaller companies that the fund manager believes to be undervalued.

The mutual fund for the Intermediate Bond Fund will be changing. The current fund, Standish Investment Grade Bond Fund, will

be replaced with Wells Fargo Montgomery Total Return Bond Fund. As part of its ongoing monitoring activities, the Joint Retirement and Savings Plan Committee determined that changes in management of the current fund did not meet the committee's guidelines for risk and performance.

When will the changes take effect?

Changes will be in effect on June 23, 2003.

How will the changes be implemented?

There will be a brief period over the weekend of June 21 and June 22, 2003, when you will not have access to your account so that the investment changes can be implemented. This brief period will not impact your ability to trade because the market is closed on Saturdays and Sundays.

When the investment changes are complete, you will have full access to your account and all the investment options by logging on to the Program Web site at oakridge.csplans.com or by calling the Information Line at 1-888-I-SAVEIT. Customer Service Representatives are available for questions Monday through Friday from 9 a.m. to 5 p.m. Eastern time, excluding New York Stock Exchange holidays. [ornl](#)

CIGNA 1 participants save with Medco home pharmacy delivery

If you participate in the CIGNA 1 medical plan, the Medco Health Home Delivery Pharmacy Service offers convenience and potential cost savings. If you need medication on an ongoing basis, such as for treatment of diabetes or asthma, you can ask your doctor to prescribe up to a 90-day supply for home delivery, plus refills for up to 1 year.

You will pay just one co-payment for each prescription or refill, without having to meet a deductible. You pay \$5 for a generic drug or \$15 for a brand-name drug, for up to a 90-day supply. Since you get a larger supply of medication through the Home Delivery service than when you fill a prescription at a retail network pharmacy, you may save money. Here's how the service works.

- Your medications are dispensed by one of the Medco Health home delivery pharmacies and delivered to your home.
- Medications are shipped by standard delivery at no additional cost to you.
- Your medication will be delivered to your home within 7 to 11 days after you mail your order. Orders placed by fax by your physician, the Internet or telephone may be received even faster.

To use the program

By mail:

1. Ask your doctor to write a new prescription for up to a 90-day supply, plus refills (if appropriate) for up to one year.

2. Complete the Medco Health order form, available from the ORNL Benefits Forms Website (Form HD10419M).
 3. Mail your prescription, form and appropriate co-payment or credit card information to the address listed at the bottom of the form.
- Online:

1. Register at the Medco Health website: www.medcohealth.com.
2. Select the "My Benefits" tab at the top of the page. Then choose the "Order new prescriptions" link and follow the instructions.

Refilling your prescriptions

You can refill and track your prescriptions online at www.medcohealth.com or by calling 1-800-473-3455. Have your member ID number and your 12-digit prescription or Rx number ready. To refill by mail, complete the order form and return with your co-payment to Medco Health. Request additional forms on the web, or call 1-800-685-8869.

To make sure that you don't run out of your medication, remember to reorder 14 days before your medication runs out, or subscribe to reminders via e-mail. You can find the refill date on the refill slip that comes with every order or on the Web.

If you need additional help, call Medco Health Member Services at 1-800-685-8869. Best times to call are Tuesday through Friday afternoons. [ornl](#)

New Staff Members

ORNL is growing. This feature lists new employees at the Lab. Welcome all.

Jo E. Rogers and Todd J. Toops, Energy & Engineering Sciences
James E. Stone, Facilities & Operations
Robin K. White, Office of Lab Director
Ronald Roseberry, Jr., Spallation Neutron Source
Dianne M. Merrill, Natalie Bryant, Gary Jenkins, James Mincey, Justin Rogers and William Rogers; Business & Information Services

Service Anniversaries

June

35 years: Barbara L. Jackson, Computer Science and Mathematics; James F. King, Metals & Ceramics; Danny H. Powell, Nuclear Science & Technology; Lynda H. Saddiq, Physics

30 years: Patricia G. Cleveland, Environmental Protection & Waste Svcs; Nicolas H. Packan, Metals & Ceramics; Patrick N. Rader, Business & Information Services Dir.

