# DOE This Month

U.S. DEPARTMENT OF ENERGY

**NOVEMBER 2003**

*Secretary Abraham presents 2003 Enrico Fermi Awards*

**Argonne scientist wins Nobel Prize in Physics**

**Magwood elected Chairman of NEA Steering Committee**

**NNSA employee receives Service to America Medal**

DOE This Month

U.S. Department of Energy

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## On our cover

The 2003 Enrico Fermi Awards were presented by Secretary of Energy Spencer Abraham on Oct. 22, 2003, in Washington, D.C. The Presidential award, administered by the Department of Energy (DOE), is one of the Federal Government's oldest and most prestigious science and technology honors.

The awards were presented at the "Atoms for Peace Plus Fifty" anniversary conference. At the awards ceremony are (l-r) Dr. Raymond Orbach, Director, DOE Office of Science; award winner Dr. John Bahcall; Dr. Andrew Davis, who accepted the award for his father Dr. Raymond Davis, Jr., (pictured at right); award winner Dr. Seymour Sack; and Secretary Abraham.

**For more on the Fermi Award and winners, see page 4.** ❖

# Argonne scientist wins Nobel Prize in Physics

The Royal Swedish Academy of Sciences has awarded the 2003 Nobel Prize in Physics to Alexei Abrikosov, a Distinguished Scientist in the Materials Science Division of the Department of Energy's (DOE) Argonne National Laboratory. The award is shared with Anthony J. Leggett of the University of Illinois, Urbana-Champaign, and Vitaly Ginzburg of the P.N. Lebedev Physical Institute in Moscow, Russia. The three, who will share $1.3 million in prize money, are being honored for their work in superconductivity and superfluidity.

Abrikosov's research centers on condensed-matter physics—the structure and behavior of solids and liquids—and concentrates on superconductivity—the ability of some materials to carry electrical current without resistance. He was the first to propose the concept of "type-II superconductors" in 1952 and constructed the theory of their magnetic properties, known as the Abrikosov vortex lattice.

"I am particularly pleased that a researcher at DOE's Argonne National Laboratory has been recognized," Secretary of Energy Spencer Abraham said. "Since coming to Argonne in 1991, Dr. Abrikosov has continued to contribute to a wide range of fields in addition to superconductivity, including theories of particle interactions, astrophysics, plasma physics, the quantum behavior of materials, and many other areas of interest. Dr. Abrikosov's Nobel Prize and his continuing work across a spectrum of scientific challenges are illustrative of the powerful scientific talent and capability of the Department's science laboratories and have helped win a place at the forefront of scientific and technological challenge."

The Office of Basic Energy Sciences in DOE's Office of Science has supported Abrikosov as part of Argonne's Materials Science Division since 1991. Before joining Argonne, Abrikosov was Director of the Institute for High-Pressure Physics of the Academy of Sciences, Moscow, Russia. He was chairman of theoretical physics at the Moscow Institute for Steel and Alloys from 1976 to 1991, and head of the condensed matter theory division of Russia's Landau Institute for Theoretical Physics from 1966 to 1988.

*Argonne National Laboratory physicist Alexei Abrikosov, winner of the 2003 Nobel Prize in Physics.*

Among Abrikosov's numerous honors are the Lenin Prize in 1966, the International Fritz London Award in 1972, the Soviet Union's State Prize in 1982, and the John Bardeen Award in 1991. Abrikosov was named a full member of the Russian Academy of Sciences in 1987 and is a member of the Royal Academy of London. He is a Fellow of the American Physical Society and in 2000 was elected to the National Academy of Sciences, one of the highest honors accorded a United States scientist or engineer. ❖

# Dearborn sworn in as Assistant Secretary

On Oct. 9, 2003, Secretary of Energy Spencer Abraham administered the oath of office to Rick A. Dearborn as Assistant Secretary for Congressional and Intergovernmental Affairs. Dearborn was nominated by President Bush for the position on April 24, 2003, and was confirmed unanimously by the United States Senate on Oct. 3. He will oversee the promotion of Department policies, programs, and initiatives through liaison, communications, coordination, and interaction with state, tribal, city, and county governments; Congress; other Federal agencies; stakeholders; and the general public.

"Rick is a valuable addition to the Department of Energy and I am pleased to welcome him aboard," Secretary Abraham said. "He will be instrumental to the Department in overseeing Congressional completion and implementation of the energy bill."

