DOE This Month

U.S. DEPARTMENT OF ENERGY

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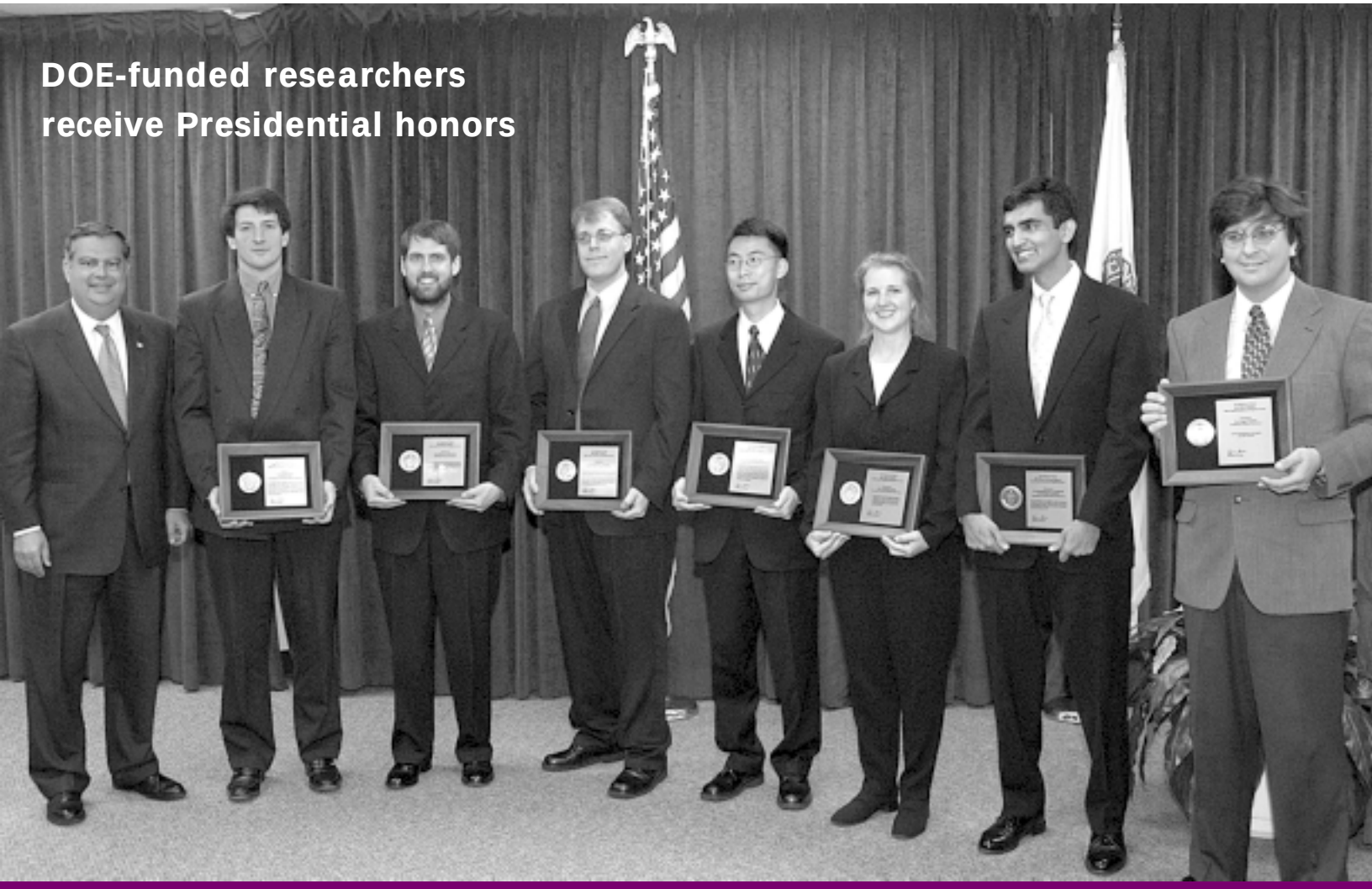

DOE-funded researchers receive Presidential honors

Secretary launches Global Threat Reduction Initiative

DOE lab researchers win technology transfer awards

Science.gov takes next step in information retrieval

DOE This Month

U.S. Department of Energy

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On our cover

Seven researchers funded by the Department of Energy (DOE) were presented the Presidential Early Career Award for Scientists and Engineers at a White House ceremony, May 4, 2004. The Presidential award is the highest honor bestowed by the U.S. Government on outstanding scientists and engineers who are beginning their independent careers.

In a ceremony at DOE Headquarters before the White House event, the researchers received DOE Early Career Scientist and Engineer Awards sponsored by the Department's Office of Science and Office of Defense Programs, National Nuclear Security Administration. In the photograph, l-r, are Secretary of Energy Spencer Abraham; Carl Boehlert, Alfred University; Jeffery Blackmon, Oak Ridge National Laboratory; Jonathan E. Menard, Princeton Plasma Physics Laboratory; Edmond Chow, Lawrence Livermore National Laboratory (LLNL); Christine Orme, LLNL; Krishnakumar Garikipati, University of Michigan; and Sergei Maslov, Brookhaven National Laboratory.

For more on the awards and winners, see page 10. ❖

Secretary addresses IEF, IAEA; meets with senior officials in six countries

Secretary of Energy Spencer Abraham began a nine-day international trip on May 19, 2004, that included conferences and meetings in six countries: Austria, Greece, Poland, Russia, The Netherlands, and the United Kingdom. Discussions focused on world energy issues, energy security, and nonproliferation.

Secretary of Energy Spencer Abraham (left) is greeted by Russian Prime Minister Mikhail Fradkov on May 27, 2004.

On May 20, in London, U.K., Secretary Abraham met with British government officials on energy developments and nonproliferation issues. The U.K. and the United States announced two partnerships to promote sustainable, affordable energy in the developed and developing world—the Efficient Energy for Sustainable Development (EESD) Partnership of the U.S. Clean Energy Initiative and the U.K. Renewable Energy and Energy Efficiency Partnership (REEEP). The EESD agreement was signed May 20 by Secretary Abraham; Stephen Timms, MP and Minister of State for Energy, E-Commerce and Postal Services; and Margaret Beckett, MP and Secretary of State for Environment, Food and Rural Affairs. The U.S. joined REEEP on April 28, 2004.

While in London, Secretary Abraham gave a major speech to members of Chatham House, the home of the Royal Institute of International Affairs, a world-leading institute for analysis of international issues. Secretary Abraham addressed the question of how the world should tackle the energy challenges of the 21st century and the role science and technology will play in meeting those challenges.

From London, Secretary Abraham traveled to Amsterdam, The Netherlands, to participate in the International Energy Forum (IEF) Ministerial Meeting, a high-level biennial informal gathering that brings together energy-producing and energy-consuming nations to discuss world energy issues, held May 22-24. Secretary Abraham addressed the IEF Opening Session and the Panel Discussion, "Oil and Gas Compared." The Secretary also held bilateral meetings with energy officials of several countries.

The Secretary signed a Memorandum of Understanding (MOU) on May 22 with Norwegian Minister of Petroleum and Energy Einar Steensnaes that will enhance research in a number of areas of mutual benefit, including carbon sequestration, hydrogen, and clean fuels. The two countries have existing cooperative agreements through the auspices of the International Energy Agency, but this is the first formal agreement between the U.S. and Norway to advance energy research and development projects.

On May 23, Secretary Abraham signed a MOU with Minister Zhang Guobao, Vice Chairman of China's National Development and Reform Commission (NDRC), to launch the U.S.-China Energy Policy Dialogue. The MOU follows Secretary Abraham's meeting in Beijing with NDRC Chairman Ma Kai in January 2004 (*DOE This Month*, February 2004). The Dialogue will strengthen energy-related interactions between the two countries, the world's two largest energy consumers.

