

Plan for the Cumberlands

Virginia Dale, Nature Conservancy team up to chart environmental course for plateau, range

With support from The Nature Conservancy, ORNL corporate fellow and Environmental Sciences Division ecologist Virginia Dale is researching land use on the Cumberland Plateau and in the adjoining Cumberland Mountains. The goal of the project is to preserve the ecology and function of the plateau and mountain forests, taking into account past, current and future conditions.

"The Nature Conservancy wants to know how they can help the largely small, private land managers better come to terms with ways to appropriately steward their land," says Virginia, who has spent more than two decades studying ecology and land management.

In comparing current forest conditions with desired ecological conditions, one problem encountered was that the two conditions had never been defined. "We talked about it, but nobody's really defined how to measure or assess desired ecological conditions," Virginia says.

Of the nonfederal land on the plateau, about 80 percent of the area is forested and owned in 20- to 40-acre lots. Since most of the land is privately owned, reaching out to owners is key. Market-based incentives and landowner education, however, can only come after an ecological assessment.

"We want to develop a description of what desired ecological conditions are, describe the forest's current conditions and then determine the gap between current and future conditions," Virginia says.

After the gap is assessed, the goal of The

Nature Conservancy is to bring the land as close to the desired ecological conditions as possible.

With the help of a post-doctoral student, Dan Druckenbrod, and the support of The Nature Conservancy, she began a process to accurately describe the differences between Cumberland plateau and mountain forests as they were historically and as they are now.

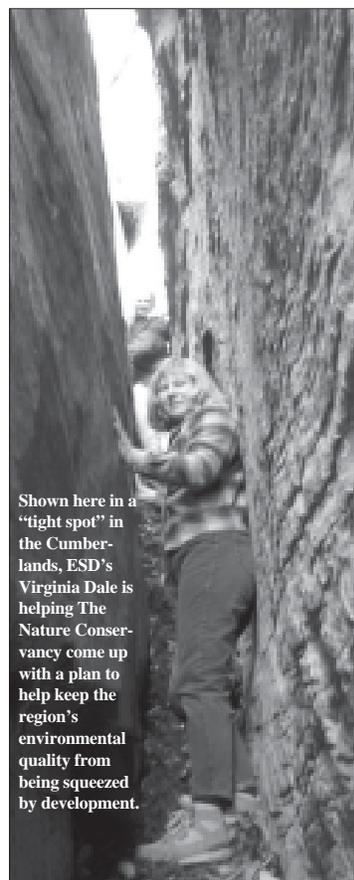
Dan and Virginia studied the forest composition, "because we are both plant people and forests establish habitat conditions for animals as well as determine other ecological functions," she says. The changing populations of mammals, insects and other organisms are being studied mainly by students and researchers from the University of Tennessee.

The researchers first had to determine past ecological conditions—what the forest was like before humans began to clear it for croplands, roads and cities. Dan spent hours poring over historical documents.

"He went over a lot of information from early ecologists, foresters and people wandering around the woods doing accurate, good descriptions of the forests," Virginia says.

Some of the literature and some drawings came from railroad workers, because they were the first people to see many of these forests in their original conditions. Discrepancies in tree names in the manuscripts—"sugar tree" versus "sugar maple" and "spruce pine"

(See CUMBERLANDS, page 2)



Shown here in a "tight spot" in the Cumberlands, ESD's Virginia Dale is helping The Nature Conservancy come up with a plan to help keep the region's environmental quality from being squeezed by development.

Virginia Dale

It's official: UT-Battelle receives five-year extension

UT-Battelle has received from DOE an official, five-year, \$6.3 billion extension for the continued operation of ORNL. DOE announced its decision to extend the contract in December 2004. The extension runs through March 31, 2010.

DOE Under Secretary David Garman announced that the extension was official while he was in Oak Ridge on December 1 for the East Tennessee Economic Council's annual meeting. "This extension demonstrates the department's commitment to scientific research and also our confidence in the people of Oak Ridge National Laboratory," Garman told the audience.

ORNL Director Jeff Wadsworth notes that the enthusiasm ORNL staff members have shown for UT-Battelle's research and operations agenda—and their patience during the modernization campaign's construction phases—have played a large role in securing DOE's approval for the extension.

"This Laboratory's strength is in its people. The hard work and support of the staff over the past five years have played a tremendous role in gaining this acknowledgment of our efforts from our DOE customer," he says.

In its five years as ORNL managing contractor, UT-Battelle has established, under its Lab Agenda, six major scientific competen-

cies that include neutron science, energy, high-performance computing, complex biological systems, advanced materials and national security.

At the same time, the Lab embarked on an innovative modernization campaign based on investments from beyond the normal federal inflow. The campaign has resulted in a new \$300 million campus and an ongoing growth plan that includes financing from federal, state and private investments.

UT-Battelle, a partnership formed in 1999 between Battelle Memorial Institute and the University of Tennessee, became ORNL's contractor on April 1, 2000.—B.C. 

Cumberlands

Continued from page 1

versus “hemlock”—required some interpretation.

Because most of the land in the study is owned privately, land use in each small area can vary widely, increasing forest diversity and making fragmentation of species habitat a problem.

“That’s important because patch size relates to how animals use it as habitat,” Virginia says, explaining that different animals have different space requirements—a chipmunk has different needs than a deer. The key factor in how any species will fare is the size of contiguous patches of the same type of habitat.

Using a computer program developed by Frank Biasi for The Nature Conservancy in 2003, Dan and Virginia generated a map of current land use that displays each landform type in a different color.

