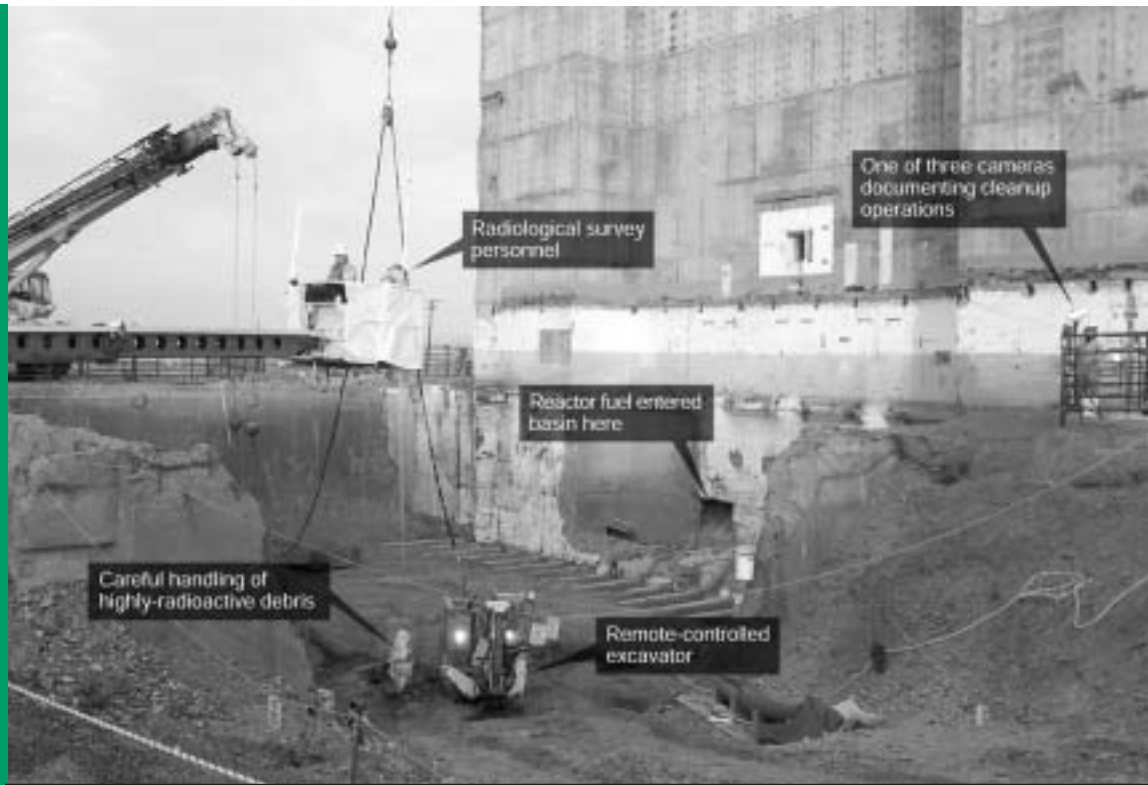


**President's  
decision  
supports  
Yucca  
Mountain for  
repository**

**New power  
plants by  
2010 goal of  
nuclear  
initiative**

**Cook, Smith,  
Beckner take  
oath of office**



*Hanford Site cleanup*



U.S. Department of Energy



Published monthly in Washington, D.C., by the Department of Energy, Office of Public Affairs, for the information of Department employees and affiliates and available to others by paid subscription.

The Secretary of Energy has determined that this periodical is necessary in the transaction of public business as required by law. Use of funds for printing has been approved by the director of the Office of Management and Budget. The content is reprintable without permission and pictures are available for media reproduction upon request.

**Spencer Abraham**  
Secretary of Energy

**Jeanne Lopatto**  
Director, Office of Public Affairs

**Bonnie Winsett**  
Editor

**Visual Media Group**  
Graphic Design

SUBSCRIPTION price for 12 issues is \$22 (\$27.50 foreign). Send check, or provide VISA or Mastercard number and expiration date, to: Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Credit-card orders can be called in 8 a.m.-4 p.m. ET, 202-512-1800, or faxed to 202-512-2250. Cite "DOE This Month (EINS)."

**Circulation Office:** 202-586-2050

**News Office:**  
DOE This Month  
Office of Public Affairs - PA-40  
U.S. Department of Energy  
Washington, DC 20585

**Internet Mail Address:**  
doe.thismonth@hq.doe.gov

**HQ cc:mail:**  
THISMONTH,DOE

Deadline for submissions: 15th of every month for the following month.

**DOE PA-0025-3**  
Vol. 25, No. 3

*DOE This Month is printed on paper containing at least 50 percent recycled materials.*

# Inside

6

Scientists and researchers now have greater access to state-of-the-art laboratories and facilities at the National Transportation Research Center in Knoxville, Tenn., newly designated a national user facility by the Department of Energy.



Advanced security technologies developed by the Department of Energy and several of its laboratories were showcased in Washington, D.C., Feb. 11-12, 2002.

8

12

Personnel from Fire Station No. 2 at the Department of Energy's Idaho National Engineering and Environmental Laboratory help save the life of a site employee.



## On our cover

**W**orkers at the Department of Energy's Hanford Site Environmental Restoration Project remotely retrieve radiologically contaminated debris from the F Reactor fuel storage basin located along the Columbia River in southeastern Washington state. The fuel storage basin of the retired plutonium production reactor was filled with sand and debris during deactivation. The top 17 feet of "cleaner" soil was removed from the basin during fiscal year 2001. Work is now ongoing to remove the final three feet containing radioactive sludge, debris, and several spent nuclear fuel elements and fragments. To date, 11 potential spent fuel elements have been recovered.

The fuel basin is part of the larger task of safely storing, or "cocooning," F Reactor. The surrounding reactor building is demolished during cocooning, except for the inner five-foot-thick walls that contain the core. Then a new roof structure is placed over the remaining building. The aerial view shows that F Reactor cocooning is 77 percent complete with nearly 80 percent of its footprint demolished and removed.

# President supports Secretary's Yucca Mountain recommendation, forwards decision to Congress

On Feb. 15, 2002, President George W. Bush notified Congress that he recommends the Yucca Mountain site in Nevada suitable for development and qualified for construction authorization for the nation's long-term geological repository for high-level nuclear waste. The President's decision and action followed the formal recommendation of the site by Secretary of Energy Spencer Abraham on Feb. 14.

"Having received the Secretary's recommendation and the comprehensive statement of the basis of it, I consider the Yucca Mountain site qualified for application for a construction authorization for a repository. Therefore, I now recommend the Yucca Mountain site for this purpose," President Bush said in his letter to the Speaker of the House of Representatives and the President of the Senate. "In accordance with section 114 of the [Nuclear Waste Policy] Act, I am transmitting with this recommendation to the Congress a copy of the comprehensive statement of the basis of the Secretary's recommendation prepared pursuant to the Act. The transmission of this document triggers an expedited process described in the Act. I urge the Congress to undertake any necessary legislative action on this recommendation in an expedited and bipartisan fashion."

In his letter to President Bush, Secretary Abraham said, "I have considered whether sound science supports the determination that the Yucca Mountain site is scientifically and technically suitable for the development of a repository. I am convinced that it does....The Department has engaged in over 20 years of scientific and technical investigation of the suitability of the Yucca Mountain site....The results of this extensive investigation and the external technical reviews of this body of scientific work give me confidence for the conclusion, based on sound scientific principles, that a repository at Yucca Mountain will be able to protect the

health and safety of the public when evaluated against the radiological protection standards adopted by the Environmental Protection Agency and implemented by the Nuclear Regulatory Commission....