The next stop on Secretary Abraham's trip was Athens, Greece, on May 25. There, the Secretary met with Minister of Development Demetris Sioufas and officially transferred handheld radiological detection equipment to Greek officials to support increased security for the upcoming Summer Olympic Games.

Secretary Abraham addressed delegates at the International Atomic Energy Agency (IAEA), Vienna, Austria, on May 26, and launched a comprehensive global initiative to secure and remove high-risk nuclear and radiological materials. In Moscow, Russia, on May 27, Secretary Abraham met with newly confirmed Russian Prime Minister Mikhail Fradkov to discuss U.S.-Russian nonproliferation and energy cooperation. The Secretary also signed a bilateral agreement between the U.S. and Russian Federation concerning the repatriation of Russian-origin highly enriched uranium (HEU) research reactor fuel to Russia (see related article, page 4).

On May 28, Secretary Abraham invited Poland to become the 17th member of the Carbon Sequestration Leadership Forum. The Secretary extended the invitation during remarks after touring the "ELCHO" power plant in the Silesia region of southern Poland. The plant, powered with clean coal technology developed under DOE's Clean Coal Program, allows the region to use its abundant supply of coal, while still improving air quality. The Foster Wheeler circulating fluidized bed boilers that power ELCHO are based on the technology that powers a similar plant in Jacksonville, Fla.

Additional information on the different segments of the Secretary's trip and his remarks at Chatham House and the IAEA are available at **http://www.energy.gov**, click on "Press Room," and then click on "Press Releases" and "Speeches." ❖

Secretary addresses IAEA, launches new Global Threat Reduction Initiative

Secretary of Energy Spencer Abraham addressed an audience of delegates at the International Atomic Energy Agency (IAEA) in Vienna, Austria, on May 26, 2004. Secretary Abraham told delegates that the Department of Energy (DOE) has made significant strides in securing and removing nuclear materials of concern to the United States and the international community, mainly by improving the security of hundreds of tons of weapons-usable material in Russia. But, he said, there still exists a significant amount of proliferation-sensitive nuclear materials in dozens of research reactors and other locations throughout the world.

"We have worked with Russia to down-blend over 200 metric tons of highly enriched uranium (HEU) from dismantled Russian nuclear weapons, and just in the last eight months have repatriated 48 kilograms of Russian-origin HEU in three separate operations, including the most recent removal of 17 kilograms of Russian-origin HEU from Libya. Nevertheless, we must continue to press forward in our efforts to reduce the threat posed by proliferation-sensitive nuclear materials and high-risk radiological materials," Secretary Abraham said.

In response to this evolving threat, Secretary Abraham launched a new U.S. program to secure, remove, or dispose of an even broader range of nuclear and radiological materials—the Global Threat Reduction Initiative (GTRI). The GTRI will be carried out in close cooperation with the IAEA and global partners. Specifically, the U.S. will:

- Work in partnership with Russia to repatriate all Russian-origin fresh highly enriched uranium fuel by the end of next year and accelerate and complete repatriation of all Russian-origin spent fuel by 2010;
- Take all steps necessary to accelerate and complete repatriation of U.S.-origin research reactor spent fuel from locations around the world within a decade;
- Work to convert the cores of civilian research reactors throughout the world that use HEU to low enriched uranium fuel; and
- Work to identify other nuclear and radiological materials and related equipment not yet covered by existing threat reduction efforts.

To help achieve this, Secretary Abraham has directed DOE's National Nuclear Security Administration to consolidate and accelerate the Department's nuclear materials removal programs and rapidly identify and address any gaps in current security coverage and recovery or removal efforts. Also, the United States plans to dedicate more than $450 million to the GTRI; but heightened international cooperation will be needed. Secretary Abraham has proposed that the IAEA and international community join the U.S. in holding a GTRI Partners' Conference later this year.

On May 27, in Moscow, Russia, Secretary Abraham and Russian Federal Agency for Atomic Energy Director Alexander Rumyantsev signed a bilateral agreement between the U.S. and Russian Federation governments concerning the repatriation of Russian-origin highly enriched uranium research reactor fuel to Russia. This is the first item of work under the GTRI.

Under the agreement, more than a dozen countries are eligible to receive financial and technical assistance from the U.S. and others to ship their fresh and spent research reactor fuel to Russia for safe and secure management. The agreement reaffirms the U.S. and Russian Federation's shared commitment to reduce global stockpiles of weapons-usable nuclear materials, to reduce the threat of international terrorism, and to prevent the proliferation of weapons of mass destruction. ❖

Assistant Secretary Roberson resigns

On June 15, Assistant Secretary for Environmental Management Jessie Roberson resigned from office, effective July 15, 2004. In her letter to President Bush and Secretary of Energy Spencer Abraham, Roberson said, "Although I was planning to serve the full term, personal family matters have required a change to my plans; but I can assure you that I leave behind a strong and capable program in good hands. Much has been accomplished in your first term in office."

"Jessie Roberson has provided smart solutions to tough problems in cleaning up Department of Energy (DOE) sites by implementing our Accelerated Cleanup Program," Secretary Abraham said. "She has fundamentally changed the culture of the Department's Environmental Management program, thereby ensuring that this very difficult program has a roadmap for success.

"At every cleanup site in the DOE complex, we have witnessed progress based on Jessie's commitment to success and commitment to improving the Environmental Management program. Her considerable talents and can-do attitude will be sorely missed at the Department. President Bush and I thank her for her dedicated service to this Administration and for her outstanding record of achievement."

Principal Deputy Assistant Secretary for Environmental Management Paul Golan has been appointed to serve as Acting Assistant Secretary for Environmental Management. ❖

DOE labs recognized for technology transfer

Researchers at six Department of Energy (DOE) national laboratories have received the Federal Laboratory Consortium (FLC) Excellence in Technology Transfer Award for 2004 in recognition of their efforts to transfer Federally developed technology to the marketplace. The awards were presented May 5, 2004, at the Consortium's national meeting in San Diego, Calif.

"The FLC Awards highlight the remarkable and vital contributions made year in and year out by researchers at the DOE national laboratories," Secretary of Energy Spencer Abraham said. "By doing outstanding research and development in key areas, the labs achieve scientific breakthroughs that advance our national and energy security. What's more, the DOE national laboratories serve as important engines of economic development, creating new industries and jobs, enhancing our nation's competitiveness and improving our general welfare and quality of life."