Assistant Secretary Dearborn is a veteran of Capitol Hill where he worked closely with numerous members and their staffs. Beginning in 1988, he worked for three years for the National Republican Senatorial Committee in both the finance and political divisions. He then served as Deputy Staff Director for the Secretary of the Senate Republican Conference to then Senator Robert Kasten and later for Senator Trent Lott. Assistant Secretary Dearborn left the Hill in 1993 to become Director of Congressional Relations for the U.S. Senate at the Heritage Foundation. In 1996, he returned as Executive Director of the Senate Steering Committee. In 1997, he began his most recent tenure as Legislative Director for Senator Jeff Sessions. ❖

*Secretary Abraham swears in Rick Dearborn as Assistant Secretary of Energy for Congressional and Intergovernmental Affairs. Looking on and holding the Bible is Deputy Secretary Kyle McSlarrow's wife Alison.*

# Three eminent scientists receive prestigious Enrico Fermi Award

Drs. John Bahcall, Raymond Davis, Jr., and Seymour Sack are the winners of the 2003 Enrico Fermi Award. The Presidential award, one of the Federal Government's oldest and most prestigious science and technology honors, is administered by the Department of Energy (DOE).

Secretary of Energy Spencer Abraham presented the awards on Oct. 22, 2003, in Washington, D.C., at the "Atoms for Peace Plus Fifty" anniversary conference. The conference, cosponsored by DOE, marked the progress of nuclear science since the December 1953 speech by President Dwight Eisenhower to the United Nations General Assembly on the peaceful uses of the atom.

Bahcall and Davis received the Fermi Award for their research in neutrino physics; the two are the scientists most responsible for the field of solar neutrino physics and neutrino astronomy. Sack was recognized for his contributions to national security. Each winner received a gold medal and a citation signed by President George W. Bush and Secretary Abraham. Sack received a $187,500 honorarium; Bahcall and Davis shared the award and each received a $93,750 honorarium.

"The contributions these distinguished scientists have made to understanding the world around us and to our national security are immense," Secretary Abraham said. "Their lifetime of innovative research follows in the tradition of Enrico Fermi, the great scientist we commemorate with this award."

Bahcall, 68, received a B.S. degree in physics from the University of California at Berkeley, an M.S. from the University of Chicago, and a Ph.D. from Harvard University. He began his career as a research fellow at Indiana University and taught physics at the California Institute of Technology from 1962-1970. Since 1971, Bahcall has been Professor of Natural Sciences at the Institute for Advanced Study and visiting lecturer with the rank of Professor at Princeton University.

Davis, 88, received B.S. and M.S. degrees in chemistry from the University of Maryland and a Ph.D. from Yale University. He began his career at Dow Chemical Co. and worked at Monsanto Chemical Company. From 1948 to 1984, Davis was a senior chemist at DOE's Brookhaven National Laboratory. In 1984, he became Research Professor at the University of Pennsylvania. Davis was awarded the Nobel Prize in Physics in 2002.

Sack, 74, received B.S., M.S., and Ph.D. degrees in physics from Yale University. Over a 35-year career at DOE's Lawrence Livermore National Laboratory (LLNL), Sack became one of the United States' foremost designers of nuclear weapons. His design concepts are found in all stockpile weapons. Sack's design programs introduced insensitive high explosives, fire-resistant plutonium pits, and other state-of-the-art nuclear safety concepts. Retired from LLNL since 1990, Sack continues as a Laboratory Associate.

Additional information about the Enrico Fermi Award and winners is available at **http://www.sc.doe.gov/sc-5/fermi/**. ❖

# Magwood elected to top NEA post

William D. Magwood IV, Director of the Department of Energy's Office of Nuclear Energy, Science and Technology, was elected Chairman of the Organization for Economic Cooperation and Development (OECD) Nuclear Energy Agency (NEA) Steering Committee during the Committee's 107th session in Paris, France, in mid October 2003. The Steering Committee is the governing body of the NEA.

Magwood is the second United States official in the NEA's 47-year history to hold the top position. In the mid 1980's, Ambassador Richard Kennedy, who served as Ambassador at Large during the Reagan and Bush Administrations, was elected to head the agency.

"The election at the NEA to install a U.S. head signals the revival of U.S. leadership in worldwide nuclear energy policy," Secretary of Energy Spencer Abraham said. "We are obviously very pleased with this appointment and we look forward to working even more closely with the international community on the nexus between sustainable development and efforts to develop Generation IV nuclear technology."

As Steering Committee Chairman, Magwood will work to strengthen NEA's work program and align its activities more closely with priority work being pursued by organizations. This work includes the Generation IV International Forum, an international organization of 11 governmental members dedicated to cooperative research and development of next generation nuclear energy technologies that are proliferation-resistant, economic, safe, and less waste intensive. Magwood was elected Chair of that group in September 2003.

The NEA, established in 1956, is comprised of the European Commission and 28 member countries. The Steering Committee meets biannually to review the NEA's work program, budget, and external relations, including the preparation of a new strategic plan covering proposed agency programs from 2004-2008. ❖

# Secretary reaffirms support for NCI program

The Nuclear Cities Initiative (NCI) is a unique Department of Energy-led nonproliferation program that is reducing Russia's nuclear infrastructure. The program is managed by the National Nuclear Security Administration (NNSA).