"...After months of study based on scientific and technical research unique in its scope and depth, and after reviewing the results of a public review process that went well beyond the requirements of the [Nuclear Waste Policy] Act, I reached the conclusions...that technically and scientifically the Yucca Mountain site is fully suitable, that development of a repository at the Yucca Mountain site serves the national interest in numerous important ways, and that the arguments against its designation do not rise to a level that would outweigh the case for going forward. Not completing the site designation process and moving forward to licensing the development of a repository, as Congress mandated almost 20 years ago, would be an irresponsible dereliction of duty."

The formal recommendation by the Secretary of Energy and the approval of the site by the President of the United States are early steps in the process mandated by the Nuclear Waste Policy Act. Under the Act, the Governor or Legislature of the State of Nevada may submit a notice of disapproval of the President's recommendation to Congress, no later than 60 days after the President recommends the Yucca Mountain site. If Nevada chooses to exercise its right, both the House of Representatives and the United States Senate must act affirmatively to accept the recommendation. If Nevada does not submit a notice of disapproval, the Secretary of Energy submits an application for construction authorization to the Nuclear Regulatory Commission (NRC).

Construction of the repository would begin if, and only if, the



*Secretary Abraham digitally signs his letter to President Bush transmitting the Yucca Mountain recommendation and supporting documents.*

Department of Energy submits a license application, goes through a multi-year review and public hearing process, and receives a construction authorization from NRC—a minimum of three years. Following construction authorization, the Department would have to complete initial construction, and apply for and receive a license from NRC before any wastes could be received.

Secretary Abraham's letter of recommendation to President Bush, the comprehensive statement of the basis of the recommendation, and other supporting documentation and information on the Yucca Mountain site are available at <http://www.energy.gov> or <http://www.ymp.gov>. The President's letter to Congress and a White House statement on the recommendation are available at <http://www.whitehouse.gov>, click on "Current News." ❖



# Nuclear Power 2010 aims for new power plants by end of decade

At the Global Nuclear Energy Summit in Washington, D.C., on Feb. 14, 2002, Secretary of Energy Spencer Abraham announced the Department of Energy's (DOE) "Nuclear Power 2010" initiative. The new public-private partnership is aimed at building and operating new nuclear power plants in the United States before the end of this decade. "We have set an ambitious target for this important work, but one that is achievable," Secretary Abraham said.

The Department proposes to match industry investments of as much as \$48.5 million over the next two years, as part of a multiyear program with the private sector, to explore both Federal and private sites that could host new nuclear plants; to demonstrate the efficiency and timeliness of key Nuclear Regulatory Commission (NRC) licensing

processes designed to make licensing of new plants more efficient, effective, and predictable; and to conduct research needed to make the safest and most efficient nuclear plant technologies available in the United States.

The first elements of the initiative will begin immediately with "scoping studies" of candidate sites for future nuclear plants. Two nuclear utilities, Exelon and Dominion Resources, will conduct initial studies of several sites. Both privately owned sites and DOE's Idaho National Engineering and Environmental Laboratory, Savannah River Site in South Carolina, and Portsmouth Site in Ohio will be considered in the site selection process. The studies will determine the costs, schedule, and specific activities required to submit an Early Site Permit (ESP) application to NRC.

In phase two of the initiative, the Department is seeking proposals by April 15, 2002, from U.S. nuclear utilities and generating companies to conduct a 30-month demonstration project for an ESP application. DOE will award up to \$3 million in fiscal year 2002 to initiate demonstration of the ESP process. The solicitation, DE-PS07-021D14305, is available at DOE's Interactive Procurement web site, <http://e-center.doe.gov>.

Additional information about "Nuclear Power 2010" is available on the Department's Office of Nuclear Energy, Science and Technology web site, <http://www.ne.doe.gov>. Secretary Abraham's remarks before the Global Nuclear Energy Summit are available at <http://www.energy.gov/HQDocs/speeches/2002/febss/GlobalNuclearEnergySummit.html>. ❖

## Department helping define labs of future

Three Department of Energy (DOE) laboratories are part of an elite group of 12 Federal and private sector laboratories that are helping to define the next generation of laboratories and to set a higher standard for how laboratories are designed, built, and maintained. Lawrence Berkeley National Laboratory (LBNL), National Renewable Energy Laboratory (NREL), and Sandia National Laboratories (Sandia) are partners in the joint Department of Energy/Environmental Protection Agency (EPA) Laboratories for the 21st Century (Labs21) program.

Unlike commercial office buildings, homes, and department stores, laboratories are an advanced and highly sophisticated building type. The average laboratory uses five times as much energy and water as a typical office building because of extensive ventilation requirements and other health and safety concerns.

Each Labs21 partner has identified a specific project and will strive to apply new thinking for improved

laboratory performance. The pilot partner projects are at different stages of planning and development. DOE and EPA are helping define the scope and performance goals for the projects.

The LBNL project, the Energy Efficiency and Electricity Reliability Laboratory, is in the concept stage. The goal is to construct a building in the top one percent of laboratory buildings in terms of energy efficiency and healthy, comfortable working environments. Electricity use from off-site sources will be less than one half of conventional laboratories, with the remaining electricity needs met with on-site renewable sources and distributed generation. Building materials will be selected to minimize adverse impacts to the environment.

NREL's project, the Science and Technology Facility, will support the National Center for Photovoltaics and Basic Science Program and related research. The facility will exceed existing Federal and national energy

codes by a minimum of 30 percent by incorporating day-lighting and other energy conservation measures into the design. NREL will maximize the specification of building products to minimize the impact to the environment over the facility's life cycle.

Sandia's Microsystems and Engineering Sciences Applications (MESA) Complex will be a state-of-the-art facility for microsystems research, development, and prototyping. The complex will include MicroFab, MicroLab, and Office/Light Laboratory buildings. The goal is to use 30 percent less energy per square foot in the MESA Complex than similar buildings at Sandia. The complex will reclaim and recycle process water.

Additional information on the Labs21 program, pilot partners, and annual conference is available at <http://www.epa.gov/labs21century>. The Labs21 Federal program manager is Will Lintner, DOE Office of Energy Efficiency and Renewable Energy, 202-586-3120. ❖

# HAMMER – ready to meet the Homeland Security training challenge

The Office of Homeland Security was established by President Bush on Oct. 8, 2001, to develop and coordinate the implementation of a comprehensive national strategy to secure the United States from terrorist threats or attacks. Mission elements include detection, preparedness, prevention, protection, response, recovery, and incident management.

The Department of Energy's (DOE) Volpentest HAMMER Training and Education Center in Richland, Wash., could become a major player in this arena in the near future.

While focused on serving the training needs of the Hanford cleanup mission, HAMMER (which stands for Hazardous Materials Management and Emergency Response) has the flexibility to use its excess capacity for local emergency responders and others in need of training. The center is managed for the Department by Fluor Hanford.

## Attractive features

The training facility is attractive to those in the Homeland Security/anti-terrorism training business for several reasons. The HAMMER site, located on the southeast corner of the Hanford Nuclear Reservation, is readily accessible, yet remote. A supportive community of scientists, engineers, training professionals, military experts, and others flanks the facility. Designed by and for workers, buildings and realistic life-sized props at

the main campus are modern and well planned. Space between training areas allows for multiple activities to be performed simultaneously, while

proximity permits multiple training experiences within a relatively short period of time.

Down the road from the facility's 80-acre main campus is a 10,000-acre law enforcement and security training campus complete with firing ranges, obstacle courses, interactive-video shooting systems, a shoot house, and a tactical entry building. The Northwest Public Power Association is building a National Utility Training Services Site for high-

risk electrical workers on an adjacent 80-acre piece of property.