Since the awards program began in 1984, researchers at DOE national laboratories have received 250 of the 565 FLC Excellence in Technology Transfer Awards presented to date. DOE researchers won 10 of the 25 awards presented this year. The 2004 award-winning projects are:

Argonne National Laboratory
- Improved Electrodialysis Operation with Buffer Solution

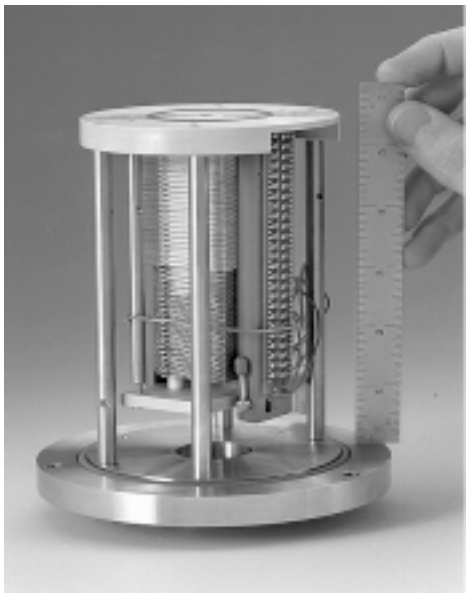
Lawrence Berkeley National Laboratory (with Lawrence Livermore National Laboratory and Sandia National Laboratories)
- Minimizing Casualties from a Chem/Bio Attack: Preparation, Training, and Response Resources

Lawrence Livermore National Laboratory
- RadScout Handheld Nuclear Material Identifier

Oak Ridge National Laboratory
- Lab-on-a-Chip
- Microcantilever-Based Biosensors
- Robust Wireless Technologies for Extreme Environment Communications
- Thin Film Rechargeable Lithium Batteries

Pacific Northwest National Laboratory
- Alpha Particle Immunotherapy for Treating Leukemia and Solid-Tumor Metastases
- Electrodynamic Ion Funnel
- Inductively Coupled Plasma/Mass Spectrometry Collision/Reactor Cell Technology

More information about the awards program and the DOE winners is available at **http://www.science.doe.gov/sub/Accomplishments/flc/index.htm**.



The Electrodynamic Ion Funnel developed at Pacific Northwest National Laboratory increases the sensitivity of analytical devices such as mass spectrometers.

The FLC was organized in 1974 and formally chartered by the Federal Technology Transfer Act of 1986 to promote and strengthen technology transfer nationwide. More than 700 major Federal laboratories and centers and their parent departments and agencies are FLC members. Additional information on the FLC is available at **http://www.federallabs.org/**. ❖

LANL, LLNL contracts to be separate

Separate competitions will be conducted by the Department of Energy for the management of its Lawrence Livermore (LLNL) and Los Alamos National Laboratories (LANL). The current contract for LLNL will be extended beyond its Sept. 30, 2005, expiration date in order to separate the two competitions. Both laboratories are currently managed by the University of California.

"I have concluded that it is very important to ensure we have the broadest possible competition for future contracts," Secretary of Energy Spencer Abraham said. "Separating these two competitions will achieve that result."

Secretary Abraham announced in April 2003 his intention to conduct a competition for the management of LANL. The current contract expires in September 2005. It was also previously announced that a competition would be conducted for the management of LLNL. What had not been decided was whether these competitions should be linked, conducted as a single solicitation, or separated. The Secretary's decision for separate competitions is a result of significant internal study and is influenced by the recommendation of the Secretary of Energy Advisory Board Blue Ribbon Commission on the Use of Competitive Procedures for Department of Energy Laboratories.

The LANL contract competition will be conducted by DOE's National Nuclear Security Administration. The schedule for Request for Proposals will be announced in the near future. ❖

Secretary launches Science.gov 2.0

Science.gov 2.0, the next major step in government science information retrieval on the Internet, was launched May 11, 2004, by Secretary of Energy Spencer Abraham in an event at Department of Energy (DOE) Headquarters, Washington, D.C. Secretary Abraham hailed the endeavor as a successful promotion of the E-gov initiative of the President's Management Agenda.

More than 47 million pages of authoritative science information from 17 government science organizations within 12 Federal agencies are available for search on Science.gov, **http://www.science.gov**. Now, taking a hint from the commercial search engine Google, Science.gov has introduced relevancy ranking to sort through the government's vast reservoirs of research and rapidly return information to users.

"These agencies together have combined innovative technology, forward thinking, and hard work to build an invaluable science resource," Secretary Abraham said. "From the most current information on new technologies, to historical research results, to the most promising medical advancements, Science.gov connects citizens to the world of science."

Secretary Abraham (far left) and Raymond Orbach, Director, Office of Science, unveil the new Science.gov 2.0 Internet site.

The event was attended by representatives from the Science.gov Alliance, including co-chairs Eleanor Frierson, Deputy Director, National Agricultural Library, and Tom Lahr, Deputy Chief, Biologic Informatics Program, U.S. Geological Survey. The Alliance is a voluntary working group from the 12 participating science agencies—Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, and the Interior; Environmental Protection Agency; Government Printing Office; National Aeronautics and Space Administration; National Science Foundation; and the National Archives and Records Administration.

DOE's Office of Scientific and Technical Information (OSTI) in Oak Ridge, Tenn., hosts the Science.gov Web portal. The new relevancy-ranking technology was funded through the Small Business Innovation Research Program in DOE's Office of Science. OSTI funded the application of the technology to meta-searches in the deep Web, where traditional search engines generally cannot go.

The Science.gov Web portal provides its unique search capability to 30 databases and 1,700 Web sites. The information at Science.gov is free. No registration is required. ❖

DOE sites win pollution prevention honors

On Earth Day 2003, Secretary of Energy Spencer Abraham made a commitment that the Department of Energy (DOE) will protect the environment while conducting its national security and energy-related missions. The support of DOE sites for that commitment was demonstrated through recently announced 2004 pollution prevention honors.

Battelle Memorial Institute, which manages or co-manages DOE's Brookhaven, Oak Ridge, and Pacific Northwest National Laboratories; Hanford Site; Idaho National Engineering and Environmental Laboratory; Los Alamos National Laboratory; National Energy Technology Laboratory; National Renewable Energy Laboratory; Sandia National Laboratories/New Mexico; Savannah River Site; Strategic Petroleum Reserve; Y-12 National Security Complex; and Yucca Mountain Project won DOE pollution prevention Best In Class Awards. These sites demonstrated how solid and hazardous waste generation can be eliminated or dramatically reduced by procuring environmentally preferable products and services, integrating environmental management systems (EMS) and sustainable design into all site operations, and implementing pollution prevention opportunity assessment solutions in projects and processes.

2004 White House Closing the Circle Awards also were presented to Battelle Memorial Institute for its corporate commitment to environmental stewardship and Environmental Management Systems that exceeded the International Organization for Standardization (ISO) 14001 standard and to Sandia National Laboratories/New Mexico for significantly increasing the use of construction materials containing recycled content through training and procurement requirements. The Yucca Mountain Project earned a Closing the Circle honorable mention for its paper use reduction efforts and the Strategic Petroleum Reserve, for its excellence in environmental protection through EMS implementation.

Information on these award-winning pollution prevention practices is available at **http://www.eh.doe.gov/p2/p2awards/nomination_list_edit_jsp.asp**. More information on the Department's progress in implementing environmental management systems and meeting its pollution prevention goals is available in the recently issued *EO 13148 Greening the Government Through Environmental Management Annual Progress Report 2003* at **http://www.eh.doe.gov/oepa/data/eo13148/2004reports.pdf**. ❖

Powerful $avings campaign to educate public

A new partnership between the Department of Energy and the Alliance to Save Energy (Alliance) will focus on increasing public awareness on the importance of energy efficiency and smart energy practices both at home and on the road. The year-long "Powerful $avings" public education and awareness campaign is designed to provide consumers with the information and tools necessary to make smart energy choices a part of their daily lives.

"This new effort will be a coordinated campaign to help consumers make smart energy choices," Assistant Secretary for Energy Efficiency and Renewable Energy David K. Garman said. "Energy efficient improvements and tips are easy ways for Americans to save energy and money in their homes and in their cars, which supports our economy and protects our energy security."

The Powerful $avings campaign will include broadly disseminated video, audio, and print news releases; op-ed pieces; and satellite media tours. DOE and Alliance officials and spokespersons will reinforce the message in their public appearances around the country. The new campaign continues the "smart energy" campaign launched last summer by Secretary of Energy Spencer Abraham.