The final NCI Joint Steering Committee Meeting was held Sept. 18-19, 2003, in Moscow, Russia, to highlight five years of accomplishments and to recommend the continuation of 69 existing projects for completion. The NCI Government-to-Government Agreement expired on Sept. 22, 2003. The agreement was not renewed due to U.S. Government concerns over its liability coverage.

Secretary of Energy Spencer Abraham addressed the meeting on Sept. 19 during his recent trip to Russia and three other countries (*DOE This Month*, October 2003). "I am proud of NCI's accomplishments and recognize that it serves a vital nonproliferation goal by assisting in the transition of Russian nuclear scientists and engineers to non-defense, commercial efforts," Secretary Abraham told high-level Russian government officials and representatives of the three closed nuclear cities where NCI operates.

*L-r, Minister Alexander Rumyantsev and First Deputy Minister Igor Borovkov of Russia's Ministry of Atomic Energy, NNSA Deputy Administrator for Defense Nuclear Nonproliferation Paul Longsworth, and Secretary of Energy Spencer Abraham prepare for the signing of the Joint Steering Committee Protocol.*

Over its tenure, the Nuclear Cities Initiative has enjoyed significant successes. In Sarov, NCI activities led to the expedited closure of the Avangard weapons assembly plant. In Snezhinsk, NCI facilitated the first ever joint venture between a U.S. company and an enterprise in a closed nuclear city to manufacture medical equipment, securing a $10 million loan from the Overseas Private Investment Corporation and raising an additional $20 million in equity to build a facility. In Zheleznogorsk, NCI established commercial partnerships with six firms, fostering economic diversification and nonproliferation employment opportunities in the city.

At the meeting, both Secretary Abraham and Russia's Minister of Atomic Energy Alexander Rumyantsev underscored their commitment to the completion of ongoing NCI projects. They witnessed the signing of a protocol by NCI Joint Steering Committee co-chairs NNSA Deputy Administrator for Defense Nuclear Nonproliferation Paul Longsworth and Russia's First Deputy Minister of Atomic Energy Igor Borovkov. The protocol developed a set of recommendations to continue existing projects under a provision in the expiring agreement that allowed for their full implementation until completion. Minister Rumyantsev pledged his support in guiding the protocol through Russia's interagency process. Existing NCI projects could then continue for up to three years or until completed. ❖

# PNNL scientists train U.S. border agents

Scientists at the Department of Energy's (DOE) Pacific Northwest National Laboratory (PNNL) are training U.S. inspectors in the Department of Homeland Security's Bureau of Customs and Border Protection (CBP) to identify and halt smuggling of weapons of mass destruction. In a three-day course at DOE's HAMMER training facility in Richland, Wash., U.S. border inspectors receive comprehensive training to detect, identify, interdict, and investigate the illicit movement of materials, commodities, and components associated with the development or deployment of weapons of mass destruction.

The October 2003 course marked the start of the second year for the training program, which is sponsored by the National Nuclear Security Administration's (NNSA) Second Line of Defense program. About 25 inspectors participate in each course. Nearly 400 inspectors have completed the training course since June 2002. PNNL and the CPB share instructional responsibilities.

The curriculum includes classroom instruction and hands-on demonstrations and exercises. The hands-on training includes instruction on advanced detection technologies like radiation pagers, gamma spectrometers, standard border enforcement inspection tools, and an ultrasound system developed at PNNL called the Acoustic Inspection Device, which identifies contents and locates hidden compartments in sealed containers.

"Our class is designed to supplement training the CBP already provides its inspectors," Bill Cliff, PNNL program manager, said. "The NNSA-sponsored training has become even more important in light of the growing need to protect against weapons of mass destruction coming into our country."

The U.S. border inspector classes are modeled after a training program targeted to inspectors from other countries. The international program has been jointly conducted by PNNL and the former U.S. Customs Service under funding from multiple agencies, including NNSA. Since its creation in 1997, more than 400 border agents from nearly 20 foreign countries have received training. ❖

# NNSA employee honored for service to America

*Riaz Awan at the Chornobyl site.*

Riaz Awan, Director of the Department of Energy's (DOE) Ukraine Office in Kiev and a staff member of the National Nuclear Security Administration (NNSA), is the recipient of a 2003 Service to America Medal. The award is presented by the Partnership for Public Service—a nonpartisan, nonprofit organization dedicated to recruiting and retaining excellence in the Federal workforce—and the Atlantic Media Company. The national awards program honors the achievements of career Federal employees.