Most important, however, HAMMER is experienced. Staff members have been working with high-risk professionals since the facility first opened its doors in September 1997. And HAMMER has a history of staging successful emergency preparedness and emergency response

events. Emergency operations training has been part of the facility's focus since its inception.

## Open to others

Dynamic partnerships with government and private industry allow HAMMER to leverage its resources to the benefit of all. This practice affords non-DOE customers an opportunity to train at a premier Federal facility, while providing Hanford Site and DOE complex workers access to rigorous performance-based classes which otherwise might be unavailable to them.

Local fire and police departments, the Umatilla Army Chemical Depot's Special Response Team, the Criminal Justice Training Commission's Special Weapons and Tactics Team, and other similar organizations train regularly at the HAMMER facility. The Department's Pacific Northwest National Laboratory conducts International Border Security Training courses at

HAMMER for foreign border officials from eastern and central European nations and former Soviet Union states.

In October 2001, over 100 U.S. Marine Corps Chemical Biological Incidence Response Force team members were at HAMMER for a week-long training program, culminating in a mock chlorine gas terrorist attack. In the months ahead, HAMMER will continue to work with key customers to initiate more and different Homeland Security training programs.

Additional information on the HAMMER facility is available at <http://www.hammertraining.com/>. ❖



*U.S. Marine Corps Chemical Biological Incidence Response Force team members practice rappelling at HAMMER's six-story training tower.*



*A Marine maneuvers through a narrow pipe at the HAMMER confined space prop.*

# Transportation research center designated national user facility

The Department of Energy (DOE) has designated the National Transportation Research Center (NTRC) in Knoxville, Tenn., a national user facility. Scientists studying fuel efficiency, vehicle safety, traffic management, and other transportation issues now will have improved access to state-of-the-art laboratories and unique research and development facilities. The Center is a joint effort involving the Department, its Oak Ridge National Laboratory (ORNL), the University of Tennessee (UT), and the Development Corporation of Knox County.

User facilities enable researchers from corporations, universities, and other institutions to conduct proprietary and non-proprietary research. They encourage collaborative efforts among ORNL, private industry, and other institutions. These efforts are coordinated by ORNL's Office of Technology Transfer and Economic Development Directorate. The



*Scott Sluder, ORNL, checks the components of an experimental diesel emission control system before checking its effectiveness on a vehicle dynamometer. Diesel engines are inherently more fuel-efficient than gasoline engines, but present challenging emissions issues.*

NTRC, located about 10 miles from ORNL, is one of 19 user facilities available to researchers inside and outside the laboratory.

Transportation research totaling \$100 million already is being conducted by ORNL and UT, and approximately one third of that work is performed at the NTRC. Nearly half of the research is funded by

DOE's Office of Transportation Technologies in the Office of Energy Efficiency and Renewable Energy.

Richard Ziegler, NTRC User Facility Director, said the user facility designation would enable the Center to add to its existing variety of research programs in the transportation field. "Visitors to the NTRC have commented on the wide range of transportation R&D knowledge exhibited by our scientists and engineers," he said. "I believe our facility offers the most diverse transportation research in the country."

Ziegler explained that much of the NTRC research is being performed in partnership with U.S. auto companies, major engine manufacturers, and more than 100 of their suppliers. The facility also offers some unique capabilities. "We are working on five different methods for measuring diesel particulate emissions," he said. "At least two of these don't exist anywhere else." ❖

## Cook sworn in to environment post

On Feb. 6, 2002, Beverly Cook took the oath of office as the Department of Energy's (DOE) Assistant Secretary for Environment, Safety and Health. She was confirmed by the United States Senate on Jan. 25, 2002.

"We are extremely fortunate to have someone with Beverly's extensive management experience and strong technical skills in this position," Secretary of Energy Spencer Abraham said. "One of our top priorities is to implement effective safety systems that enable us to efficiently perform work while maintaining the highest standards for protection of our workers and the public. With her knowledge of the work within the DOE complex, Beverly is in a unique position to lead that effort."

Cook will be the Secretary's principal advisor for worker and public health and safety at DOE sites. She will advise the Secretary on national environmental goals, oversee the Department's compliance with environmental laws and regulations, oversee the Price-Anderson nuclear safety enforcement program, and lead DOE's implementation of its responsibilities under the Energy Employees Occupational Illness Compensation Act.

After 15 years as a contractor in the DOE complex performing nuclear and materials research and development, Cook served on the staff to the Defense Nuclear Facilities Safety Board. She then served in several positions in the



*Secretary Abraham administers the oath of office to Beverly Cook.*

Department's Office of Nuclear Energy, Science and Technology, including Principal Deputy Director. She was appointed Director of the Department's Idaho Operations Office in 1999. ❖



# New Fossil Energy head on board

Carl Michael Smith was sworn in as the Department of Energy's ninth Assistant Secretary for Fossil Energy on Feb. 5, 2002. He was confirmed by the United States Senate on Jan. 25, 2002.

"I'm very pleased that Mike is joining the Energy Department team," Secretary of Energy Spencer Abraham said. "He's highly respected and brings a wealth of experience to the Department that will serve this Administration and this nation well."

Smith will serve as the primary policy advisor to Secretary Abraham and the Department on issues involv-

ing Federal coal, oil, and natural gas programs, including extensive research and development in those areas. His responsibilities include coordinating and implementing elements of the National Energy Policy and oversight of the Department's Fossil Energy organization at Headquarters and field sites.

Previously, Smith served as Secretary of Energy for the State of Oklahoma, and as President of the Oklahoma Independent Petroleum Association. He was a member of the Oklahoma Energy Re-



*Secretary Abraham congratulates Carl Michael Smith after administering the oath of office.*

sources Board and is a member of the Oklahoma Bar Association. ❖

# NNSA announces organization realignment

In a Feb. 25, 2002, report to Congress, Under Secretary for Nuclear Security and Administrator, National Nuclear Security Administration (NNSA) John Gordon announced his decision to eliminate a layer in the Administration's field management and streamline the operation of the nation's nuclear weapons complex. The report outlines a series of steps to reduce duplication and increase accountability in the organization.

When the realignment is fully implemented later this year, NNSA's eight contractor operated national security laboratories and weapons production plants will report to the Administrator through an NNSA Site Office. Currently, there are two

Federal field management layers—an Operations Office and a local Area Office—between NNSA Headquarters officials and contractor employees who carry out the Administration's mission. The Operations Offices will be converted to Federally staffed Service Centers to provide support, such as human resources, finance, and procurement to the eight NNSA Site Offices.

The realignment will move many key decision-making responsibilities from Headquarters to the field, closer to where the work is actually being done. For example, each NNSA Site Office will be responsible for contract and project management oversight. Headquarters will be

responsible for strategic and program planning, budgeting and oversight of research development, and nonproliferation activities.

"These changes will help us achieve the goals set by Congress when it established NNSA," said Administrator Gordon. "By clearly defining roles and responsibilities between NNSA employees at Headquarters and in the field, we will increase accountability and reduce duplication. We need to make sure that we have people doing the right jobs in the right places to be most effective in carrying out our important national security mission."

A copy of the report is available at <http://www.nnsa.doe.gov>. ❖

# Beckner takes oath of office

Dr. Everet H. Beckner was sworn in as Deputy Administrator for Defense Programs in the Department of Energy's (DOE) National Nuclear Security Administration (NNSA) on Feb. 6, 2002. "We are very fortunate to have a senior manager of Ev's caliber and standing in the national security community join our leadership team," said Secretary of Energy Spencer Abraham.