Both DOE and the Alliance offer free consumer booklets with helpful ways to reduce home energy bills that are important elements of the campaign:

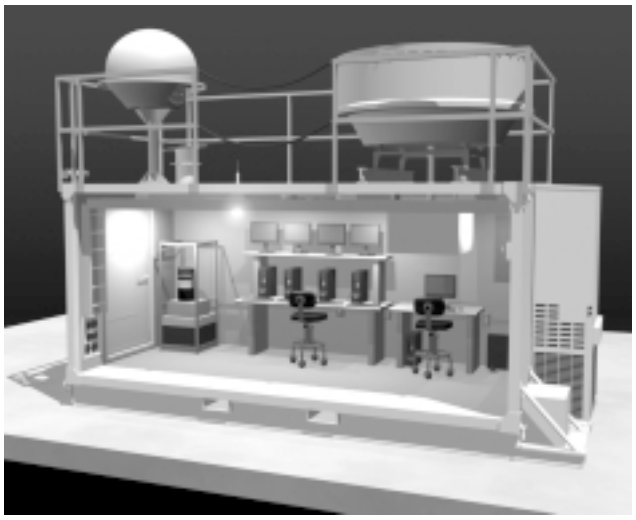
- *Energy Savers: Tips on Saving Energy & Money at Home* is available from DOE in both English and Spanish by calling 1-877-337-3463 or at **http://www.energysavers.gov**.
- *Power$mart: Easy Tips to Save Money and the Planet* can be ordered from the Alliance by calling 1-888-878-3256. An animated version can be previewed at **http://www.ase.org/powersmart/index.html** where customization details can be found. ❖

ARM sites designated a national user facility

The Atmospheric Radiation Measurement (ARM) Program sites have been designated a national scientific user facility by the Department of Energy (DOE). The resulting new ARM Climate Research Facility (ACRF) has the potential to contribute to a wide range of interdisciplinary science in areas such as hydrology, ecology, and weather forecasting. A call for Fiscal Year 2006 campaign proposals went out to the scientific community, opening the facility's resources to increased scientific research from around the world.

"The thing to remember is that ARM still represents the scientific research program focused on improving our understanding of cloud and radiation processes using the facility data," Wanda Ferrell, ARM Program Director, Office of Science, said. "ACRF encompasses the infrastructure (sites, instruments, data, etc.) that enables the ARM science, and allows the global scientific community to use that infrastructure for other research as well."

The goal of the ACRF is to provide scientific researchers with unique data and tools to facilitate scientific applications for improving the understanding of climate. ACRF's permanent sites are located at the North Slope of Alaska, the Southern Great Plains in Oklahoma, and the Tropical Western Pacific. The new Mobile Facility is similar to the permanent ACRF sites in that it contains many of the same instruments and data systems, but it is designed to be deployed around the world for campaigns lasting up to 18 months. Additional ACRF capabilities include the ARM Data Archive and the Unmanned Aerospace Vehicle Program.



This artist's 3D rendering shows the ACRF Mobile Facility operations shelter, which houses the instrument computers, data and communications systems, and several instruments.

Since 1990, the ARM Program has sponsored scientific field measurements and modeling studies designed to improve the representation of clouds and radiative processes used in computer models that predict the weather and simulate the earth's climate. Through the ARM Program, DOE's Office of Biological and Environmental Research has funded the establishment of heavily instrumented field research sites around the world. These sites are used to study cloud formation processes and their influence on radiative transfer and to measure other parameters that determine radiative properties in the atmosphere. The sites and their accompanying infrastructure and data products now are available to the global scientific community through the ACRF.

Further information on the ACRF is available at **http://www.arm.gov/acrf/**. ❖

Fermilab ships its first magnet for Large Hadron Collider

The Department of Energy's Fermi National Accelerator Laboratory (Fermilab) has shipped the first of a series of advanced, superconducting magnets to CERN, the European Organization for Nuclear Research in Geneva, Switzerland. The magnet will play a key role in the operation of the Large Hadron Collider (LHC), a new particle accelerator due to begin operating in 2007.

The departure of the 43-foot, 19-ton magnet marks the culmination of a decade-long Fermilab effort to design, develop, manufacture, and test the next generation of focusing magnets for particle accelerators. Next-generation superconducting magnet systems built at three DOE national laboratories—Fermilab, Brookhaven, and Lawrence Berkeley—represent a significant part of the $531 million total U.S. contribution to the LHC machine and detectors.

At left, the Fermilab magnet is in its steel shipping cylinder. L-r, are Fermilab-LHC Project Manager James Kerby, Fermilab Director Michael Witherell, US-LHC Project Manager James Strait, and DOE Office of Science Director Raymond Orbach. ❖

Savannah River locks the door on the RBOF facility

The Spent Fuel Project at the Department of Energy's Savannah River Site has locked the door on the Receiving Basin for Offsite Fuels (RBOF), signaling that the facility has been deactivated and placed in a virtually "maintenance-free" mode in preparation for eventual decontamination and decommissioning activities. In the photograph, Todd Sipes, Spent Fuel Project Operations (left), and Don Bishop, H Area Completion Projects, turn the key. Remaining utilities to the facility will be shut down late this month.

The RBOF deactivation follows the facility's deinventory, which was completed in October 2003, years ahead of the original schedule, saving approximately $12 million in operating costs (*DOE This Month*, December 2003). DOE Assistant Secretary for Environmental Management Jessie Roberson praised the deinventory milestone as one of a handful of achievements across the DOE complex that "underscore the significant progress in the Department's efforts to accelerate cleanup across the Nation." ❖

NREL brings Zero Energy Homes to homebuilders

Imagine living in a community where homeowners can save 60 percent on their monthly utility bills thanks to energy-saving features that are part of the standard home package. With the help of scientists and engineers at the Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) through DOE's Zero Energy Homes initiative, Premier Homes is building just such a community, the first of its kind, in Sacramento, Calif.

A Zero Energy Home combines renewable energy technologies, such as solar panels, at left, and solar hot water systems with advanced energy-efficient construction and appliances so that the house uses no more energy than it produces in a year. DOE began the initiative to move the latest research from its national laboratories into homes.

NREL is working with four teams to introduce the Zero Energy Homes concept into the single-family, new-home construction industry: ConSol, Stockton, Calif., which worked directly with Premier Homes; Davis Energy Group, Davis, Calif.; NAHB Research Center, Upper Marlboro, Md.; and Steven Winter Associates, Norwalk, Conn. ❖

Brookhaven Lab's small business fair its biggest ever

A record 300 attendees packed the ninth biannual small business fair held recently at the Department of Energy's (DOE) Brookhaven National Laboratory (BNL). The fair was sponsored in collaboration with DOE, the Brookhaven Town Small Business Advisory Council, the Small Business Development Center at BNL, Farmingdale University, and Stony Brook University. Small business personnel were given the opportunity to network with buyers from large businesses to understand their needs, with the goal of winning contracts.

"The event was a great success," said Jill Clough-Johnston, BNL Small Business Liaison Officer. "Brookhaven Lab awarded about $30,000 worth of orders to small businesses right at the fair." In the photograph, Mary-Faith Healey (right), head of BNL's Office of Procurement and Property Management, and Paul Simons (far right), BNL Procurement Operations Manager, look over some of the scientific equipment displayed by Brookhaven Lab's Jackie Timko (far left) and Paul Giannotti. ❖

BPA completes Celilo Converter Station modernization

On June 2, the Department of Energy's Bonneville Power Administration (BPA), Siemens Corporation, and the Los Angeles Department of Water and Power celebrated the completed modernization of BPA's Celilo Converter Station (right) at The Dalles, Ore. Celilo is the northern end of the 846-mile direct current (DC) Pacific Intertie that connects the Pacific Northwest with Los Angeles, Calif. The intertie is the largest single line on the BPA grid, the largest (3,100 megawatts) and longest DC line in the United States, and can move enough power for three cities like Seattle, Wash., up or down the West Coast.