A total of 28 finalists were nominated in nine categories for their inspiring accomplishments and dedication to our nation. Awan is the winner from among three finalists in the National Security and International Affairs category. He was recognized for his oversight of multimillion-dollar initiatives that significantly improved nuclear safety and enhanced the security of nuclear facilities in Ukraine, including the permanent closure of the Chornobyl Nuclear Power Plant in 2000.

Awan spent several years at the Chornobyl site contributing to the plant's safe and secure permanent closure. He also was active in coordinating multinational projects to mitigate the social and economic impacts on the city of Slavutych—where Chornobyl workers and their families live.

Awan currently is helping to coordinate the construction of a new shelter over the destroyed Chornobyl reactor. The $768 million concrete shelter or "sarcophagus" is a very large, technically complex engineering project that, when completed, will significantly improve the reactor containment.

Born and educated in Pakistan, Awan attended and received a degree in mechanical engineering from Catholic University in Washington, D.C. He worked for several government contractors designing and testing nuclear power plants in the United States before he joined DOE in 1996 to manage nuclear programs.

Asked about his reaction to the award, Awan said, "I always dreamed of coming to this great country. I am very humbled and honored to have had the privilege to work on such important programs and be a part of the NNSA. I love my job! The award is truly icing on the cake. I'm very honored." ❖

# Access Grid™ technology allows Native Americans to bridge 'digital divide'

The sudden appearance of cutting-edge Internet technology created a "digital divide" between Native Americans and the rest of the United States. Now, a group seeking to preserve Native American culture is putting technology to work in hopes of bridging that gap.

Staff at the Department of Energy's Argonne National Laboratory (ANL) recently gave a tutorial on the newest Access Grid™ technology and software to representatives from the Tribal Virtual Network (TVN). TVN, a consortium of Native American communities, is using Access Grid to provide broadband Internet connection to five tribal museums and cultural centers. Having the technology in place will allow the museums to develop Web-based exhibitions and other educational tools for tribal members and the general public.

"Some families from the reservation have to make a 120-mile trip to the city to have access to some sort of education," said Arlan Sando, an Access Grid operator for the Jemez Pueblo. "Access Grid technology will make it easier for rural villages to keep up with everything that's going on in the world."

Based on technology developed by the Futures Laboratory Branch of ANL's Mathematics and Computer Science Division, Access Grid is an ensemble of resources that gives large groups the ability to collaborate through video and voice. These systems rely on specialized "nodes," or custom-designed spaces, that contain the audio and visual technology required for high-quality user interface.

Access Grid nodes aim to make the user completely unaware of the infrastructure needed for the service to work. Though such user-friendly interfacing has had many applications for scientific collaborations, TVN members view Access Grid as not only a research tool for scientists but also a "collaborative ignition switch between communities."

Despite all the potential advantages, TVN still faces obstacles in convincing tribal leaders of the significant impact of the Access Grid. Only a handful of people have firsthand experience with the technology, so many tribal members remain suspicious of its benefits. TVN remains optimistic that its efforts to use the Access Grid to link Native Americans with each other and with the rest of the country will prove successful. ❖

# NETL meets international environmental standard

Following an intensive two and one-half year effort, the Department of Energy's (DOE) National Energy Technology Laboratory (NETL) on Aug. 31, 2003, joined the growing international ranks of government agencies and private industries that have earned the prestigious International Organization for Standardization (ISO) 14001 certification for environmental management. The certification covers NETL operations at its locations in Morgantown, W.Va., and Pittsburgh, Pa., including onsite research and development, site operations, and supporting administrative functions.

"This is a great achievement for NETL and reflects our strong commitment to ensuring that our environmental performance measures up to our world-class status in research," NETL Director Rita Bajura said. "This accomplishment makes us one of the first fossil energy research laboratories in the world to obtain third-party registration to the ISO 14001 standard."

"I congratulate NETL on receiving ISO certification," Assistant Secretary for Fossil Energy Carl Michael Smith said. "Their accomplishment is helping the Office of Fossil Energy to achieve the environmental goals set forth by Secretary Abraham. Certification makes a statement to the global community that we take seriously our responsibility to environmental stewardship."

To achieve certification, the laboratory went through a complete independent third-party audit of its environmental management system (EMS). The auditors were impressed with many of NETL's programs and singled out several aspects of the EMS as being particularly noteworthy. These included NETL's integration of its EMS in two locations; the active involvement of NETL management and employees; and the various mechanisms in place to maintain employee environmental awareness, such as an ISO 14001 mouse pad and the internal and external EMS web pages.

ISO 14001 is a globally recognized standard that defines the structure of an organization's EMS for purposes of improving its environmental performance. The standard requires an organization to identify potential environmental impacts and establish controls needed to appropriately minimize any impacts, to monitor and communicate environmental performance to its stakeholders, and to establish a formal process for continually improving the system. DOE Order 450.1 requires DOE facilities to have an EMS in place by the end of 2005. ❖

# First coal mine methane fuel cell powers up

FuelCell Energy of Danbury, Conn., has begun operating the world's first fuel cell powered by coal mine methane. The demonstration is funded by the Department of Energy (DOE).