Beckner will direct the program responsible for maintaining the safety, security, and reliability of the nation's nuclear weapons stockpile. "Ev's proven leadership skills, man-

agement experience, and technical background are a perfect fit for this critical position," said Under Secretary for Nuclear Security and NNSA Administrator John Gordon.

Beckner recently retired as a Vice President at Lockheed Martin, where he was Deputy Chief Executive at Atomic Weapons Establishment at Aldermaston, United Kingdom. Prior to joining Lockheed Martin, he served as DOE's Principal Deputy Assistant Secretary for Defense Programs from 1991 to 1995. He also has held se-



*Secretary Abraham swears in Dr. Everet Beckner.*

nior leadership positions at the Department's Sandia National Laboratories in Albuquerque, N.M. ❖

## Department showcases advanced security technologies



On Feb. 11-12, 2002, the Department of Energy (DOE) sponsored an exposition in Washington, D.C., showcasing the latest advanced security technologies developed by DOE and its laboratories that can help protect the nation's energy infrastructure. The participating laboratories were Argonne, Brookhaven, Lawrence Berkeley, Lawrence Livermore, Los Alamos, Oak Ridge, Pacific Northwest, and Sandia National Laboratories; Idaho National Engineering and Environmental Laboratory; National Energy Technology Laboratory; National Renewable Energy Laboratory; and Princeton Plasma Physics Laboratory. Featured technologies and programs included cyber and physical security, modeling and simulation, monitoring and information systems, interdependent infrastructures, and training and emergency response.

Several hundred leaders from the energy industry, utilities, state energy offices, and other institutions attended the exposition. Sam Varnado, Director, Infrastructure and Information Systems Center, Sandia National Laboratories, led the large DOE and multi-laboratory team that developed the expo. At left, Varnado explains technology that can be used to protect energy production/distribution facilities to Geoff Brumfiel, *Nature* magazine. ❖

## Technology offered Olympics a 'BASIS' for security



Since 1999, researchers at the Department of Energy's Lawrence Livermore and Los Alamos National Laboratories (at left) have collaborated to develop a system capable of detecting airborne biological incidents at special events. The results of their work—the Biological Aerosol Sentry and Information System (BASIS)—formed part of the security network at the 2002 Winter Olympics in Salt Lake City, Utah.

BASIS is a transportable field laboratory of sampling units that collects and analyzes aerosols using the most reliable and sensitive identification techniques available. The system, which has undergone extensive, real-world testing in urban environments, reduces the time for detecting a bioagent release from days or weeks to less than a day, allowing public health officials to have much more rapid warning.

The system's aerosol collection units, command and control software, and sample handling procedures were developed at Los Alamos. Livermore developed the BASIS biodetection equipment, DNA analysis procedures, and communications capability. ❖

## Beryllium Testing Laboratory opens in Oak Ridge



The Department of Energy's (DOE) Oak Ridge Institute for Science and Education (ORISE) recently opened a new Beryllium Testing Laboratory. The laboratory will process the lymphocyte proliferation test (LPT) for thousands of DOE workers who were exposed to or worked with beryllium. The complicated blood test is used to determine if a worker has become "sensitized" to beryllium, which may be an early indicator of chronic beryllium disease.

The facility is one of only five laboratories in the nation that can handle the LPT. Last year, ORISE processed more than 3,200 tests as part of the Department's Former Beryllium Workers Medical Surveillance Program. Workers from 14 different DOE sites currently are being screened.

At the laboratory opening are (l-r) Congressman Zach Wamp (R-TN); Donna Cragle, Director, ORISE Center for Epidemiologic Research; Ron Townsend, Director, ORISE; Lee Reidinger, Oak Ridge National Laboratory; Wayne Stevenson, ORISE; and Leah Dever, Manager, Oak Ridge Operations Office. ❖



## Research agreement targets hydrogen technology

Dr. Susan Wood, Westinghouse Savannah River Company Vice President and Director, Savannah River Technology Center (SRTC), and John M. Palms, President, University of South Carolina (USC), recently signed an agreement for collaborative research and development in the area of hydrogen and fuel cell technology. The Savannah River Technology Center is the applied research and development laboratory for the Department of Energy's Savannah River Site.

The initiative will help maintain and enhance the Site's expertise in hydrogen and related technologies. A team of engineers has conducted pioneering research in hydrogen fuel at the university. Savannah River engineers and scientists have devoted more than 40 years to hydrogen-fuel research for the defense industry, transportation and other non-defense initiatives.

At right, Wood and Palms sign the agreement surrounded by (l-r) John Van Zee, USC; Craig Williamson, South Carolina Universities Research and Education Foundation; Michael Matthews and Ralph White, USC; and Ted Motyka, SRTC. ❖



## New permanent magnet motor developed at ORNL

Permanent magnet motors using “rare earth” magnets are attractive propulsion devices for hybrid electric vehicles due to their large power densities and efficiencies. One approach to the motor design is shown, at right, by J. Milton Bailey, professor emeritus at the University of Tennessee (UT), who works with the Department of Energy's Oak Ridge National Laboratory (ORNL) at the National Transportation Research Center—a joint ORNL-UT venture.

Bailey is holding the stator of an “axial gap” permanent magnet motor. In front is the rotor assembly with the shaft, a hub connecting the shaft to the magnet ring and the magnets. The magnets are charged alternately north and south such that the magnetic flux is in the axial direction—along the shaft. The complete assembly consists of two stators with the rotor/magnet in the middle. This research prototype motor is one of the first ever permanent magnet motors designed specifically to operate with a broad constant power speed range as required for automotive use. ❖



## Fernald demolition – six down, four to go

Another cleanup milestone recently was reached by the Department of Energy's (DOE) Fernald Environmental Management Project. Fernald workers razed the 223,000-square-foot Plant 6, the former Metals Fabrication Plant, where high purity metals were machined to exacting specifications. At right, an operating engineer uses a 5,000 PSI shear to size reduce the last of the rollers in the Rolling Mill area.

This is the sixth of 10 major structures demolished at the Fernald site. Before decontamination and demolition (D&D) activities began in Plant 6, workers removed more than 205,000 pounds of hazardous materials that remained in process lines and equipment.

“Plant 6 is another big piece to fall into place so we can move forward with the below-grade remediation of the site's former production area,” said John Trygier, DOE's D&D project manager. “In addition to achieving schedule and budget requirements, the project also had a great safety record.” ❖



# Research DIGEST

Information security is all the buzz thanks to a new surveillance system designed by researchers at the Department of Energy's (DOE) **Pacific Northwest National Laboratory**. Called Secure Safe, this wireless communications system triggers an alarm if a worker leaves a room without properly closing and locking a safe, file drawer, or other security container. Mechanical and optical sensors track the position of a safe's door and locking mechanism. This information is relayed to an optical sensor mounted at the room's exit point, which sounds an alarm if a worker leaves without fully securing the safe. Secure Safe is being tested at several DOE sites to enhance information security. Other potential applications include bank vaults, hospital medicine cabinets, and corporate filing cabinets containing intellectual property. (Greg Koller, 509-372-4864)

Researchers at the Department of Energy's **Lawrence Livermore National Laboratory** (LLNL) have developed and demonstrated a laboratory prototype miniature thin-film fuel cell power source, which provides portable electrical power for a range of consumer electronics. With the LLNL fuel cell, a typical cell phone battery could be projected to last more than 300 percent longer, extending standby time from four days to two weeks, and talk time from six hours to two days. The patented miniature fuel cell technology combines microcircuit processes, microfluidic components, and micro-electrical-mechanical systems