Where there are many small patches of differing landform types, it can look as though tiny confetti has been sprinkled over sections of the map. Where larger patches of contiguous forest type exist, the colored sections are larger and more defined. After the landforms and their influences were implemented in a computer code, different scenarios were enacted to generate possible future conditions.

“We came up with a scenario where we transitioned all nonurban and nonwater lands to forest, as an extreme. We know that will never happen, but it provided bounds on potential futures,” Virginia says.

More realistically, she and Dan considered the possible shift of transitional areas—areas that have been cut but which are maturing to other forest types.

“If we run a scenario where we change transitional areas within this forest-landform type, we get an improvement in the number and size of patches,” she says.

Another element of the forest assessment was the comparison of historical tree size and

number of trees per hectare with current size and tree density. The Forest Service defines high-quality trees as those being between 198 and 607 years old, whereas the average tree on the Cumberland Plateau is about 63 years old.

“The trees should be older and bigger to support more desired ecological conditions. The current condition is a high number of small trees; what is a better ecological condition is fewer and larger old trees,” Virginia says. “In the structural features is where the ecological system falls apart.”

For example, older, larger trees with larger canopies provide habitat to species of songbirds whose current habitat is threatened by fragmentation.

“The key purpose of this effort was to try and quantify an approach to reach desired

ecological conditions and to describe those for this particular area,” Virginia says.

For the next step, transitioning to “decision-maker mode.” The Nature Conservancy must

figure out just who the decision makers are and find ways to educate them about the conditions, current and future, of the land.”

“If they want to improve the ecological conditions of their land, they have to think about larger patches, larger trees and fewer trees,” Virginia says. “But it is important to identify who these landowners are, if they’re interested in ecological aspects, and what they want to do with their land. From a socioeconomic perspective it is necessary to consider what’s acceptable to the small, private landowner.”

This past summer a student from Duke University began the process of defining the target group for education about desired future conditions as defined by Virginia’s study.

“We’re trying to identify land owners who are not limited by knowledge and have an open vision,” Virginia says. “By knowing what the desired ecological conditions are, land owners can learn to steward their land to improve the ecological structure, function and composition of the forests of the Cumberlands.” —Eva Millwood 

Slimmer, safer

F&O staff members shed nearly 800 pounds

Thanks to ORNL’s Wellness Program, a number of Facilities & Operations Directorate employees are going into the holidays leaner and a little richer. A year ago F&O Director Herb Debban and Facilities Management Division Director Jimmy Stone asked Wellness Coordinator Joan Lawson to help them with a program to reduce soft-tissue injuries.

They came up with a wellness award program on the theory that being fitter and leaner might help avoid the all-too-common soft-tissue strains and sprains that plague the work force.

About half of the nearly 500 F&O employees showed up for an initial “body-mass index” (height and weight) assessment. A BMI of 29 or below was considered the target. About 60 percent met that criteria, while the rest scored over 29—some way over. The criteria for a \$100 wellness award was to maintain a 29 or less BMI or lose five BMI units; refrain from smoking; and participate in the Tennessee on the Move program, a stretching program or exercise at a fitness center.

About half of those initial respondents returned a year later for their second assessment. Joan says some of the results were downright amazing.

“Sixteen people changed their BMI from over 30 to below 29. Some individual weight losses were 45, 40, 32.4, 31 and 19 pounds. Ninety-eight of the 139 who returned lost weight, and 25 lost between 5 to 10 percent of their body fat,” Joan says.

“Most of the people say they did it by moving around more and cutting back on eating. These aren’t big lifestyle changes,” she says.

In all, nearly 800 pounds were dropped through the program. Roughly half of the original participants are receiving the award. Hopefully, they’ll also be better able to avoid certain on-the-job injuries.

Joan cites studies that show that a smoker racks up an extra \$6,000 in lifetime medical costs over a nonsmoker.

“Two people in the program quit smoking. That’s huge,” she says.—B.C. 

The key factor in how any species will fare is the size of contiguous patches of the same type of habitat.



Reporter

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Retirement

Betty S. Salada has retired from the Contracts Division, where she was subcontracts administrator, after 26 years of service with ORNL. Betty lives in Maryville.



Salada

December 2005

Lab Notes

Cornwell: Leave CSI to the experts

Best-selling crime author and UT body farm advocate Patricia Cornwell visited the Lab, mostly on business, on November 16, although she did make time for a half-hour talk in Wigner Auditorium before a room full of readers and fans.

Cornwell's brief remarks before opening a Q&A session centered on decrying the "CSI effect." It seems that, thanks to the popularity of crime-scene investigation shows on TV, there are now as many arm-chair CSI experts as there are offensive coordinators. It's doing damage, she says, because the shows are often unrealistic and it is making it harder to convict criminals.

"Detectives are arriving at crime scenes to find that people have already bagged the evidence," Cornwell says, adding that defense attorneys are also finding success in playing on the lack of realism in the TV shows.

"Juries have all these expectations from TV, and it makes it hard to convict when defense lawyers ask about all these tests that haven't been performed because they are unnecessary," she says.

What's a detective to do?

"Police need to start arresting people for tampering with evidence," she says. "That would send a message."

Supercomputer joins the elite

The major players in supercomputing no doubt have their eye on an up-and-comer; namely, us. ORNL cracked the top 10 in the latest Supercomputing Top 500 list, compiled by an international team of computer scientists that includes the University of Tennessee's Jack Dongarra.