The six-month demonstration at the Rose Valley coal mine methane test site in Hopedale, Ohio, features FuelCell Energy's innovative Direct FuelCell® technology. The 200-kW power plant generates enough electricity to supply an average of 40 homes. A successful demonstration could pave the way to the use of fuel cells to mitigate coal mine methane emissions while producing power at high efficiency and very low emissions. Coal mines account for approximately 10 percent of anthropogenic methane emissions worldwide.

"We believe this technology can reduce coal mine methane emissions significantly while producing clean, efficient, and reliable high-quality power," Secretary of Energy Spencer Abraham said. "This has the dual benefit of reducing greenhouse gases while supporting our energy security by generating power from readily available domestic fuels."

Direct FuelCell power plants can use hydrocarbon fuels to produce electricity without the need to first create hydrogen in an external fuel processor. Hydrogen is generated directly within the fuel cell module from readily available fuels.

"FuelCell Energy's Direct FuelCell power plants are currently operating globally on natural gas, digester gas, and, later this year, on syngas from coal. The addition of coal mine methane to the list of usable fuels demonstrates the flexibility of Direct FuelCell power plants, which can operate on any hydrocarbon fuel," said Dr. Hans Maru, Executive Vice President and Chief Technology Officer of FuelCell Energy.

DOE's National Energy Technology Laboratory, the research laboratory for the Department's Office of Fossil Energy, is managing the three-year project. The total project cost is approximately $7 million, shared equally between DOE and FuelCell Energy. ❖

*Secretary of Energy Spencer Abraham (right) exchanges greetings with California Governor-Elect Arnold Schwarzenegger prior to a meeting with Department of Energy (DOE) senior officials, Oct. 29, 2003, at DOE Headquarters. Discussions focused on energy issues and programs available for state participation. Governor-Elect Schwarzenegger was visiting Washington, D.C., to establish relationships with Congress and Cabinet agencies in preparation for taking office.* ❖

# Savannah River testing recycled paper as fuel source

The Department of Energy's Savannah River Site is testing a cost-effective new source of heating fuel. The fuel is expected to cut the Site's coal usage, reduce emissions, and decrease the amount of paper trash sent to the landfill.

The Site traditionally has used coal in its A-Area steam plant boiler to provide steam for heating and process support for the Savannah River Technology Center and other A-Area buildings. In August 2003, the steam plant began testing a fuel that is a mixture of approximately 70 percent coal and 30 percent pellets made from compressed recycled paper and cardboard. South Carolina granted permission to use the pelletized paper fuel for one year to verify uniform consistency.

Savannah River's Process Engineered Fuel Facility, at left, turns the Site's recyclable paper products into pellets. To begin the yearlong test, the facility produced over three tons of the pelletized fuel, mixed it with coal, and loaded it into the hopper that feeds the boiler. ❖

# Yucca Mountain contractor earns a 'star' for safety


Bechtel SAIC Company, LLC, the management and operating contractor for the Department of Energy's (DOE) Yucca Mountain Project in Nevada, has earned the prestigious STAR award in DOE's Voluntary Protection Program (VPP). The award was presented during DOE's annual VPP meeting and awards ceremony, which was held in September 2003 in Washington, D.C., in conjunction with the annual conference of the Voluntary Protection Program Participants Association.

Bechtel SAIC is recognized for its outstanding employee safety and health record and program. Proudly displaying the STAR citation are (l-r) Bechtel SAIC employees Frank Sanda, Sue Watson, Marty Rajsich, Jayne Davis, and Carl Ellis.

The VPP encourages and recognizes excellence in both technical and managerial protection of employee safety and health in five program elements—management leadership, employee involvement, worksite analysis, hazard prevention and control, and safety and health training. Additional information on the program is available at **http://tis.eh.doe.gov/vpp/**. ❖

# UT-Battelle, union partnership win state service award

UT-Battelle, managing contractor for the Department of Energy's (DOE) Oak Ridge National Laboratory (ORNL), and the Atomic Trades and Labor Council (ATLC) have received the 2003 Horizon Award from the Tennessee Labor-Management Conference. The conference is sponsored by the Tennessee Center for Labor-Management Relations. The award recognizes labor-management partnerships toward community service in Tennessee.

ATLC members and Team UT-Battelle, a volunteer employee organization, partnered to assist in recovery activities in the aftermath of November 2002 tornadoes, which devastated several East Tennessee communities. ATLC workers, aided by equipment made available by UT-Battelle and DOE, were on the scene in Cumberland County shortly after the disaster to clear tornado debris hampering recovery efforts.