(MEMS) technology. Jeff Morse, LLNL Center for Microtechnology Engineering predicts the MEMS-based fuel cell power source will replace rechargeable batteries, such as lithium-ion and lithium-ion polymer. (Sheri Byrd, 925-422-2379)

Hoping to save the paper manufacturing industry millions of dollars in energy costs, engineers at the Department of Energy's **Lawrence Berkeley National Laboratory** have developed a laser ultrasonic sensor that measures paper's flexibility as it courses through a production web at up to 65 miles per hour. Currently, paper is manually analyzed after manufacturing by sampling. If the sample doesn't meet specifications, the entire three-ton paper roll is scrapped or sold as an inferior grade. To avoid this costly mistake, manufacturers often use more pulp than necessary to ensure quality, consuming more raw materials, more energy, and more heat during the drying phase. The laser ultrasonic sensor was tested successfully at a Mead Paper Company mill in Ohio last year. A full-scale pilot test is scheduled for summer 2003. (Dan Krotz, 510-486-4019)

A common bond in computational mechanics has created a teaming effort between the Department of Energy's **Sandia National Laboratories** and Goodyear to replace the tire company's traditional build-and-test design method with reliable computational mechanics

simulation tools. This collaboration, accomplished under a Cooperative Research and Development Agreement has provided Goodyear with modeling tools that are shortening production time and reducing costs. "The nonlinear mechanics code that we developed for Goodyear allows their designers to run simulations in place of the costly build-and-test method of tire design," says Al Romig, Sandia Vice President for Science-Technology Partnerships. "The tire designers have models that are as reliable as the prototype tests." (Chris Burroughs, 505-855-0948)

Scientists at the Department of Energy's **Brookhaven National Laboratory** (BNL) have developed a novel imaging method known as "ion pair imaging spectroscopy" that may help them better understand the properties of previously hard-to-study molecules. Currently, scientists learn about ion properties through photoelectron spectroscopy or by using absorbed laser light. In photoelectron spectroscopy, light is used to eject one of the electrons from a neutral molecule. By determining the ejected electron's energy, the structure of the remaining positively charged ion can be mapped. Arthur Suits, lead BNL researcher says, "...instead of ejecting an electron...to determine the energy levels of the ion left behind, we eject a negatively charged ion and use its energy to determine the energy levels of the positively charged ion left behind." (BNL Communications, 631-344-3174)

## INEEL licenses groundwater cleanup process

A bioremediation process that can more effectively treat one of the most widespread groundwater contamination problems in the country has been licensed by the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL) to North Wind Environmental, Inc., Idaho Falls, Idaho. The Bioavailability Enhancement Technology (B.E.T.) process cleans chlorinated solvents from groundwater more easily than current technologies.

B.E.T. is used at INEEL to treat trichloroethene (TCE). TCE was used extensively for degreasing and

was injected into the Snake River Plain aquifer over a 15-year period at Test Area North. That practice has ceased.

Success of a large-scale test of B.E.T. at INEEL won the approval of the State of Idaho and U.S. Environmental Protection Agency. B.E.T., combined with monitored natural attenuation—the contaminant degradation that takes place naturally in the TCE plume—is expected to save \$23 million at the test site.

The bioremediation process takes advantage of natural biological processes that break down TCE when

bacteria already present at the site are given an appropriate food source. Scientists found that the INEEL process helps dissolve the TCE, which accelerates its degradation.

Kent Sorensen, Director for Applied Research at North Wind and a former INEEL scientist, said, "B.E.T. is part of a breakthrough in the understanding of bioremediation that has the potential to revolutionize the cleanup of chlorinated solvent source areas, which is one of the biggest environmental challenges facing industry, the government, and cleanup professionals today." ❖

# Education NOTES

The Department of Energy's **Argonne National Laboratory** is offering a free software program called "The ArithmAttack" to anyone who wants to learn or teach arithmetic. The upgraded version of the game randomly creates problems using numbers that the user sets between 0 and 25. Users can focus exclusively on addition, subtraction, multiplication, or division, or can let the game choose at random. Parents and teachers can download a 2.7 MB .zip file for installation from <http://www.anl.gov/OPA/attack.htm> and play the game on any computer running a Windows 95 or higher operating system. For non-Windows computers, an earlier version written in JavaScript, can be played or downloaded at <http://www.dep.anl.gov/aattack.htm>.

**Energy Design Guidelines for High Performance Schools: Hot and Dry Climates**, the first volume in a series of guidelines to help the nation's K-12 schools save millions of dollars on their annual energy costs, which now top \$6 billion a year, is available from the Department of Energy. Six more sets of guidelines geared to specific U.S. climate zones are planned for released by this summer. The guidelines grew out of meetings that the Department's Rebuild America program convened during 2000 and 2001 to discuss best energy-saving practices with school administrators, architects, teachers, developers, and others. Numerous case studies that illustrate energy-efficient efforts already in place at various schools across the U.S. are profiled. The guidelines for schools in hot, dry climates are available at <http://www.energysmartschools.gov>. A free CD-ROM with the guidelines is available from the Energy Efficiency and Renewable Energy Clearinghouse at 1-800-363-3732.

More than 200 school administrators, security professionals, law enforcement officials, and researchers from across the country gathered in Arlington, Va., in January 2002 for a three-day workshop in school safety and security. The conference was cosponsored by the Department of Energy's **Sandia National Laboratories**, the Department of Justice's National Institute of Justice and Community Oriented Policing Services program, and George Mason University's Center for Justice Leadership and Management. Participants had the opportunity to learn about comprehensive approaches to school safety and the latest in security technologies that can contribute to safer schools. Sandia's School Security Technologies and Resource (SSTAR) Center serves as an independent advisor to school administrators and security professionals. Sandia advises educators on technical as well as

practical, often non-technical, solutions to a school's security problems.

A total of 400 elementary and middle school students from Tennessee, Alabama, Kentucky, and Mississippi participated in the recent First Lego League competition at Tennessee Tech University, Cookeville, Tenn. More than 1,000 people attended the competition which was cosponsored by the Department of Energy's **Oak Ridge National Laboratory**, the American Museum of Science and Energy, and Tennessee Tech. Forty 10-student teams used miniature robots and legs to solve a challenge that is issued to First Lego League participants worldwide. Playing on a flat table and using props, the teams had to solve a series of challenges to rescue construction workers from a large melting iceberg in the Arctic Sea. ❖



*During the final round of the 18th Kansas City Regional Science Knowledge Bowl, the student team from Oak Park High School, Kansas City, Mo., struggles to come up with an answer. Oak Park went on to win the final round against Pembroke Hill School of Kansas City. The competition, held Feb. 2, 2002, at Rockhurst University, was sponsored by the National Nuclear Security Administration's Office of Kansas City Site Operations, Honeywell FM&T, and the university. Both schools will travel to Washington, D.C. to compete in the Department of Energy's 12th Annual National Science Bowl, May 3-6, 2002, at the National 4-H Conference Center, Chevy Chase, Md. More than 60 high school teams and an estimated 500 students showed up to compete in the Kansas City competition, which has grown to become the largest DOE regional science bowl.*



# Environmental Management staff reassigned

Forty percent of the 70 senior executives in the Department of Energy's Environmental Management (EM) program are being reassigned in order to strengthen, streamline, and delay the leadership. This action will reduce the number of senior executives in EM headquarters by about 30 percent.