ORNL's Cray XT3 Jaguar system weighed in at 20.53 teraflop/s (trillion floating operations per second), up from 10 teraflop/s a year

ago, to place at number 10 in the list of 500. The Center for Computational Sciences plans to increase the Jaguar's current 56 cabinets to around 120 in its quest to attain 100 teraflop/s.

The UT, University of Mannheim (Germany) and Lawrence Berkeley

National Laboratory group normally issues its rankings at the annual Supercomputing Conference. This year at the conference,

Computing and Computational Sciences Associate Lab Director Thomas Zacharia and UT's Jack Dongarra received *HPCwire Magazine* awards for "communicating the importance of HPC (high performance computing) Technology and Raising Public Awareness."

SNS instruments readying for '06

In what Spallation Neutron Source Experimental Facilities Division Director Ian Anderson terms a major milestone for the SNS Instrument Systems, the goniostat for the liquids reflectometer has been successfully installed in the SNS beam line 4B instrument cave.

The work illustrates the level of intense activity and ongoing progress leading toward the project's completion next year. The liquids reflectometer effort, led by instrument scientist John Ankner, is one of the first three project-funded instruments that must be installed as part of the completion criteria for the SNS project.

Team member Ken Herwig explains that the goniostat—a mechanism capable of more than two dozen precision motions—is the heart of the liquids reflectometer. It has three main sections: an incident arm that defines the neutron beam reaching the sample; a sample stage that positions and orients the sample and an arm that rotates the detector into position to measure the scattered neutrons.

Among the major milestones remaining for the SNS are filling the target module with mercury and commissioning the accumulator ring—Brookhaven National Laboratory's part of the project—early next year.

Join the club

ORNL's employee organization has been rechristened Club ORNL. Organizers appar-



Thomas Zacharia receives his award from *HPCwire* publisher Tom Tabor.

ently took to heart a *Reporter* staffer's comment that the former name, "staff association," sounded a little, eh, clinical.

Club ORNL kicked off the holidays with an after-work gathering on December 1 featuring food, music and a screening of the Christmas classic, *It's a Wonderful Life*. A good crowd made its way over to the Conference Center in the wintry twilight.

After a set of holiday music and just as the sun dipped behind the joint institute across the common, Thomas Zacharia led the group in lighting the decorated tree set up on the center's second floor.

"I came to the Lab several decades ago as a postdoc and with a very small child. It would have been really nice to have had something like this then," Thomas told the crowd.

With the mission to enhance the Lab's *esprit de corps*, Club ORNL organizers, led by protocol officer Bonnie Hébert, aim to organize onsite and offsite events to give staff, retirees, guests and subcontractors the opportunity to enjoy each other's company and get to know each other better through events like the tree lighting and last September's fall festival.

Other Club ORNL membership benefits will include discount buying privileges, interest groups, excursions, and athletic team support, Bonnie says. Club ORNL activities are under the direction of a 21-member group of representatives from across the Lab. Club ORNL membership is free. Check out the Website at home.ornl.gov/clubornl.

Reported by Bill Cabage



Cornwell peruses a gift copy of the ORNL history for possible clues.



Carolers at the December 1 Club ORNL holiday gathering include (from left) Marilyn McLaughlin, Bonnie Hébert, Leroy Sims, Joe Inger, Sean Ahern, Steven Carter and pianist Beverly Kerr.

The best of ORNL

Awards Night 2005

ORNL's outstanding staff members in the areas of research, operations and community service for 2005 were honored on December 9 at the annual Awards Night celebration, this year held at the Knoxville Convention Center. Congratulations to this year's winners and finalists.

Outstanding Accomplishment in Laboratory Operations

Administrative Support exempt payroll

Winner: Karen Nolan, SNS Project Site Support Office

For outstanding service to ORNL by providing award-winning design and support for the Spallation Neutron Source Projectwise installation and related CAD systems

Finalists: Kathleen Prater Gambrell, Engineering Science and Technology and Brenda Gouldy, Nuclear Science and Technology

Administrative Support nonexempt payroll

Winner: Jaigne Christman, Nuclear Science & Technology

For exceptional coordination of meetings and events with high-level staff, especially for salvaging a crucial international meeting on radiological threat reduction

Finalists: Beth Bailey, Environmental Sciences and Kaye Carter, Condensed Matter Sciences

Bargaining Unit Support by a team

Winner: Steve Davis, Harold Kuziak Jr. and Darrell Watson, Craft Resources

For extraordinary success in replacing the fans in the Building 7920 Vessel Off-Gas System under difficult working conditions, with commendable professionalism, and without contamination incidents or injuries

Environment, Safety, Health, and Quality

Winner: Betty Sueko Evans, Nuclear Science & Technology

For multi-year leadership and personal commitment to the disposition of legacy wastes and to the decontamination and refurbishment of laboratory space

Winner: Charles D. Hochanadel, Judith A. Fitak, Kay Traugher, Health Services

For outstanding service and commitment to the health and safety of ORNL employees, particularly in the areas of injury prevention and recovery

Integrated Safeguards and Security Management

Winner: Allen E. Ekkebus, Deborah W. Barker, Krystee Ervin, Deborah L. Gray, Nancy L. Gray, Jeff Guilford, David Hamrin, Linda L. Horton, Bill Manuel and Karen Moore representing International Services,

Laboratory Protection, Legal Directorate, Center for Nanophase Material Sciences, Networking and Computing Technologies, Office of Counterintelligence, Prime Contract Administration, and SNS Experimental Facilities