Later, more than 100 employees, including those at left, volunteered to build a Habitat for Humanity home in Morgan County, which was particularly affected by the twisters. In addition, ORNL employees donated $16,000 to recovery efforts. ❖

# Y-12 breaks ground on modernization facility

Ground has been broken for a new $50 million special materials facility at the Y-12 National Security Complex, in Oak Ridge, Tenn. The Purification Facility is the first of the site's modernization efforts to reach this stage of execution. The new facility "is an important upgrade of infrastructure and technology to allow Y-12 to meet its future mission requirements within the Nuclear Weapons Complex," said Bill Brumley, National Nuclear Security Administration (NNSA) Y-12 Site Manager.

The 10,000-square-foot facility will provide a purification process for the manufacturing of non-nuclear, special materials needed to support future Y-12 Stockpile Life-Extension Program missions. Processes in the new facility will be housed in glove boxes, and 21st century instrumentation and equipment will be employed.

In the photograph, doing the honors at the groundbreaking are (l-r) Brumley; Dennis Ruddy, President and General Manager, BWXT Y-12; Congressman Zach Wamp of Tennessee; and Everet Beckner, Deputy Administrator for Defense Programs, NNSA. ❖

# Energy programs share ES&H experience at workshop


The Department of Energy's (DOE) Offices of Fossil Energy (FE); Nuclear Energy, Science and Technology (NE); and Energy Efficiency and Renewable Energy (EE) held their first FE-NE-EE Integrated ES&H Synergy Workshop, Sept. 24-25, 2003. The forum was hosted by DOE's Idaho National Engineering and Environmental Laboratory (INEEL).

An outgrowth of a recommendation of the December 2002 DOE Executive Safety Summit, the workshop gave the energy programs an opportunity to exchange information, lessons learned, and practical approaches concerning common safety and health problems and accident prevention. Topics included current DOE Corporate Integrated Safety Management System/ Environment Safety and Health (ES&H) initiatives, the Voluntary Protection Program, and ISO-14001 certification.

Participants included Headquarters and field senior managers and ES&H professionals. In the photograph (l-r) are Robert Lange, Associate Director, NE; Beverly Cook, Assistant Secretary for Environment, Safety and Health; Gary Staffo, Safety and Occupational Health Manager, EE; Elizabeth Sellers, Manager, Idaho Operations Office; and Craig Zamuda, Director, Office of Environment, Security, Safety and Health, FE. ❖

# Fernald 'production area' demolition nears completion

Crews at the Fernald Closure Project in Ohio, seen at right, have completed the demolition of Plants 2 and 3. The former Ore Refinery Plants served Fernald's uranium processing operations from 1953 to the shutdown of production in 1989.

Ten major processing facilities, each with a unique but integrated function, played a critical role in supplying uranium metal products to the nation's nuclear weapons complex. Workers in Plants 2 and 3 converted incoming materials and recycled residues to high purity uranium trioxide, an intermediate product used in the metal production process.

Only two of the 10 uranium processing facilities remain today—the Pilot Plant, which served as an operating prototype for all phases of the production process, and the Scrap Recovery Plant (Plant 8). By year's end, Fluor Fernald expects to complete demolition of these facilities from the 136-acre former production area. With the major facilities gone, soil excavation and ecological restoration activities can be expedited. ❖

# Canada commits to hydrogen partnership

Following a meeting on Oct. 16, 2003, in Ottawa, Canada, with Minister of Natural Resources Canada Herb Dhaliwal, U.S. Secretary of Energy Spencer Abraham announced Canada's support for the International Partnership for the Hydrogen Economy (IPHE). The IPHE will support the deployment of hydrogen energy technologies; establish collaborative efforts in hydrogen production, storage, transport, and end-use technologies; develop common codes and standards; and share information necessary to develop hydrogen fuel infrastructure.

"We are pleased to learn of Canada's decision to support the partnership for hydrogen and fuel cell technology research, development and demonstration activities," Secretary Abraham said. "International cooperation is key to achieving the hydrogen and fuel cell program goals outlined by President Bush in his last State of the Union address."

Secretary Abraham called for international hydrogen collaboration and the creation of the IPHE in his speech to the International Energy Agency Ministerial Meeting in Paris, France, on April 28, 2003. In remarks in June 2003 to the European Union Conference on Hydrogen in Belgium, Secretary Abraham called on the international community to join him in a ministerial level conference to formally define and establish the IPHE.