The modernization project retired the last of the 1970 vintage power converters that had six-foot vacuum tubes; the original equipment had lasted more than twice its expected life. The new system, which uses solid-state silicon chips four inches in diameter, should keep the DC intertie humming for another 35 years or so. The modernized Celilo also will be cooler, safer, and ecologically improved. BPA crews did most of the modernization work, reducing project costs. ❖

Fernald razes last uranium production building

Fluor Fernald demolition crews recently brought down the Pilot Plant (right) at the Department of Energy's Fernald Site. The plant was the last of 10 former uranium complexes that produced high purity uranium metal from 1951 to 1989 to support the nation's weapons production needs. "Despite the challenges and all of the unknowns you face when taking down a 40-year-old plant, the workers were committed to safety," said DOE Fernald Director Bill Taylor.

The former Fernald production area sits on 125 acres in the middle of the property. Uranium production plants once stretched over nine city blocks with buildings standing anywhere from one to seven stories tall. Over the years of production, the plants and the soil beneath them were contaminated. With the demolition of the last building, soil excavation workers will begin removing contaminated concrete and soil beneath the surface of the old plant. Additional information is available at **http://www.fernald.gov/Cleanup/D&DfactSheets.htm**. ❖

Early career scientists, engineers honored

At a May 4, 2004, White House ceremony, seven researchers funded by the Department of Energy (DOE) received the Presidential Early Career Award for Scientists and Engineers. The Presidential award is the highest honor bestowed by the U.S. Government on outstanding scientists and engineers who are beginning their independent careers.

A total of 57 researchers supported by eight Federal Departments and agencies were honored. Each researcher received a citation, a plaque, and a commitment for continued funding of their work from their agency for five years. Dr. John Marburger, Director, Office of Science and Technology, presented the awards.

Before the White House ceremony, the seven researchers described their work at a ceremony hosted by Secretary of Energy Spencer Abraham at DOE Headquarters. "Each of these researchers has made a distinctive contribution both as an independent investigator and as a team member," Secretary Abraham said. "Individually and collectively, they continue to be sources of invaluable technical direction and expertise in support of the Department's research and development and national security missions."

At the DOE event, five of the scientists from the Department's national laboratories received the Office of Science Early Career Scientist and Engineer Award. The winners are:

- **Jeffery Blackmon**, Oak Ridge National Laboratory, for his use of radioactive beams to understand how stars explode;
- **Edmond Chow**, Lawrence Livermore National Laboratory (LLNL), for his contributions to the field of computational science, including scalable numerical algorithms;
- **Sergei Maslov**, Brookhaven National Laboratory, for his contributions to the physics of complex systems, with applications such as cellular biology;
- **Jonathan E. Menard**, Princeton Plasma Physics Laboratory, for performing studies to optimize the stability of fusion plasmas and providing the heart of the physics basis for a new, spherical fusion plasma reactor; and
- **Christine Orme**, LLNL, for her work on understanding the physical mechanisms of biomineralization and developing methods to investigate mineralization at the nanoscale.

Two university researchers received the Office of Defense Programs Early Career Scientist and Engineer Award for their work in support of national security. The winners are:

- **Carl Boehlert**, Alfred University in New York, for research into structural intermetallics and metal matrix composites; and;
- **Krishnakumar Garikipati**, University of Michigan in Ann Arbor, for efficient numerical solutions of non-local models of solids. ❖

New process used to demolish Hanford facility

The Department of Energy's (DOE) Richland Operations Office (DOE-RL) and contractor Fluor Hanford, Inc. have completed demolition of the first of three plutonium concentration facilities at Hanford Site. A first-of-its-kind process was used in the demolition.

Plutonium-containing solutions were processed at the 233-S Plutonium Concentration Facility from 1956 to 1964. The multistory building was highly contaminated because of the work performed there and various incidents over the years.

During the "free air" demolition, crews applied a fixative to the walls to glue contamination in place so that the facility would not have to be decontaminated prior to demolition. A large fogger machine maintained a mist of water over the site to control dust and prevent the spread of contamination.

"This is one of those unique projects where we could see the day-to-day progress. It's important that we're able to share our data and lessons learned with other sites because we're all aiming for the same goal—safe environmental cleanup," Steve Veitenheimer, DOE-RL Project Manager, said.

"We worked extensively with employees to figure out how to bring down this highly contaminated facility safely," Mike Lackey, Vice President, Deactivation and Decommissioning, Fluor Hanford, said. "There wasn't a single OSHA-recordable injury during demolition and no skin contaminations during more than 4,000 employee entries into the work site. We're proud of our safety record and accomplishment. We think this approach can be applied to future Hanford demolition projects." ❖

COMING Events

August

28-Sept. 3 World Renewable Energy Congress VIII (WREC VIII) and Energy Technology Expo and Conference (ETEC), Denver, Colo. Cosponsored by the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy and others; hosted by DOE's National Renewable Energy Laboratory. WREC VIII, held every two years, will provide a forum for energy suppliers and consumers, governments, industry, academia, and financial institutions from around the world to discuss the development of energy sources that are secure, sustainable, accessible, and economically viable. ETEC will offer international representation of all renewable energy technologies and showcase the diversity of technology solutions. Additional information is available at **http://www.nrel.gov/wrec**. ❖

Research DIGEST

Scientists at the Department of Energy's **Los Alamos National Laboratory** have developed a novel thermometer and a fluorescent material that responds rapidly and reversibly to temperature. The material could be the basis for highly sensitive optical thermometers useful in biological monitoring, medical, industrial, and security applications. Molecule-based optical thermometers have limited operational ranges on the order of only a few degrees. The Los Alamos thermometer is accurate to one-tenth of a degree and responds to temperature changes ranging from 77 to 284 degrees Fahrenheit, giving it a wider temperature range than any existing fluorescent thermometer. The researchers currently are working to advance several promising applications, as well as encapsulating the material to create temperature-sensitive paints. (Todd Hanson, 505-665-2085)

Researchers at the Department of Energy's **Pacific Northwest National Laboratory** (PNNL) are developing a system to rapidly produce hydrogen from gasoline in a car. Instead of building a new infrastructure of hydrogen fueling stations, gasoline can be converted or reformed onboard the vehicle. One approach uses steam reforming, in which hydrocarbon fuel reacts with steam at high temperatures over a catalyst. Hydrogen atoms are stripped from water and hydrocarbon molecules to produce hydrogen gas. The problem has been a 15-minute wait before driving. It has taken steam reformer prototypes that long to come up to temperature to begin producing hydrogen. PNNL has demonstrated a very compact steam reformer which can produce large amounts of hydrogen-rich gas from a liquid fuel in only 12 seconds. (Susan Bauer, 509-375-3688)

Combining the power of the sun and the wind might be cheaper and more reliable than using just solar energy alone, or, in some cases, than connecting to a utility grid. Researchers with the Photovoltaics International Program at the Department of Energy's **National Renewable Energy Laboratory** (NREL) are testing and collecting data on hybrid power systems, including a small hybrid solar and wind energy system at NREL's Outdoor Test Facility, to show how these systems can power remote households and villages as effectively as solar, wind, diesel, or battery power alone. "Hybrid systems show how wind and solar complement each other in a big way," Lorenzo Roybal, NREL, says. "Either the sun is shining or the wind is blowing, so there is always something producing power." (Sarah Barba, 303-275-3023) ❖

DOE emergency management group meets

The Department of Energy (DOE) Emergency Management Issues Special Interest Group (EMI SIG) held its annual meeting in Washington, D.C., May 3-6, 2004. The theme of the meeting was "National Perspectives on Emergency Management—A Capitol Concept." Speakers from several Federal agencies addressed current emergency management issues from their respective agency's perspective.