For innovative and efficient security solutions in support of programs that have enhanced the security of Laboratory personnel and research efforts while promoting a principal ORNL goal of an open Laboratory campus

Administrative and Operational Leadership at the Group Level

Winner: Ron R. Smith, Laboratory Protection

For exemplary leadership of ORNL's Security Department, including support of the research mission while efficiently delivering a secure ORNL campus

Winner: Kimberly B. Jeskie, Physical Sciences Directorate

For outstanding mentoring of group staff and personal involvement in ensuring safe and compliant research performance, and for leadership in nuclear facility relocation and reclassification projects in the Chemical Sciences Division

Operations Support by a Team

Winner: Robert T. Jubin, Thomas B. Conley, Ronald A. Crone, Carlo D. Melbihess, Robert F. Peacher, Sharon Robinson and Martin W. Tull representing Environmental Protection and Waste Services, Facilities Development, Nuclear Operations Directorate, Nuclear Science and Technology, and Research Reactors

For developing the vision and providing leadership for nuclear program planning and facilities consolidation to secure ORNL's future capability to perform nuclear work

Secretarial Support

Winner: Debbie Bain, Engineering Science & Technology

For her strong work ethic, attention to details, comprehensive knowledge of ORNL's policies and procedures, and tremendous spirit that make her an invaluable member of the Transportation Policy and Planning Group

Finalists: Angie Alford, Nuclear Science & Technology and Sherry D. Samples, Metals & Ceramics

Outstanding Accomplishment in Community Service

Community Leadership

Winner: Maj. Charles Eric Mulkey, Environmental Protection and Waste Services

For repeatedly volunteering for active military assignments to war zones in Afghanistan and Iraq

Exceptional Community Outreach by an individual

Winner: Danny H. Powell, Nuclear Science & Technology

For exceptional community outreach in providing humanitarian efforts at Russian orphanages

Finalists: Eric Manneschmidt, Metals & Ceramics and Bruce Allen Tomkins, Chemical Sciences

Exceptional Community Outreach by a Team

Winner: Cathy Cheverton, Wendell G. Ely, Kahra Gilley, Keith S. Joy, Joan W. Lawson, Roxanne A. Raschke and Nina Jean Roberts representing ESH&Q Directorate, Facilities Management, Logistical Services, Metals and Ceramics, Quality Systems and Services and Safety Services

For a phenomenal team effort in organizing through Team UT-Battelle the largest Komen team for the fifth year in a row for participation in the 8th Annual Knoxville Komen Race for the Cure to benefit breast cancer research and education, raising over \$7,000

Esprit de Corps

Winner: Budhendra L. Bhaduri, Computational Sciences & Engineering

For outstanding efforts toward enhancement and enrichment of the lives of our international staff members, while becoming an internationally known spokesperson for the important role of geospatial science in support of national and global missions

Science Communicator

Winner: Lee A. Berry, Fusion Energy

For continued involvement and leadership in education and outreach for plasma science and its applications

Finalists: Stacy C. Davis, Engineering Science and Technology and David J. Wesolowski, Chemical Sciences

Outstanding Accomplishment in Science and Technology

Distinguished Engineer

Winner: Charles W. Forsberg, Nuclear Science & Technology

For sustained and significant contributions in the areas of reactor system concepts, reactor safety, waste management technology, and nuclear fuel disposition

Finalists: Charles L. Britton Jr., Engineering Science & Technology and Charles Stuart Daw, Engineering Science & Technology

Early Career Award for Engineering Accomplishment

Winner: Burak Ozpineci, Engineering Science

& Technology

For excellence in engineering research on advanced power electronic device applications and power system topologies that are critical to DOE's energy efficiency goals

Finalists: Sara A. Pozzi, Nuclear Science & Technology and Todd J. Toops, Engineering Science & Technology

Engineering Development by a Team

Winner: Lawrence F. Allard, Douglas A. Blom, Lynn Degenhardt, John A. Mayo, William H. Sides Jr. representing Condensed Matter Sciences, Facilities Development and Metals & Ceramics

For exceptional collaboration in the conceptualization, plan, design, and supervision of construction of a unique, state-of-the-art, environmentally stable laboratory that ensures optimum operation of advanced electron optical instruments

Inventor of the Year

Winner: Amit Goyal, Metals & Ceramics
For establishing an intellectual property portfolio that has resulted in ORNL's worldwide dominance in high-temperature superconducting wire fabrication
Finalists: Jack L. Collins, Nuclear Science & Technology and Peter T. A. Reilly, Chemical Sciences

R&D Leadership at the Group Level

Winner: Stephen J. Pennycook, Condensed Matter Sciences
For exhibiting outstanding management skills in building a widely recognized, world-class electron microscopy program, recruiting and mentoring top personnel, and securing substantial increases in DOE funding to support this initiative

Finalists: Robert E. Norris Jr., Metals and Ceramics and Thomas C. Schulthess, Computer Science & Mathematics

R&D Leadership at the Director Level

Winner: Brian A. Worley, Computational Sciences & Engineering
For exemplary vision and leadership in founding the Computational Sciences and Engineering Division and in the growth of its world-class staff and funding, with emphasis on national security and energy assurance and international humanitarian assistance
Finalists: Stanley L. Milora, Fusion Energy and Arvid E. Pasto, Metals & Ceramics

Technical Support

Winner: William H. Sides Jr., Condensed Matter Sciences
For technical excellence beyond the call of duty enabling ORNL microscopy to achieve a world record in resolution
Finalists: Thomas W. Burgess, E. Craig Bradley, Van B. Graves and David L. Conner, Nuclear Science & Technology
John D. Harrell, Craft Resources