The IPHE inaugural meeting will take place in Washington, D.C., Nov. 19-21. The U.S. Departments of Energy, State, and Transportation will host ministerial delegations from 13 countries and the European Commission. The United States Energy Association is co-hosting the meeting. The ministerial meeting will culminate in the signing of a Terms of Reference formally creating the IPHE as an international mechanism to coordinate hydrogen research and hydrogen technology development and deployment. ❖

# West Valley completes challenging cleanup task

Among the areas undergoing cleanup at the Department of Energy's West Valley Demonstration Project (WVDP), few have been as challenging to enter or work in safely as the Product Purification Cell-South (PPC-S). From 1966 to 1972, spent nuclear fuel was reprocessed at West Valley. The silo-like PPC-S was used to complete the purification of plutonium and uranium product streams produced through reprocessing.

When cleanup of the PPC-S began in October 2002, the 5' wide by 15' long by 57' high cell interior contained five large vessels, three large "slab" tanks, and more than 3,200 linear feet of associated process and utility piping. The equipment, piping, and cell structural supports were contaminated with loose dust and particulate matter, primarily alpha contamination in levels of 50 to 70 million dpm/cm$^2$.

Through careful planning, coordination, and teamwork, the West Valley Nuclear Services Company (WVNSCO) project team finished cleanup work in this extremely hazardous environment in August 2003, ahead of schedule and with no OSHA-recordable injuries or illnesses. Of particular note, team members assessed potential radiological and safety hazards during each work planning stage, developed cleanup techniques based on comprehensive hazards and safety analyses, conducted training exercises in near-to-scale mockup facilities, and continuously monitored in-cell conditions.

WVNSCO currently is working on decontaminating four other cells, including the vitrification cell. This work is scheduled for completion next year. ❖

## NEW ON THE *Internet*

### DOE 2003 Strategic Plan

The Department of Energy (DOE) has finalized and issued its 2003 Strategic Plan. The plan charts the Department's course for the next 25 years, focusing capabilities to meet today's needs and provide innovative solutions to tomorrow's challenges. The DOE mission has been updated, long-term goals established, strategies outlined, and key intermediate objectives identified.

The plan provides the basis for measuring performance, from annual to long-term, and facilitates the creation of managers' annual standards to assure the completion of these goals. It will be used in the Fiscal Year (FY) 2005 budget and the FY 2003 Annual Performance and Accountability Report. Input to the plan was received from the public, stakeholders, and DOE program offices.

The Office of Program Analysis and Evaluation in the Office of Management, Budget and Evaluation produced the Strategic Plan. It is available on DOE's home page, **http://www.energy.gov**, under "About DOE," or at **http://strategicplan.doe.gov**. Questions may be directed to Bill Kennedy, 202-586-0423, or Bill.Kennedy@hq.doe.gov. ❖

# DOE sites report cleanup progress

Most Department of Energy (DOE) sites have ongoing cleanup and remediation projects at various stages of completion. Work is accomplished and milestones are met regularly. Following is a sample of progress reported by different sites.

The **Hanford Site** in Richland, Wash., continues to accelerate shipment of transuranic (TRU) waste to DOE's Waste Isolation Pilot Plant (WIPP) in New Mexico. In Fiscal Year (FY) 2003, the Hanford TRU waste project made three times as many shipments as in its first three years. The goal for FY 2004 is to send eight shipments per month to WIPP and then step up the pace again in 2005 and 2006, with about 160 shipments annually. Work is beginning on TRU waste retrieval operations at underground storage trenches, where the first buried drums are being removed for characterization and eventual shipment to WIPP.

The Idaho Completion Project at the **Idaho National Engineering and Environmental Laboratory** removed the last of the spent nuclear fuel from the Power Burst Facility (PBF) water storage canal and placed the fuel into dry storage at the Idaho Nuclear Technology and Engineering Center. The project was completed Sept. 19, 2003, three months ahead of an accelerated schedule. A total of 2,425 spent nuclear fuel units were moved from the 30-year-old PBF canal. Four other aged storage pools have been emptied in the past three years. Under an agreement with the State of Idaho, INEEL is committed to moving all spent nuclear fuel into dry storage by 2023, with an accelerated cleanup completion plan goal of 2012.

Remediation of the Ford Building Seepage Basin at the **Savannah River Site** marked the 300th of 515 total waste sites officially completed. The basin was constructed in 1964 to receive radioactive and hazardous wastewater from a nearby building where process reactor equipment was repaired for 20 years. The final remediation consisted of excavating contaminated soil and vegetation, backfilling the remaining basin and former underground piping areas with clean soil, placing vegetation over the backfilled areas, and installing institutional controls. Remediation of Savannah River waste sites and groundwater continues at an aggressive pace to meet the accelerated cleanup plan.