25 years: Gary T. Alley and Bill Langford, Engineering Science & Technology; Jamie K. Bain, Frank K. Edwards, Jr., and Shirley A. Shugart, Metals & Ceramics; Sam A. Carnes and M. Schweitzer, Environmental Sciences; Bobby H. Cupp and Randy W. Hobbs, Research Reactors; Joe R. DeVore, SNS Conventional Facilities; Pat W. Duncan, Lois R. Foster, Harry D. Housley, and Claude J. Stratton, Jr., Craft Resources; Charles D. Fisher, Networking & Computing Technologies; Paul E. Johnson, Computational Sciences & Engineering; S. D. Mobley, Fabrication & Site Services; Donna J. Roy, Communications & Community Outreach Dir; K. Thacker, Office of the Laboratory Director

20 years: John K. Arthur and Don Foster, Jr., Nuclear Science & Technology; William W. Bolinger, Metals & Ceramics; Elizabeth Dixon, Operational Safety Services; Eva B. Freer and Michael S. Hileman, Engineering Science & Technology; Al Geist, Computer Science and Mathematics; Jeffrey A. Long, Laboratory Protection; Rick D. Phillips, Networking & Computing Technologies; Robert J. Quinn, Craft Resources; Linda L. Smith, Environmental Protection & Waste Svcs; Harry E. Smith, Jr., Quality Services; Michael R. Strayer, Physics; Robert S. Turner, Environmental Sciences; Richard J. Violet, Fabrication & Site Services; David J. Wesolowski, Chemical Sciences

Safe summer

ORNL stresses Safety 1st to this year's influx of summer students

Safety at ORNL is no microscopic matter. It's a gargantuan issue for all employees, including summer students—an especially important bunch. Students are relatively inexperienced and yet they offer ORNL a chance to mold the future work force.

“As we prepare for another season of hosting students we have a tremendous opportunity to shape the future of our science

integrated into a program presented by the Operational Safety Services Division.

Safety 1st is a monthly program that focuses on current safety issues. This month's program dealt with safety concerns specific to summer students. During the program students are taught about more than just the safety hazards they may be unfamiliar with

and how to deal with them. The various safety standards that students from different countries are accustomed to working under are, in a sense, homogenized as well. All students are taught about the safety standards here at ORNL and about what is expected of them as far as laboratory and office housekeeping are concerned. In this way everyone operates under the same standards and develops similar safety habits, which greatly reduces the chance that two people will experience a misunderstanding that might lead

is to encourage frequent mentor-student interaction. OSSD, in conjunction with Safety 1st, is creating a safety primer that will aid mentors in helping students find and understand safety information quickly and completely.

“We want to be able to give the mentor or the supervisor a list of some key things that are important to the students' safety. This way they can show them where to go for information and help them understand a particular area,” says OSSD Director Carol Scott.

Solid mentor-student relationships and good safety habit development, encouraged by the Safety 1st program, are not only crucial to keeping summer students injury-free at ORNL, they are also essential for turning out future scientists who practice safety in every environment they will ever work in, Carol says.

“Students learn a lot more than science,” says Kelly. “They will accrue habits, not only in the way they do their work and the way they approach science, but also in many aspects. We want to make sure that those habits are positive and have an enduring effect on them.”

Visit the Safety 1st web site at safety1st.ornl.gov to learn more about safety topics important to summer students. —*Erin DeMuth* [ornl](#)

Students at ORNL learn a lot more than science. They will accrue habits, and we want to make sure those habits are positive and enduring.



and the manner in which our work is conducted,” says Kelly Beierschmitt, director of Environment, Safety, Health and Quality. “Instilling proper respect for safety and emphasizing good basic laboratory procedures should be a critical goal for us.”

For this reason these individuals have been

to an accident.

“Safety 1st gives us an opportunity to get beyond the compliance part of safety and reinforce behaviors and practices,” says Kelly. “Safe habits that we want people to have—that's really what Safety 1st is about.”

Another way to foster proper safety habits

Erin DeMuth is the Communications and Community Outreach summer intern from the University of Tennessee School of Journalism's science writing program.

ornl reporter

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