Early Career Award for Scientific Accomplishment

Winner: Sergei V. Kalinin, Condensed Matter Sciences

For advances in nanoscale imaging of physical, chemical, and biological properties through the development and application of advanced scanning probe microscopes
Finalists: Radu Custelcean, Chemical Sciences and Z.P. Lu, Metals and Ceramics

Scientific Research

Winner: Ho Nyung Lee, Condensed Matter Sciences
For developing experimental methods and theoretical understanding that led to the discovery of strong polarization enhancement in three-component (Ca, Ba, Sr) TiO₃ ferroelectric superlattices grown by pulsed laser deposition

Finalists: A. C. Buchanan III, Phillip F. Britt, Alan Loyd Chaffee, Sheng Dai, Edward W. Hagaman, Michelle K. Kidder, Zongtao Zhang, Chemical Sciences and ORISE
Andrey I. Zheludev, Condensed Matter Sciences

Distinguished Scientist

Winner: Lynn A. Boatner, Condensed Matter Sciences
For pioneering new approaches and techniques for the growth, synthesis, and characterization of novel materials
Finalists: George D. Wignall, Center for Neutron Scattering and Thomas J. Wilbanks, Environmental Sciences

Director's Awards

Outstanding Individual Accomplishment in Science and Technology

Stephen J. Pennycook

For exhibiting outstanding management skills in building a widely recognized world-class electron microscopy program, recruiting and mentoring top personnel, and securing substantial increases in DOE funding to support this initiative



Stephen Pennycook



Betty S. Evans

Outstanding Individual Accomplishment in Laboratory Operations

Betty S. Evans

For multi-year leadership and personal commitment to the disposition of legacy wastes and to the decontamination and refurbishment of laboratory space

Outstanding Individual Accomplishment in Community Service

Budhendra L. Bhaduri

For outstanding efforts toward enhancement and enrichment of the lives of our international staff members, while becoming an internationally known spokesperson for the important role of geospatial science in support of national and global missions



Budhendra L. Bhaduri

Outstanding Team Accomplishment

Lawrence F. Allard Jr., Douglas A. Blom, John A. Mayo Jr., Lynn J. Degenhardt and William H. Sides Jr.

For exceptional collaboration in the conceptualization, plan, design, and supervision of construction of a unique, state-of-the-art environmentally stable laboratory that ensures optimum operation of advanced electron optical instruments



From left: John A. Mayo Jr., Lynn J. Degenhardt, Lawrence F. Allard Jr., William H. Sides Jr. and Douglas A. Blom

Photos: Curtis Boles

Benefits Summary Annual Report for 2004

Summary Annual Report for

RETIREMENT PROGRAM PLAN FOR EMPLOYEES OF CERTAIN EMPLOYERS AT THE U.S. DEPARTMENT OF ENERGY FACILITIES AT OAK RIDGE, TENNESSEE

This is a summary of the annual report for the RETIREMENT PROGRAM PLAN FOR EMPLOYEES OF CERTAIN EMPLOYERS AT THE U.S. DEPARTMENT OF ENERGY, (Employer Identification No. 54-1987297, Plan No. 001) for the period January 1, 2004 to December 31, 2004. The annual report has been filed with the Employee Benefits Security Administration, as required under the Employee Retirement Income Security Act of 1974 (ERISA).

BASIC FINANCIAL STATEMENT

Benefits under the plan are provided by a trust (benefits are provided in whole from trust funds). Plan expenses were \$169,206,459. These expenses included \$16,513,312 in administrative expenses and \$152,693,147 in benefits paid to participants and beneficiaries. A total of 22,878 persons were participants in or beneficiaries of the plan at the end of the plan year, although not all of these persons had yet earned the right to receive benefits.

The value of plan assets, after subtracting liabilities of the plan, was \$2,861,239,681 as of December 31, 2004 compared to \$2,691,958,132 as of January 1, 2004. During the plan year the plan experienced an increase in its net assets of \$169,281,549. This increase includes unrealized appreciation or depreciation in the value of plan assets; that is, the difference between the value of the plan's assets at the end of the year and the value of the assets at the beginning of the year, or the cost of assets acquired during the year. The plan had total income of \$338,488,008, including gains of \$12,216,729 from the sale of assets and earnings from investments of \$324,074,438. The plan has contracts with MetLife and The Prudential Insurance Company of America, which allocate funds toward individual policies.

MINIMUM FUNDING STANDARDS

An actuary's statement shows that enough money was contributed to the plan to keep it funded in accordance with the minimum funding standards of ERISA.

YOUR RIGHTS TO ADDITIONAL INFORMATION

You have the right to receive a copy of the full annual report, or any part thereof, on request. The items listed below are included in that report:

1. An accountant's report;
2. Assets held for investment;
3. Transactions in excess of 5 percent of the plan assets;
4. Insurance information including sales commissions paid by insurance carriers; and
5. Information regarding any common or collective trust, pooled separate accounts, master trusts or 103-12 investment entities in which the plan participates.

To obtain a copy of the full annual report, or any part thereof, write or call the office of:

BWXT Y-12, L.L.C.
P.O. Box 2009, MS8267
Oak Ridge, TN 37830
865-574-9110

You also have the right to receive from the plan administrator, on request and at no charge, a statement of the assets and liabilities of the plan and accompanying notes, or a statement of income and expenses of the plan and accompanying notes, or both. If you request a copy of the full annual report from the plan administrator, these two statements and accompanying notes will be included as part of that report. These portions of the report are furnished without charge.