The EMI SIG, established in 1986, is a network of emergency management professionals working together toward a common purpose—to foster the exchange of information, ideas, resources, and products of interest to support the DOE emergency management community. The group is sponsored by DOE's Office of Emergency Management, National Nuclear Security Administration (NNSA). Approximately 600 DOE Federal and contractor employees are members of EMI SIG. More than 170 members attended this year's annual meeting.

The guest speaker was Linton Brooks, Under Secretary of Energy for Nuclear Security and Administrator, NNSA. Administrator Brooks stressed that "emergency management is the last line of defense for our various operations when natural phenomena strike, equipment malfunctions, engineering safety systems fail, humans make mistakes, and terrorists and malcontents attempt to cause mass casualties or significant life-style disruptions by various means."

NNSA Administrator Linton Brooks addresses attendees at the EMI SIG annual meeting.

He continued, "Not everybody gets to do important and meaningful work, but we do. Not everybody gets to make a difference, but we do. Above all, not everybody gets to act in the service of something larger than them, in the service of our country, but we do. Don't forget what a privilege that is."

Other speakers included representatives from the Departments of Health and Human Services and Homeland Security, Federal Bureau of Investigation, Federal Emergency Management Agency, and Centers for Disease Control and Prevention. Oleg Kalugin, former head of worldwide foreign counterintelligence for the Russian KGB, provided his perspective on terrorism and counterintelligence in the closing address.

For more information on EMI SIG and the meeting, contact the group's coordinator, Dorothy Cohen, Emergency Management Laboratory, Oak Ridge Institute for Science and Education, 865-576-2007, or cohend@orau.gov. ❖

Argonne hosts science careers for women conference

The 17th annual "Science Careers in Search of Women" conference was held recently at the Department of Energy's Argonne National Laboratory. More than 300 students from 46 schools throughout the Chicago, Ill., area participated in the day-long conference, which aims to encourage high school women to consider careers in science and technology.

The conference featured a keynote address by Denise Casalino, Commissioner of the Department of Planning and Development, City of Chicago. Casalino is a civil engineer who has directed many major engineering projects, including the $200 million Wacker Drive reconstruction project in Chicago.

In the morning, the students participated in panel discussions with speakers from a variety of scientific and engineering disciplines. Panelists shared their personal experiences and insights on what a career in science and technology is really like and how to pursue such a career.

Students were grouped by their area of interest for lunch with a woman scientist in that field and more informal, one-on-one conversation. After lunch, students had a choice of several different laboratory tours. The day concluded with a career booth exhibit.

"The conference is designed to expose students to a variety of careers in science and engineering and real-life women in those professions. I hope we inspire many of the students to pursue technical careers," said Kirsten Laurin-Kovitz, a mechanical engineer at Argonne and chair of the conference. "If we broaden the outlook of even one girl, it will be worth it."

Pat Zriny, Argonne National Laboratory, conducts a superconductivity demonstration for students attending the conference.

According to the National Science Foundation, enrollment of women in undergraduate science and engineering programs is rising. In fields such as engineering, the percentage of women earning bachelor's degrees rose from one percent in 1966 to 18 percent in 1996. However, women's enrollment in mathematics and computer science programs declined.

"We're making great progress, but there is still a lot of work to be done to encourage women to enter certain science and engineering fields," Laurin-Kovitz notes. "This is an extremely complex problem, and we believe that programs such as Science Careers in Search of Women are a part of the solution."

The conference is sponsored by Argonne's Office of the Director and Division of Educational Programs and DOE's Office of Science. ❖

DOE, TVA to study advanced new nuclear plant

The Department of Energy (DOE) will cooperate with an industry team led by the Tennessee Valley Authority (TVA) to conduct a detailed study of the potential construction of a two-unit Advanced Boiling Water Reactor (ABWR) nuclear plant on TVA's Bellefonte site near Hollywood, Ala. The 10-month, $4.25 million study will help TVA decide whether to build a new, advanced technology nuclear plant at the site by the middle of the next decade which could produce more than 2,600 megawatts of electricity. DOE will fund half of the cost associated with the study.

The Bellefonte project will detail the cost and schedule for building a two-unit ABWR plant. This technology is a Generation III nuclear power plant that is based on a design developed by General Electric and certified by the Nuclear Regulatory Commission (NRC) in 1997. While no plant using this technology has been built in the United States, three ABWR plants are successfully operating in Japan and three additional units are under construction in Japan and Taiwan. The specific design being evaluated for the Bellefonte site will reflect modifications made by the Japanese firm Toshiba, reflecting that company's successful experience with the technology in Japan.

TVA will lead a project team that includes General Electric, Toshiba, Bechtel, Global Nuclear Fuels-America, and USEC Inc. Following completion of the study in April 2005, TVA will decide whether to file a combined Construction and Operating License (COL) application with NRC and consider subsequent steps for building a new nuclear plant.

The project, to be conducted under DOE's Nuclear Power 2010 program, was proposed by TVA in response to a program financial assistance solicitation issued Nov. 20, 2003. The program seeks to achieve an industry decision in 2005 to proceed with a COL application for at least one new nuclear power plant that can begin commercial operation early in the next decade. ❖

Education NOTES

The Department of Energy's (DOE) **Idaho National Engineering and Environmental Laboratory** (INEEL) coordinated the 15th annual Hispanic Youth Symposium in Sun Valley, Idaho, April 30-May 2, 2004. The symposium was sponsored by DOE, INEEL, state agencies and employers, and regional colleges and universities. About 300 Idaho Latino high school students gathered for a weekend of motivational speakers, skill competitions, and interactive workshops. Over 150 scholarships valued at more than $430,000 were awarded to 109 students at the symposium. Earlier this year, Idaho Governor Dirk Kempthorne recognized the Hispanic Youth Symposium with a Brightest Stars Award for being an exemplary program in making a positive difference in the lives of children across the state of Idaho.

The University of California at Los Angeles (UCLA) and the National Ignition Facility (NIF) at the Department of Energy's (DOE) **Lawrence Livermore National Laboratory** have created a UCLA/NIF joint professorship. The tenure-track appointment at the assistant professor level will reside in UCLA's electrical engineering and physics departments. The professorship will create a "natural avenue" for UCLA faculty and students to pursue research in high energy-density plasma physics, inertial confinement fusion, and astrophysics at the world's most powerful laser facility. The professorship is modeled after existing joint appointments between UC San Diego and the Los Alamos Neutron Science Center at DOE's **Los Alamos National Laboratory** and between UC Davis and UC San Francisco and the Advanced Light Source at DOE's **Lawrence Berkeley National Laboratory**.

On May 4, 2004, William D. Magwood IV, Director of the Department of Energy's (DOE) **Office of Nuclear Energy, Science and Technology**, gave students at Wilkinson High School in Orangeburg, S.C., a glimpse into the future by demonstrating hydrogen fuel technologies. "It is important that we begin to prepare and inspire the next generation of scientists and engineers who will lead the transition to a hydrogen-based economy and build the machines and infrastructure that will make it a reality," Magwood said. The students learned about hydrogen and fuel cells through a series of experiments that taught them how to build model fuel cell cars. DOE is encouraging the study of hydrogen and fuel cell technologies in schools to inspire the next generation of scientists and engineers needed to bring the vision of a hydrogen economy to reality. ❖

Module 1 of ePME project to be deployed

On Sept. 30, 2004, the Department of Energy's (DOE) research and development (R&D) program management will be streamlined with the deployment of the first module of the e-Government Corporate R&D Portfolio Management Environment (ePME) project. The ePME Module 1, Electronic Receipt and Review, will enable the Department's Program Secretarial Offices engaged in research and development to electronically receive, review, and approve national laboratory proposals for new and ongoing R&D activities. Module 2, Electronic Portfolio Management, is proposed for development.