"The purpose of these reassignments is to better leverage the unique talents of these executives; force better integration between the

field and headquarters of the real, on-the-ground challenges confronting the program; and stimulate new thinking and creative solutions to our cleanup challenges," Assistant Secretary for Environmental Management Jessie Roberson said.

These changes are consistent with recommendations from the recent top-to-bottom review of the Environmental Management program. Cross-rotational assignments will be used with greater frequency across senior

levels of the organization to ensure that executives have both field and headquarters expertise.

A total of 27 senior staff are involved in the first round of executive reassignments, which includes moves from Headquarters to the field, from field to Headquarters, between field offices, and within Headquarters. A list of some of those reassigned is available at <http://www.energy.gov/HQPress/releases02/febpr/pr02025.htm>. ❖

# Savannah River scores high on safety survey

About 1,200 employees at the Department of Energy's Savannah River Site were randomly selected to participate in the National Safety Council's (NSC) safety perception survey last fall. This is the second time in three years that Site employees answered the questionnaire. About 51 percent responded to the most recent survey.

Overall, Savannah River achieved a high 89 out of a possible 100 in 1998 and improved to a very high 94 in 2001. This means that only six percent of the nationwide companies

in the NSC database achieved a higher overall score.

"SRS has a safety reputation that reaches nationwide," says Terry Miller of the National Safety Council. "It takes a lot of courage for an organization to take this survey, and to use it to improve its safety posture."

The survey consisted of standard safety program questions in six fundamental categories: management leadership, supervisory and employee participation, safety support activities, safety climate, and overall organizational climate. Areas identi-

fied for improvement included employee involvement in safety and health procedures, the effectiveness of safety and health committees in improving safety conditions, supervisors reducing workers' fears of reporting safety problems, and the effectiveness of award programs in promoting safe behavior.

Westinghouse Savannah River Company's Safety and Health Department will analyze the survey data and make recommendations on how the Savannah River Site can continue to improve its safety performance. ❖

## HUNSUNG Heroes

On Dec. 7, 2001, a rollover accident occurred on U.S. Highway 20 in Idaho involving Chris Anderson, an accountant in the Facilities Division at the Department of Energy's Argonne National Laboratory-West (ANL-W). Personnel from Fire Station No. 2 at the Department's Idaho National Engineering and Environmental Laboratory (INEEL) were dispatched immediately to the scene for extrication, medical assistance, and transport of the injured to Eastern Idaho Regional Medical Center.

From all accounts, the accident was quite severe and Anderson had significant injuries. The Medical Center staff observed that even the slightest mistake during extrication could have significantly impaired her

recovery and quality of life. She is expected to recover fully, thanks to the individual and team efforts of the firefighters.

Anderson and ANL senior officials recently visited the fire station to personally thank and present a commendation to her rescuers. Clockwise, starting back row, left, are Travis M. Covert, Firefighter/EMT; Gale J. Christensen, Captain; Dr. Hermann Grunder, Director, ANL; Don Whittaker, Captain; Dr. John I.



Sackett, Deputy Associate Laboratory Director, ANL-W; Steve S. Chamberlain, Firefighter/EMT; Brady K. Austin, Firefighter/EMT; Chris Anderson; Jerry L. Holenbeck, Firefighter/EMT. ❖

## NEW ON THE *Internet*

### Livermore Lab's 50 years

In celebration of its 50th anniversary, the Department of Energy's Lawrence Livermore National Laboratory (LLNL) has a web site, [http://www.llnl.gov/50th\\_anniv/](http://www.llnl.gov/50th_anniv/), describing the accomplishments of the laboratory and information about anniversary events. A comprehensive timeline features facts from the day the laboratory first opened up in 1952 to the present. Beginning with the 1950's, for each decade there are pictures and short summaries of the laboratory's top news; links to longer articles for each item; and short overviews of the LLNL leadership, organization, and number of employees.

### Cleanup criteria database

The DOE Cleanup Criteria/Decision Document (C2D2) Database has been upgraded to improve content and accessibility to address Department of Energy (DOE) cleanup needs. The upgraded version provides easier and faster access to information from more than 300 documents. Users can select a contaminant and medium of interest from drop-down menus and then view maps and plots that show typical cleanup criteria values, variations, and trends. Detailed text and numerical data can be viewed using point and click options. A map shows the DOE installations in the database and provides summaries of cleanup information. The database is available on the Office of Environmental Management web site, <http://www.em.doe.gov>, or on DOE's Environmental Measurements Laboratory (EML) home page, <http://www.eml.doe.gov>. For more information, contact Gladys Klemic, EML, 630-252-2394, or [gladys.klemic@eml.doe.gov](mailto:gladys.klemic@eml.doe.gov). ❖

## Ethics training an 'e-Learning' success story

Since mid November 2001, the value of e-Learning has been demonstrated tangibly within the Department of Energy (DOE) via the "2001 Annual Ethics Training." Employees required to file financial disclosure reports were able to complete their annual ethics requirement through a course available on the Energy Online Learning Center (OLC), a web-based training system currently housing 1,600 courses. Nearly 6,000 DOE employees have complied with the requirement.

The Department's Designated Agency Ethics Official opted to use the OLC for the mandatory training. Instantaneous posting of course completion to employee transcripts makes the tracking task relatively easy. Online training enables employees to take courses at a time convenient to them—and not be dependent upon the schedules of other employees. It also eliminates the need for travel time away from the office.

For more information about online learning, take a tour at <http://www.energyolc.com>. All DOE Federal employees have access to basic services within the site, including DOE-owned courses. Additional courses are available on a 12-month subscription basis. Employees seeking information on obtaining a subscription or their subscription status should contact their organization's OLC Data Administrator or Training Coordinator. Information about the Energy Online Learning Center is available from DOE's Office of Training and Human Resource Development at 202-287-1656. ❖

## Civil rights leader visits Fernald

In January 2002, the Department of Energy's (DOE) Fernald Environmental Management Project in Ohio, like most other DOE sites, paid tribute to the memory of Dr. Martin Luther King, Jr. The Fernald program featured a visit and talk from Reverend Fred Shuttlesworth, a Cincinnati native and one of the "Big Three" working alongside Dr. King and Rev. Ralph Abernathy in the fight for racial equality in the South.

Life was extremely dangerous and difficult for the civil rights activist in Birmingham, Ala. The three known attempts on Rev. Shuttlesworth's life included a bombing at the Bethel Baptist Church on Christmas Eve in 1956 that completely destroyed the parsonage. Would-be assassins detonated 16 sticks of dynamite outside his bedroom, yet he and his family miraculously were unharmed. Rev. Shuttlesworth was arrested 35 times in association with non-violent protests for equality.

A modest man, Rev. Shuttlesworth downplays his role as a civil rights leader. "Everyone has within him more than he thinks," he said. "I just tried to make the world better."

Today, Rev. Shuttlesworth is pastor of the Revelation Baptist Church, a church he founded in Cincinnati. He also established the Shuttlesworth Housing Foundation to help low-income families purchase their first homes.

His adopted home of Birmingham recently recognized Rev. Shuttlesworth by naming a street after him. "They couldn't kill me, so they decided to honor me," he said jokingly. "If you have justice, everything else will be all right. Justice will lead to opportunities." ❖



*Rev. Fred Shuttlesworth (left) and James Ellis, Fluor Fernald supervisor and event coordinator, share a few moments before the employee program.*

# People IN ENERGY

**Steven F. Ashby** is the new Deputy Associate Director for Computing Applications and Research at the Department of Energy's Lawrence Livermore National Laboratory (LLNL). Ashby will oversee the research and development activities of nearly 500 computer scientists and mathematicians working on a variety of defense, energy, and life sciences applications. Previously, he was the founding Director of LLNL's Center for Applied Scientific Computing.