You also have the legally protected right to examine the annual report at the main office of the plan:

BWXT Y-12, L.L.C.
104 Union Valley Road, Room 140
Oak Ridge, TN 37830

and at the U.S. Department of Labor in Washington, D.C., or to obtain a copy from the U.S. Department of Labor upon payment of copying costs. Requests to the

Department should be addressed to: U.S. Department of Labor, Employee Benefits Security Administration, Public Disclosure Room, 200 Constitution Avenue, NW, Suite N-1513, Washington, D.C. 20210.

Summary Annual Report for

SAVINGS PROGRAM FOR EMPLOYEES OF CERTAIN EMPLOYERS AT THE U.S. DEPARTMENT OF ENERGY FACILITIES AT OAK RIDGE, TENNESSEE

This is a summary of the annual report for the SAVINGS PROGRAM FOR EMPLOYEES OF CERTAIN EMPLOYERS AT THE U.S. DEPARTMENT OF ENERGY FACILITIES AT, (Employer Identification No. 54-1987297, Plan No. 009) for the period January 1, 2004 to December 31, 2004. The annual report has been filed with the Employee Benefits Security Administration, as required under the Employee Retirement Income Security Act of 1974 (ERISA).

BASIC FINANCIAL STATEMENT

Benefits under the plan are provided by a trust (benefits are provided in whole from trust funds). Plan expenses were \$63,293,139. These expenses included \$770,820 in administrative expenses and \$62,522,319 in benefits paid to participants and beneficiaries. A total of 10685 persons were participants in or beneficiaries of the plan at the end of the plan year, although not all of these persons had yet earned the right to receive benefits.

The value of plan assets, after subtracting liabilities of the plan, was \$1,255,747,754 as of December 31, 2004 compared to \$1,154,576,972 as of January 1, 2004. During the plan year the plan experienced an increase in its net assets of \$101,170,782. This increase includes unrealized appreciation or depreciation in the value of plan assets; that is, the difference between the value of the plan's assets at the end of the year and the value of the assets at the beginning of the year, or the cost of assets acquired during the year. The plan had total income of \$164,463,921, including employer contributions of \$18,534,991, employee contributions of \$50,085,297, gains of \$563,835 from the sale of assets and earnings from investments of \$93,544,249.

YOUR RIGHTS TO ADDITIONAL INFORMATION

You have the right to receive a copy of the full annual report, or any part thereof, on request. The items listed below are included in that report:

1. An accountant's report;
2. Financial information and information on payments to service providers;
3. Assets held for investment;
4. Transactions in excess of 5 percent of the plan assets;
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104 Union Valley Road, Room 140
Oak Ridge, TN 37830

and at the U.S. Department of Labor in Washington,

D.C., or to obtain a copy from the U.S. Department of Labor upon payment of copying costs. Requests to the Department should be addressed to: U.S. Department of Labor, Employee Benefits Security Administration, Public Disclosure Room, 200 Constitution Avenue, NW, Suite N-1513, Washington, D.C. 20210.

Summary Annual Report for

GROUP WELFARE BENEFIT PLAN FOR EMPLOYEES OF CERTAIN EMPLOYERS AT THE U.S. DEPARTMENT OF ENERGY FACILITIES AT OAK RIDGE, TENNESSEE

This is a summary of the annual report for the GROUP WELFARE BENEFIT PLAN FOR EMPLOYEES OF CERTAIN EMPLOYERS AT THE U.S. DEPARTMENT OF ENERGY FACILITIES, (Employer Identification No. 54-1987297, Plan No. 506) for the period January 1, 2004 to December 31, 2004. The annual report has been filed with the Employee Benefits Security Administration, as required under the Employee Retirement Income Security Act of 1974 (ERISA).

BASIC FINANCIAL STATEMENT

The value of plan assets, after subtracting liabilities of the plan, was \$-1,006,970,720 as of December 31, 2004 compared to \$-963,725,672 as of January 1, 2004.

During the plan year the plan experienced a decrease in its net assets of \$43,245,048. This decrease includes unrealized appreciation or depreciation in the value of plan assets; that is, the difference between the value of the plan's assets at the end of the year and the value of the assets at the beginning of the year, or the cost of assets acquired during the year. During the plan year, the plan had total income of \$141,073,167. This income included employer contributions of \$135,449,356 and employee contributions of \$48,868,859. Plan expenses were \$184,318,215. These expenses included \$184,318,215 in benefits paid to participants and beneficiaries.

YOUR RIGHTS TO ADDITIONAL INFORMATION

You have the right to receive a copy of the full annual report, or any part thereof, on request. The items listed below are included in that report:

1. An accountant's report;
2. Financial information and information on payments to service providers; and
3. Insurance information including sales commissions paid by insurance carriers.

To obtain a copy of the full annual report, or any part thereof, write or call the office of:

BWXT Y-12, L.L.C.
P.O. Box 2009, MS8267
Oak Ridge, TN 37830
865-574-9110

You also have the right to receive from the plan administrator, on request and at no charge, a statement of the assets and liabilities of the plan and accompanying notes, or a statement of income and expenses of the plan and accompanying notes, or both. If you request a copy of the full annual report from the plan administrator, these two statements and accompanying notes will be included as part of that report. These portions of the report are furnished without charge.