"DOE's e-Government Corporate R&D Portfolio Management Environment is designed to offer a one-stop repository for the Department's R&D portfolio, enabling the tracking of R&D projects from inception to closeout," said James Decker, Principal Deputy Director, Officer of Science, and Chair of ePME's Executive Steering Committee. When fully implemented, Electronic Receipt and Review is expected to:

- Increase efficiencies by streamlining the process for developing and approving new and ongoing field work proposals;
- Offer a one-stop repository for field work proposals;
- Interface with other DOE corporate systems, such as I-MANAGE;
- Reduce paper need and streamline R&D submission, processing, and approval processes; and
- Reduce the administrative burden associated with responding to the field budget call.

The Office of Science has the lead for the ePME project. However, all Program Secretarial Offices that engage in R&D are participating in developing the system and will be using it. The National Nuclear Security Administration (NNSA) is participating in ePME's development and has the option of using or leveraging technology solutions implemented as part of the system.

The ePME team tested a Module 1 prototype in March and April 2004 and confirmed that the system meets DOE's and the national laboratories' business needs. Pilot participants included DOE Headquarters, Fermi Area Office, Fermi National Accelerator Laboratory, Golden Field Office, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Oak Ridge Operations Office, NNSA Service Center, and Sandia National Laboratories.

The team is working closely with organizations to prepare for full deployment of Electronic Receipt and Review by providing hands-on training, web-based training, and various outreach events. For more information, visit **http://epme.doe.gov/**. ❖

People IN ENERGY

Walter Warnick, Director of the Department of Energy's Office of Scientific and Technical Information, has been appointed to serve on the Depository Library Council to the Pubic Printer of the United States. Also, Warnick has been named to chair CENDI, an interagency working group of senior scientific and technical information managers from 11 Federal agencies, representing over 97 percent of the Fiscal Year 2004 Federal research and development budget.

Herschel Smartt, engineer and leader of the Metals Joining and Manufacturing Group at the Department of Energy's Idaho National Engineering and Environmental Laboratory, is the recipient of the A.F. Davis Silver Medal from the American Welding Society. Smartt and colleagues from Vanderbilt University were recognized for their research in controlling robotic friction stir welding and for advancing welding technology in machine design.

Kenneth White has been named Manager of the Office of Educational Programs at the Department of Energy's (DOE) Brookhaven National Laboratory (BNL). He has served as Interim Manager of the office since December 2003. White will oversee BNL's involvement in several core educational programs supported by DOE's Office of Science and a variety of programs offered by BNL for students ranging from elementary school to college level.

Jose M. Hernandez, on leave from the Department of Energy's Lawrence Livermore National Laboratory (LLNL), is one of 11 men and women selected by the National Aeronautics and Space Administration (NASA) to join the 2004 Astronaut Candidate Class. "This is something I've wanted since I was a kid," says Hernandez, the son of Mexican migrant farmworkers. Hernandez was an electrical engineer at LLNL for 15 years before taking a leave of absence to join NASA in 2001. His work at LLNL included the X-ray Laser Program and digital mammography. Hernandez, who will train as a mission specialist, is the fourth astronaut to be affiliated with LLNL.

Mike Bebon has been selected as Deputy Director for Operations at the Department of Energy's (DOE) Brookhaven National Laboratory (BNL), a position he has held in an interim capacity since 2003. Since joining BNL in 1987, Bebon has served in several managerial positions, including Assistant Laboratory Director for Facilities and Operations. As Deputy Director, Bebon will oversee nine major operating divisions, BNL's Environmental Restoration Program, and two senior level staff offices.

Bonnie Hong, Counterintelligence Program Information and Special Technologies Program technical expert at the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL), recently was named the 2004 INEEL Woman of the Year in recognition of her professional and community accomplishments. **Tom Middleton**, INEEL Safeguards/Personnel Security manager, received the laboratory's Federal Women's Recognition Award for his leadership and support of women in the workplace.

Albert Wagner, well-known theoretical chemist, has been named Director of the Chemistry Division at the Department of Energy's Argonne National Laboratory, a position he has been serving in an acting capacity. Wagner conducts research into chemical dynamics in the gas phase. As division director, he leads a staff of 90 employees who work in chemistry research areas ranging from photosynthesis to superconductivity.

Thomas E. Shea has been named Director for Defense Nuclear Nonproliferation Programs at the Department of Energy's Pacific Northwest National Laboratory. Shea's experience in international safeguards and nonproliferation includes 24 years at the International Atomic Energy Agency (IAEA) in Vienna, Austria, where he was involved in such areas as establishing and implementing basic IAEA safeguards concepts and developing new IAEA nuclear materials verification systems. ❖

NEW Publications

Office of Inspector General (IG) reports: ***The Department's Reporting of Occupational Injuries and Illnesses*** (DOE/IG-0648); ***Major Cleanup Projects at the Idaho National Engineering and Environmental Laboratory*** (DOE/IG-0649); ***Allegations Involving Occupational Medical Services and Tank Farm Vapor Exposures at the Hanford Site*** (I04RL003); ***Management Controls Over Administration of the WERC Project*** (OAS-M-04-03). The reports are available from the U.S. Department of Energy, IG Reports Request Line, 202-586-2744, or at **http://www.ig.doe.gov**. ❖

Milestones

YEARS OF SERVICE
June 2004
Headquarters

Chief Information Officer - Cathy A. Hutzell (30 years). **EIA** - Albert D. Gerard (35), Nancy A. Masterson (35), David W. Costello (25), William D. Watson, Jr. (25). **Energy Efficiency & Renewable Energy** - Mary F. Gerald (40). **Environment, Safety & Health** - Carol M. Borgstrom (30), James C. Snell (30). **Environmental Management** - John C. Lehr (35), Eugene C. Schmitt (35), Richard J. Schassburger (25). **FERC** - Patricia S.P. Johnson (35), Ruby A. Meek (35), Martha E. Altamar (30), Relonna J. Gilmore (30), Lyle T. Hanagami (30), Lula M. James (30), Peter A. Leitzke (30), Cheum Ni (30), Joseph C. Athey (25), Toyia L. Johnson (25).

Fossil Energy - Richard A. Dye (35), Vanessa Dodson-Cunningham (30), Sheila M. Hopkins (30), Selena B. Thomas (30), Anthony J. Como (25). **General Counsel** - Robert J. Marchick (35), Norma H. Noble (35), Pamela M. Pontillo (30). **Hearings & Appeals** - Patricia G. Spencer (35). **Independent Oversight & Performance Assurance** - Victor I. Crawford (30). **Inspector General** - Donald G. Farmer (30), Daniel M. Weeber (30). **Legacy Management** - Jack R. Craig (30). **Management, Budget & Evaluation** - Michael L. Righi (35), George M. Tengan (35), David M. Treacy (35), Roy L. Craig (30), Frank G. Dulovich (30), Derea R. Hawkins (30), Brian D. Costlow (25), Rachel M. Samuel (25).