**William A. Lewis, Jr.**, Director, Office of Employee Concerns, in the Department of Energy's Office of Economic Impact and Diversity, also is serving as Acting Director, Office of the National Ombudsman. He replaces **Jeremy Wu**, who has accepted an appointment at the Department of Transportation.

Fluor Fernald President **Woodrow "Jamie" Jameson** has been named Chairman and CEO of the company, succeeding **John Bradburne**, who is retiring. Fluor Fernald is the primary contractor of the Department of Energy's Fernald Environmental Management Project in Ohio. Jameson, a 30-year construction veteran with Fluor, took over day-to-day operations at the site in August 2001 during a transition period.



**Richard A. Marquez** has been named Associate Director for Administration at the Department of Energy's (DOE) Los Alamos National Laboratory in New Mexico. Most recently, Marquez was Deputy Director for Operations for the local office of Burns and Roe

Enterprises, Inc. Previously, he held several management positions with DOE's Albuquerque Operations Office, including Assistant Manager for Management and Administration and Director, Office of Intergovernmental and External Affairs.

Five scientists at the Department of Energy's Thomas Jefferson National Accelerator Facility have been elected Fellows of the American Physical Society: **Kees de Jager** and **Bernhard Mecking**, Physics Division; and **Fred Dylla**, **Geoff Krafft**, and **George Neil**, Accelerator Division.

Researcher **Harold Blackman** has been named Associate Laboratory Director for Environmental Technologies at the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL). Previously, Blackman was INEEL's Director of Environmental and Human Systems. In his new position, Blackman is responsible for shepherding research and technologies from their first stages of development and demonstration to their deployment in the field.



President George W. Bush has nominated **Guy F. Caruso** to be Administrator of the Department of Energy's (DOE) Energy Information Administration, subject to Senate confirmation. Caruso has been Executive Director, Strategic Energy Initiative, at the Center for Strategic and International Studies since 1998, as well as Director of the National Energy Strategy Project since July 2000. From 1993 to 1998, he was Director, Office of Non-Member Countries, International Energy Agency, Paris, France. Caruso was with DOE from 1986 to 1993 in the Office of Energy Emergencies and International Affairs and in the Office of Domestic and International Energy Policy.

Scientist **J. David Bowman** of the Department of Energy's Los Alamos National Laboratory (LANL) has been awarded the Tom W. Bonner Prize in nuclear physics by the American Physical Society. Bowman was recognized for his studies of parity nonconservation in compound nuclei, a property of physical systems related to the forces that act between neutrons and protons. Bowman currently is the leader of a team of scientists in LANL's Neutron Science and Technology Group.

**Herb Mook** is the recipient of the 2001 Director's Award for Outstanding Accomplishment in Science and Technology at the Department of Energy's Oak Ridge National Laboratory. Mook received the laboratory's most prestigious scientific award for his cutting-edge research in the field of neutron scattering physics. During his 30 years in Oak Ridge, Mook gained recognition as a leader in materials research.



**Judith D. Connell**, Formerly Director of Corporate Relations with Framatome ANP, Lynchburg Va., has joined Fluor Hanford as Director of Communications and Community Programs. Fluor Hanford is the prime contractor for the Department of Energy's Hanford Site in southeastern Washington state. Connell will oversee media relations, employee communications, and stakeholder affairs.

**Nicholas Samios**, a senior physicist at and former director of the Department of Energy's Brookhaven National Laboratory, is the 2001 recipient of the prestigious Bruno Pontecorvo Prize by the Joint Institute for Nuclear Research in Dubna, Russia. The award recognizes Samios for his contributions both as a researcher in elementary particle physics, particularly neutrino physics, and as a scientific administrator. ❖



# Milestones

## YEARS OF SERVICE

### March 2002

#### Headquarters

**EIA** - Melvin E. Johnson (35 years), Lawrence R. Klur (35), Betsy K. O'Brien (35), Herbert T. Miller (25). **Energy Efficiency & Renewable Energy** - Timothy A. Eastling (30), John D. Ryan (30), Bernadette C. Ruffin (25), Daniel X. Sze (25). **Envir. Management** - Donna K. Goodrich (35), Carol A. Peabody (25), John C. Tseng (25). **Envir., Safety & Health** - Roger M. Anders (30), Francis C. Hawkins (25), Mary Jo Zacchero (25).

**FERC** - Merita Hughes (30), Joseph R. Kane (30), Renee C. Settles-Height (30), Vladimir Ekzarkhov (25), James M. Fargo (25), Joseph D. Morgan (25), John M. Robinson (25). **Fossil Energy** - Peter J. Muchunas (35). **General Counsel** - Robert G. Rabben (40), Margie L. Washington (30), James K. White (30). **Hearings & Appeals** - Lillian D. Walker (30). **Inspector General** - Patricia A. Moore (35).

**Management, Budget & Evaluation** - Michael A. Haley (35), Judy L. Brodbeck (30), Juanita Ellis (30), Byron D. Deegan (25). **NNSA** - Frances C. Massa (35). **Nuclear Energy** - Lang D. Soo-Hoo (30). **Policy & International** - David L. Pumphrey (30), Steven F. Sacks (25). **Radioactive Waste** - Linda J. Desell (30). **Science** - Rita H. Hohenbrink (30). **Security** - Frederick C. Zingman (35), Jesus J. San Agustin (25), Lisbeth A. Walker (25).

#### Field

**Albuquerque/NNSA** - Salvador P. Alvarez (30), Jack H. Dennis (30), Richard L. Smith (30), Linda K. Earnest (25), Randy G. Stallings (25). **Chicago** - Ann A. Gruender (35), Floria J. Brown (30), Gary L. Peabody (30), Pamela K. Hungerford (25). **Golden** - Christine A. Phoebe (30), Marlys L. Kinsey (25). **Idaho** - Tansy L. Taylor (25).

**Bonneville Power** - Peter A. Lossner (35), Jeanne L. Cozad (30), Toni D. Dewey (30), Paula E. Golemon (30), Bruce E. Lavier (30), Michael D. Matthews (30), Nancy E. Morgan (30), Frederic D. Rettenmund (30), Michael A. Street (30), Patricia Alvarez (25), Margaret R. Buis (25), Brooke L. Crenshaw (25), Haven H. Fowler, Jr. (25), Ivan M. Hance, Jr. (25), Kristy J. Humphrey (25), Velma V. Iversen (25), Allen A. Stroklund (25), Spencer G. Wedlund, Jr. (25).

**NETL** - William K. Dulin (35), Larry C. Headley (35), Michael P. Nolan (30). **Nevada/NNSA** - Thomas D. Wiard (30), Annette M. Hill (25). **Oak Ridge** - Bobby J. Davis (30), Daniel H. Wilken (30), Marlena C. Clark (25), James D. Kopotic (25). **Oakland** - Tyndal L. Lindler (25). **Oakland/NNSA** - James S. Hirahara (30), Mark A. Barnes (25), Barry A. Savnik (25).

**Ohio** - Jane M. Greenwalt (25). **Richland** - John M. Clark (30), Robert P. Carter (25). **Rocky Flats** - Terrel J. Agy (35). **Savannah River** - Larry E. Snyder (35), Ivette D. Sullivan (30), Deborah J. Gonyaw (25). **Schenectady Naval Reactors/NNSA** - Paul Dmyterko (30). **Southwestern Power** - Bethel J. Herold (30). **Western Area Power** - Robert E. Parkins (30), Russell K. Kunz (25), Thomas W. Steshyn (25), Theodore W. Wilcox (25).