You also have the legally protected right to examine the annual report at the main office of the plan:

BWXT Y-12, L.L.C.
104 Union Valley Road, Room 140
Oak Ridge, TN 37830

and at the U.S. Department of Labor in Washington, D.C., or to obtain a copy from the U.S. Department of Labor upon payment of copying costs. Requests to the Department should be addressed to: U.S. Department of Labor, Employee Benefits Security Administration, Public Disclosure Room, 200 Constitution Avenue, NW, Suite N-1513, Washington, D.C. 20210.

Team UT-Battelle captains lauded for nearly \$300K year

Team UT-Battelle recently recognized its team captains and teams for another stellar year of community service. Lab staff members have coordinated 30 projects with nearly 800 volunteers donating almost 2,600 hours to community causes.

Projects that included monetary contributions raised \$294,901.07, with UT-Battelle contributing \$1,800 for project expenses. UT-Battelle corporate gifts totaled \$157,178.

These teams and their captains were cited for this year's projects:

The Aid to Distressed Families of Appalachian Counties met its \$30,000 goal thanks to project captain and ORNL retiree Tim Myrick's 50 hours in handling a \$10,000 grant pledge.

Team captain Karen Murphy coordinated 13 volunteers and collected \$2,800 for the American Cancer Society's Anderson County Relay For Life.

Sixteen volunteers led by Tim Jones spent some 20 hours coordinating the AMSE Pinewood Derby for local Cub Scouts.

Sherri Coffee once again led the Lab's perennially successful Angel Tree Christmas collection.

Fund drives for employees who suffered misfortunes ranging from house fires to car accidents gathered nearly \$18,000. Organizers for three drives were Kathy McIntyre, Janet Bradshaw and Janice Allgood.

J.K. Zhao's team from the Third Annual Dragonboat Race—42 volunteers who spent 200 hours—collected some \$6,500 toward the total \$50K raised to help local needs through the Knoxville Area Rescue Ministry and the Second Harvest Food Bank.

For the Five-County Alzheimer's Memory Walk, 33 volunteers led by Nancy Dailey

spent 75 hours collecting \$8,267. Nancy Ballard won the most individual sponsorship award for collecting \$900.

Kim McMahan rounded up 19 volunteers for the Help to the Smokies Project. They spent 150 hours working on the rehabilitation of

picnic sites, walkways and surrounding trampled areas at the Chimneys picnic area.

Meredith Leahy led 29 volunteers who spent some 150 hours collecting a truckload of debris in the Highway 95 Trash Bash.

Kahra Gilley led 15 volunteers who spent 60 hours collecting \$2,232.72 for the Juvenile Diabetes Research

Foundation.

Cathy Cheverton, captain, and Mylissa Buttram, co-captain, led 241 volunteers (the largest corporate team) who spent some 500 hours and collected \$7,500 for the Susan G. Komen Race for the Cure. The noisy band on the corner of Fifth and Central had a Team UT-Battelle element, as well.

Fred Strohl and 11 volunteers collected some \$1,530 for the March of Dimes for Anderson County.

Melton Hill Lake's shores are cleaner because Daron Long and 18 volunteers spent 90 hours collecting several boatloads of trash.

Team captain Sharon Thompson and 12 volunteers spent 50 hours collecting \$6,000 for the Multiple Sclerosis Walk.

Team captain Beverly Abele and 22 volunteers spent 75 hours and collected some \$11,000 for the National Kidney Foundation.

Les Hook organized the new and ongoing Oak Ridge Playhouse Work Days for building and painting sets and props.



From left, Debbie May, Sarah Shaver and Amy Massey drop off gifts for this year's Angel Tree.

Roberta Grafton and Nancy Davis are leading the ongoing Recycle Your Cell Phone project with some 25 hours.

Cindy Spence and 16 volunteers spent some 50 hours on the Ronald McDonald House. Roger Jones has run the ongoing Ronald McDonald House Pull Tabs effort.

For the "Tour de Cure" bike ride, Bruce Siefken and 36 volunteers spent some 576 hours collecting \$16,000 for the American Diabetes Association.

Joy Anderson and volunteer retiree Gerry Slaughter have so far invested 78 hours and expect to spend more than 90 hours by year end on the ongoing Old Photo ID Preservation Project.

Marilyn McLaughlin and three volunteers have spent 264.5 hours evaluating, assessing and finding homes for historical items unique to ORNL for the ongoing ORNL History Room and Antiquities Preservation Project. 🌿

New Staff Members

Michael Lawrence Baker, Safety Services
Betty "Jackie" Becker and Deborah

Helfenberger Sumner, Quality Systems & Services

Richard S. Canon and Marsha Dykes Henley, Center for Computational Sciences

Melissa Marie Beauvais Harvey, Peter Mark Rosenblad and Timothy Lee Chae, SNS Experimental Facilities

Allen Wade McNair, Office of Chief Information Officer

Lisa Marsh Thompson, National Security Directorate

Andrew Richard Lupini, Condensed Matter Sciences

Glenda Mae Sharp, Paul Milburn Newman III and James Randy Trater, Networking & Computing Technologies

Andy Wayne Crass, Jamie Ray Seeber, William McCoy Smith, Mark Anthony Watson, Teresa Harrison Wilkerson, Reginald Jermaine Chatman, Richard Brian Hendrickson, Victoria Dawn Lively, Riccardo Alan Newman, David L. Phillips, Roger Dale White Jr. and Mark Patrick Wise, Craft Resources