NNSA - Douglas S. Newton (35), Eugene R. Romero (35), Candace J. Benner (30), Randall L. Estes (30), Cheryl P. Fitzgerald (30), Terry L. Keiser (30), Daniel D. Rose (30), Gail R. Young (30), Diane K. Larsen (25), David D. Zamora (25). **Nuclear Energy** - Joseph A. Bartell (30), Virginia A. Oland (25). **Office of the Secretary** - Ingrid A.C. Kolb (25). **Policy & International** - Pamela W. Cochran (35), Wanda M. Klimkiewicz (35), Marian K. Thompson (35). **Science** - Mary B. Dison (25). **Security** - Stephen M. Stern (30). **Security & Safety Performance Assurance** - Glenn S. Podonsky (25).

Field
Albany Research Center - Joseph H. Tylczak (25). **Bonneville Power** - Robert E. Albenesius (35) Martin A. Larsen (35), David B. Pidduck (35), Robert J. Ries (35), Donald J. Rubard (35), Michael W. Berg (30), Frank E. Brown (30), Steven F. Fucile (30), Irvin W. Housinger (30), John E. Odgaard (30), Robin R. Pierson (30), William D. Schmidt (30), Donald R. Sterley (30), Thomas R. Sutton (30), John M. Taves (30), Susan L. Wiese (30), Joyce M. Chan (25), Harry W. Clark (25), J. Michael Freeman (25), Bertha L. Hill (25), Ruth L. Hiraki (25), John E. Macula (25), Marla L. McCombie (25), Alaina D. Redenbo (25), Gregory G. Stults (25), Arturo R. Velasco (25).

Chicago - Jane L. Monhart (35), Michael J. Klimas (30), Charles A. Zagozdon (30). **Idaho** - David A. Clark (30). **Kansas City Site/NNSA** - Gregory A. Betzen (30). **Los Alamos Site/NNSA** - Richard X. Tom (30). **NETL** - Kathleen B. Fear (35), Michael J. Hilterman (35), John W. Kleinhenz (30), Robert M. Kornosky (30), George W. Pukanic (30), Carl O. Bauer (25), Robert L.P. Kleinmann (25). **NNSA Service Center** - Galvin H. Brown, Jr. (30), Frances L. Davis (30), Sharon E. House (30), Elaine M. Ramirez (30), Steve M. Yazzie (30), Laura A. Barr (25), Shirley L. Peterson (25), Bruce F. Rose (25).

Oak Ridge - Patricia H. Smith (30), Beverly J. Harness (25), R. Max Smith (25). **Ohio** - Robert S. Rothman (30). **Pantex Site/NNSA** - Karl E. Waltzer (25). **Pittsburgh Naval Reactors/ NNSA** - Earl D. Shollenberger (30). **Portsmouth/Paducah** - Michael J. Dabbert (30). **Richland** - James E. O'Connor (25). **Savannah River** - Seaward Middleton, Jr. (35), Priscilla A. Wilson (35), Dorothy M. Green (25), Diana C. Hannah (25), Richard L. Huskin (25). **Savannah River Site/ NNSA** - Clay H. Ramsey (25).

Schenectady Naval Reactors/NNSA - Glenn M. Millis (30). **Southwestern Power** - Harry Mardirosian, Jr. (25). **Strategic Petroleum Reserve** - Gregory R. Magallanez (40), Audrey G. Grant (25), Robert J. Kahl III (25). **Western Area Power** - Raymond J. Kub (35), Maxwell K. Morse (35), Thomas A. Eimers (30), Melanie J. Reed (30), Kenneth C. Wolohon (30), Aurelio A. Brown (25), Nancy G. Crocker (25), M. Susan Earley (25), Cindy L. Rogers (25).

RETIREMENTS
May 2004
Headquarters

EIA - Martha M. Johnson (20 years). **FERC** - Richard A. Rosell (26). **Inspector General** - Raymond G. Busen (37), Lynn B. Moran (27). **Management, Budget & Evaluation** - Gary S. Davis (31), Ronald C. Ricks, Sr. (35). **NNSA** - Ralph E. Erickson (30), Owen B. Johnson (35).

Field
Bonneville Power - Robert W. Beraud (34), Kathleen L. Billesbach (26), Karen H. Currier (26), Douglas D. Douthit (34), Robert L. Jones (26), Thomas P. Maclachlan (32), Thomas A. Munson (26), Verne G. Newsom (38), Michael T. Orr (32), Philip M. Schmid (16), Michael C. Vogel (35). **Idaho** - Dennis W. Green (25), Michael G. Judd (26), Thomas L. Must (21). **NNSA Service Center** - Leland G. Elster (31), David L. Marks, Jr. (37). **Oakland** - Martin W. Molloy (38). **Ohio** - Steven G. Casto (31). **Western Area Power** - James V. Bouvia (35), Terry A. Taylor (25), Charles E. Toney (34). ❖

June 2004

AROUND DOE

LANL/Sandia nanocenter moves closer to reality

Groundbreaking ceremonies were held in late May 2004 for the Center for Integrated Nanotechnologies (CINT) at the Department of Energy's (DOE) Los Alamos (LANL) and Sandia National Laboratories (Sandia). The ceremonies took place at the sites of the center's Core Facility in Albuquerque, N.M, and the Gateway to Los Alamos facility.

LANL and Sandia will operate CINT jointly. The center is comprised of the two new facilities and the existing CINT Gateway to Sandia. The Core Facility will include synthesis labs for chemical and biological work, characterization labs for optical and laser work, and Class 1000 clean rooms for integration operations. The CINT Gateway to Sandia will focus on nanomaterials and microfabrication from the existing Integrated Materials Research Laboratory, while synthesis and characterization labs at the CINT Gateway to Los Alamos will primarily focus on biosciences and nanomaterials work.

The $76 million CINT is one of five new Nanoscale Science Research Centers being built by DOE's Office of Science to provide researchers with world-class facilities for the interdisciplinary study of matter at the atomic scale. The other centers will be located at Argonne, Brookhaven, Lawrence Berkeley, and Oak Ridge National Laboratories.

Yucca Mountain Project at four million safe hours

The Yucca Mountain Project, under the jurisdiction of the Department of Energy's (DOE) Office of Civilian Radioactive Waste Management, recently reached a significant safety milestone. Employees have achieved four million safe hours without a lost workday.

"This accomplishment confirms that employees have accepted a safety culture," notes John Mitchell, President and General Manager, Bechtel SAIC Company, LLC, the Yucca Mountain Project management and operating contractor. "Every employee can take pride in this remarkable accomplishment."

Scott Wade, Director, Environment, Safety, and Health Division, DOE Office of Repository Development, concurs. "Achievement of five million hours and beyond can be realized if we all seek continuous improvement, utilize lessons learned, and involve all employees in practicing and promoting safety."

Carbon drill pipe may aid U.S. oil, gas industry

On May 17, 2004, the Department of Energy (DOE) announced the development of a new "composite" drill pipe that is lighter, stronger, and more flexible than steel. The new pipe, made from carbon fiber resins, was developed under a four-year $3.6 million cooperative agreement managed by DOE's National Energy Technology Laboratory. The pipe, possibly the next major technical achievement emerging from the government-industry natural gas research program, could significantly benefit U.S. energy production.

"This is another example of the technology breakthroughs in the arena of domestic energy production being carried out by our Office of Fossil Energy," Secretary of Energy Spencer Abraham said. "To reach and recover untapped domestic oil and gas reserves, we must have the ability to inexpensively drill highly deviated or horizontal holes."

The drill pipe was successfully field tested at two Oklahoma sites. At a previously producing site, the well was drilled another 1,000 feet where it struck an oil-bearing zone. In another test, a 60-foot radius, 1,000-foot lateral was punched through hard sandstone from a shallow well in a successful search for gas. Integrated Directional Resources, Lafayette, La., has placed the first commercial order for the composite drill pipe. ❖

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

Official Business