## RETIREMENTS

### January 2002

#### Headquarters

**FERC** - Rainer Feller (27 years), Virender K. Sondhi (12).

#### Field

**Albany Research Center** - Jeffrey S. Hansen (31). **Albuquerque** - Lila M. King (14). **Albuquerque/NNSA** - Alice F. Baca (25), Anna M. Bachicha-Reynolds (34), Floyd J. Bowers, Jr. (29), John F. Campos (29), Richard P. Carmean (30), Donna M. Christensen (14), Charles F. Cox (27), Robert E. Davidson (30), Leotis Dixon (26), James D. Gallagher (23), G. Stanley Hearron (32), Curtis K. Kenagy (32), Karen K. Kerby (28), Sharon E. Klafke (31), George K. Laskar (31),

Gary W. Locklin (30), Patrick F. Maffei (25), Thomas P. Marino (28), Judy D. McGurn (20), James E. Minter (28), Julian J. Neston (29), Charles A. Payne (29), Thomas E. Romero (33), James H. Roper (27), Herman L. Smith II (34), John G. Themelis (34), Grace M. Tilton (21), Joe L. Trujillo (30), H. Alan Wells (36), Stanley P. Whisenhunt (24), Johnny R. Wilson, Jr. (31), Irma R. Wilson (20).

**Chicago** - James D. Allen (12), Michael J. Flannigan (32), Charles G. Frazier (34), Kathleen Mueller (30), Patricia M. Santoliquido (21), Rick L. Slagle (29), Dawn R. Snelson (28), Joseph N. Zameic (41). **Golden** - Shirley M. Johnson (26),

Frank M. Stewart, Jr. (30). **Idaho** - C. Michael Bennett (37), Luella I. Bennett (20), Janice Hemming (27), Vicki L. Johnson (23), Walter J. Mings (11), James D. Minton (28). **Naval Petroleum Reserves CA** - Charlie D. Ellison (22).

**Naval Petroleum Reserves CO, UT, WY** - David A. Miles (30), Deborah L. Miles (25), Barbara C. Tucker (38). **NETL** - Frederick R. Brown (30), Melanie Brown (26), James I. Joubert (30), Robert E. Lemmon (15), Curtis W. McBride (33), Jane W. McLaughlin (24), Alexis W. Puher, Sr. (31), Robert M. Ray (34), Adrian C. Woods (35).

**Nevada** - Earl W. Hodge (25). **Nevada/NNSA** - Budd B. Bornhoft, Jr. (35), Kurt W. Haase (23), David L. Hamer, Jr. (37), James Haynes, Jr. (33), Derek S. Scammell (13), John F. Spahn (31), Jeryl L. Wood (10). **Oakland/NNSA** - Joseph M. Cullen, Jr. (32), Martin J. Domagala (34), Sandra J. Jarratt (35).

**Oak Ridge** - Mary J. Booker (32), William R. Bowden (36), Nina E. Boyer (35), Angela P. Carroll (28), Sandra J. Davis (29), Robert D. Dempsey (32), John S. Ford (30), Linda L. Fowler (23), Nancy K. Hendrix-Ward (23), Jacqueline P. Hinton (28), Daniel L. Houston (30), Mitchell L. Kennedy (35), Rodney R. Nelson (30), Joyce S. Norris (28), Donna J. Phillips (25), Glenda J. Pickens (21), William M. Seay (34), Wayne M. Yoder (31).

**Ohio** - Nancy B. Mazzuckelli (22), Susan J. Moore (5). **Pittsburgh Naval Reactors/NNSA** - Shirle B. Rush (22). **Richland** - Richard P. Grill (30). **Rocky Flats** - Paul P. Psomas (29). **Savannah River** - John W. Altoonian (28), Sukumar Banerjee (15), Carol M. Black (23), Elaine B. Boyd (33), Donald N. Bridges (35), Jimmie W. Cowan (31), Jerry T. Hickman (33), Richard D. Lynch (27), Jerry J. Nelsen (27), Sarah E. O'Rear (36), Sandra M. Pike (26). **Savannah River/NNSA** - Joseph M. Francis (21).

**Southwestern Power** - Perry H. Henson (34), James B. Jennings (25). **Strategic Petroleum Reserve** - Gary R. Vincent (35). **Western Area Power** - William E. Alsabrook (20), Donald E. Bragg (22), Joan D. Christopher (27), Ronald D. Dockins (28), John D. Harrington (34), Charles R. Huckfeldt (25), Evelyn L. Kiser (23), Patricia R. McClary (28), Mary J. McFadden (10), Stephen M. McKenna (21), Felix C. Medina (21), Ramon S. Rivera (32), Duane R. Torgerson (20). ❖

## Radar system could lead to smarter coal mining

Engineers at the Department of Energy's Kansas City Plant in Missouri and Kirtland Operations in New Mexico—facilities under the jurisdiction of the National Nuclear Security Administration (NNSA)—are partnering with New Mexico-based Stolar Horizon to develop a radar system to help miners more accurately locate coal seams and thus reduce waste rock contaminants.

A 30 percent reduction in waste rock will save the coal industry hundreds of millions of dollars each year and help the environment. "When waste products are mined along with coal, they must be separated from the ore and then disposed of in an environmentally sound manner," said Dr. Chris Baumgart, technical project specialist, Kirtland Operations. "Being able to accurately map the coal seam allows miners to dig up less accompanying waste products and more clean coal."

The Stolar Horizon project will be funded through NNSA's Initiatives for Proliferation Prevention program. The Kansas City Plant will contract \$1.2 million over two years to Russian scientists and engineers at the Measuring Systems Research Institute, located in Nizhny Novgorod, Russia, to assist Stolar Horizon in developing the product.

March 2002

# AROUND DOE

## Idaho lab office building earns Energy Star label

The Engineering Research and Office Building at the Department of Energy's (DOE) Idaho National Engineering and Environmental Laboratory (INEEL) has received the Energy Star rating from the U.S. Environmental Protection Agency (EPA). The building demonstrated energy performance in the top 25 percent of the office buildings market, while maintaining indoor environmental requirements for air quality, thermal comfort and lighting performance.

The INEEL office building was completed in 1993 with many energy-efficient measures in place. Additional measures implemented include lighting controls, occupancy sensors, and an automated building on/off system. Energy Star is a joint DOE/EPA program that promotes energy efficiency and environmental stewardship in buildings, major appliances, and other product areas.

## 'Geopowering the West' reaches Nevada

Using heat from the Earth to provide inexpensive, clean power was the subject of a January workshop in Reno, Nev., sponsored by the Department of Energy's (DOE) "Geopowering the West" program. The Department, the University of Nevada, Reno (UNR), and the U.S. geothermal industry made the "Geothermal Opportunities in Nevada" workshop a great success. The event was the formal kick-off of the Great Basin Center for Geothermal Energy, which was established through the efforts of DOE, UNR's Mackay School of Mines, and Senator Harry Reid.

Nearly 200 geothermal stakeholders were in attendance. Presentations and discussion highlighted the opportunities and challenges provided by the vast geothermal resources in Nevada and across the western U.S. In his keynote address, Senator Reid noted that Nevada has made great strides in developing its renewable resources. Geothermal resources currently provide nearly 10 percent of northern Nevada's energy needs.

For more information on the "Geopowering the West" program in Nevada, contact Curtis Framel, DOE's Seattle Regional Office, 206-553-7841, or visit <http://www.eren.doe.gov/geopoweringthewest/>. ❖

---

United States  
Department of Energy (PA-40)  
Washington, DC 20585

---

Official Business