Neena Imam, Computer Sciences & Mathematics

Deborah Rena Stairs and Karilee A. Durham, Human Resources

Robert L. Wilson and Cary D. Long, SNS Accelerator Systems Division

Stephen Allen Brown and Larry Ralph Rightsell, Research Reactors

Ellen Elizabeth Blackburn and Lisa Parker Hawk, Contracts

Ron Cain, Nuclear Science & Technology
Ronald Harish Chand, Metals & Ceramics

Tracy Michelle Housewright, Chemical Sciences

Minghu Pan, Physics

Service Anniversaries

December 2005

30 years: Larry J. Bivens, Glenn Thomas Miller and James Arthur Ayers, Craft Resources; Clifton R. Hyman III, Research Reactors; Rodney A. McKee, Metals & Ceramics; David W. Swain, Fusion Energy; Robert (Bob) W. Shaw, Chemical Sciences; Johnnie B. Cannon, National Security Dir.; C. Barry Oland, Engineering Science & Technology

25 years: Teresa F. Ault, Laboratory Protection; Donald Clifford Gregory and W. Randy Gorman, Nuclear & Radiological Protection; Terrence P. Sjoreen, Office of the Laboratory Director; Robert A. Hawsey, Energy & Engineering Sciences Dir.; Pedro J. Otaduy, Gary J.

Capps and James Anthony Moore, Engineering Science & Technology; Linda J. Rose, Nuclear Science & Technology; Jeanette McBride, Physics; James Loren Baxter, Facilities Management; Marilyn K. Kerley, Life Sciences; Andrea L. Sjoreen, Computational Sciences & Engineering

20 years: Gail R. Moore, Human Resources Dir.; Cyril V. Thompson, Chemical Sciences; Diana M. Linville, Quality Systems and Services; Moonis Raza Ally, Engineering Science & Technology; Richard R. Rawl, Nuclear Science & Technology; Frederick Alyious List III, Metals & Ceramics

Cardall: Tough Gulf weekend

Christian Cardall of ORNL's Physics Division worked hard through the years to earn a doctorate degree.

However, Christian probably never worked any harder in his life than during the weekend of September 24-25, when he joined a local church group to aid victims of Hurricane Katrina during a mission of mercy to Hattiesburg, Miss., located about 60 miles north of Biloxi, Miss., and 60 miles northeast of New Orleans.

"I'm certain I've never performed such strenuous manual labor as I did those two days," Christian said of his efforts as part of a five-member group from Clinton's Clinch River Ward of the Church of Jesus Christ of Latter-day Saints.

Christian said most of his group's work over two days was to use chain saws to remove downed trees from several residential neighborhoods and assist in roofing repairs.

"Most of the people we helped were either one-parent families where only the mother was living at home and the elderly," Christian said. "These were people who had trouble helping themselves."

Christian said wind damage was the main problem Katrina caused Hattiesburg, as opposed to the additional flooding problems that plagued New Orleans, Biloxi and other communities located along the Gulf Coast. During the two days Christian and his group were in Biloxi, they had to deal with some rain falling from Hurricane Rita.

"It rained hard and the wind blew hard at times, but our group kept working through that," Christian said. "We got used to it after a while."

With follow-up Hurricane Rita approaching, the crew members expected to have to

camp out in tents.

"We were told to expect to fend for ourselves," Christian said. "We brought our own tents, sleeping bags, food and drink."

However, a number of relief workers who were expected to be in the area canceled, providing Christian's group the opportunity to stay in a local church.

"We went to bed at 10 o'clock at night and got up at 6 the next morning," Christian said. "On Sunday morning, we had an early church service and then we worked all day. After that, we went home, but I didn't sleep any during the nine-hour trip. I must have been awake about 20 hours straight."

Christian said the people of Hattiesburg have plenty of work ahead of them in the rebuilding process, but they are grateful for the



Christian Cardall stands in the wreckage of a post-Katrina Mississippi lawn.

relief workers who have helped in their area.

Although Christian was tired from the work, he had no regrets.

"I was exhausted when I got home, but I still felt good about contributing to the relief effort. —Fred Strohl 🌿

Letters

Heading home

To the ORNL family,

As you all recall, life, as we knew it, changed overnight on August 27 with Katrina and the flooding resulting from the levy breakdowns. Like hundreds of others we too had fled the city with nothing but a suitcase of personal belongings, hoping to be back in a couple of days. Well, the couple of days have been stretched to almost three months and we are still away from home, *except* that we have made a new home right here at ORNL and Oak Ridge. (*Reporter* No. 72).

It is truly hard to describe to anyone the

devastation that our city has faced and the contrast of our lives here versus what may lie ahead when we return in January. It is almost impossible for us to acknowledge by name every person who has made our stay here possible, since we would not want to mistakenly leave anyone out. It is also safe to say that we do not have adequate words to express the enormous gratitude and joy we feel for everything we have received—from the many opportunities to contribute to ORNL to the lasting friendships from you all at ORNL and from the wonderful folks at the University of Tennessee, Knoxville.

So, as we get ready to say goodbye, we want to thank each and every one of you for your kindness and prayers. We also want to wish everybody a safe holiday season with the best of health, peace and prosperity. We will stay in touch. Thanks again.

Richard and Shubha Ireland



Reporter

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Oak Ridge, TN 37831-6266

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INSIDE...

Number 73 December 2005

Cumberland studies, page 1

Contract extended, page 1

Sleeker staff, page 2

**Lab Notes: Patricia Cornwell,
top ten computer, Club ORNL,
page 3**

Awards Night, page 4

Team UT-Battelle captains, page 7