Demolition efforts at Savannah River reached a major milestone when work was completed in all "clean" buildings in the "TNX" area nearly three months ahead of the scheduled completion date of Sept. 30, 2003. The entire demolition project included about 112,000 square feet. "We have a terrific team," said Project Manager Dave Bokesch. The TNX area was the first area built at the Site in the early 1950's and is the first complete area being demolished. ❖

# Enhanced cyber security program at work

Department of Energy (DOE) employees daily rely on computers, the Internet, and communication networks to help them accomplish their duties, often taking for granted that these tools will be secure. But a lot of behind-the-scenes work helps guarantee this protection. DOE security and information technology personnel are on constant alert, testing and refining network defenses to prevent disruption of services or compromise of important information.

Cyber specialists from the Office of Independent Oversight and Performance Assurance (OA) use real world hacking techniques to evaluate and help improve the ability of DOE networks to withstand ongoing attacks. The Office of Cyber Security and Special Reviews (OA-20) is dedicated to performance-based assessments of DOE computer systems complex-wide.

OA-20's Cyber Security Testing Network (CST-Net)—the Department's independent penetration testing facility—has undergone significant improvements to better evaluate vulnerabilities to DOE computer networks. These improvements include the purchase of new wireless testing equipment.

Department sites are gravitating toward wireless technology. This technology, although convenient and versatile, can cause major vulnerabilities to network security. Using a technique called "war driving," OA-20 uses mobile wireless testing systems to intercept wireless signals at DOE sites and attempt connections to site networks. These same techniques can be used by hackers to penetrate computer systems. By identifying unauthorized use or insecure wireless applications and their causes, OA will help the Department move into the expanding world of wireless technology more securely.

Using the resources of CST-Net, OA-20 plans to initiate unannounced reviews, or "Red Teaming," in addition to regularly scheduled cyber security inspections. The "Red Team" will provide a more realistic assessment of a DOE site's intrusion detection and incident reporting performance. Exercises will be conducted without the knowledge of a site's network operations group. OA will enlist "trusted agents" as advisors in case a test triggers real intrusion detection response measures. This advisory group, or "white cell," will be privileged to OA's penetration testing tactics. A pilot of the "Red Teaming" will be initiated in the coming months.

The world of cyber security is constantly evolving. OA recognizes the importance of its role in protecting DOE networks and is committed to keeping pace with the ever-changing threat to computer security and applying its capabilities more broadly across the Department. ❖

# Research DIGEST

Scientists at the Department of Energy's **Lawrence Livermore National Laboratory** (LLNL) for the first time have fully mapped the phonons in gallium-stabilized delta plutonium. Measuring the phonon dispersion curves is key to understanding the properties of plutonium materials, such as force constants, sound velocities, elasticity, phase stability, and thermodynamics. For years, scientists have been plagued trying to measure these curves because they were unable to grow the large single crystals necessary for inelastic neutron scattering. LLNL physical chemist and lead researcher Joe Wong and his colleagues used an inelastic X-ray scattering technique to impinge a microbeam from a highly brilliant X-ray synchrotron source on a single grain in a polycrystalline plutonium alloy to make their measurements. The research, conducted in collaboration with the European Synchrotron Radiation Facility in Grenoble, France, and the University of Illinois at Champaign-Urbana, was published in the Aug. 22, 2003, edition of *Science*. (Gordon Yano, 925-423-3117)

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Researchers from Structural GenomiX, a company based in San Diego, Calif., using the powerful X-rays at the Advanced Photon Source (APS) at the Department of Energy's **Argonne National Laboratory**, have determined the first structure of the main protease from the coronavirus that causes Severe Acute Respiratory Syndrome (SARS). A protease is a viral enzyme critical in the SARS life cycle. Strucural GenomiX operates a macromolecular X-ray diffraction beamline at the APS, the Western Hemisphere's most brilliant source of X-rays for research. The scientists created a three-dimensional, high-resolution image of a crystal of the SARS virus. Because of the serious public health issue posed by SARS, the company deposited the crystal structure in the Protein Data Bank, a public database available to researchers worldwide, before publishing a paper in a refereed scientific journal. The company is exploring collaborative opportunities to develop a treatment. (Donna Jones Pelkie, 630-252-5501)

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"ThraxVac," a device that can collect and kill anthrax and other bacterial spores has been developed by researchers at the Department of Energy's **Brookhaven National Laboratory** (BNL). The patent-pending device has been licensed to Circle Group Holdings, Inc., a public company based in Mundeen, Ill. ThraxVac vacuums up anthrax and other bacterial spores, then "tricks" the spores into germinating through heat and moisture, thus making them vulnerable to injury. The newly activated spores are then bombarded with alpha particles from polonium that kill the spores, rendering them nontoxic. Proof-of-principle tests and microscopic analysis of the spore destruction process conducted using transmission electron microscopy and scanning electron microscopy at BNL are extremely promising. The final steps before commercialization will be making a prototype and optimizing it for field use. (Diane Greenberg, 631-344-2347)

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Researchers at the Department of Energy's **Sandia National Laboratories** are developing ways to lower the cost of wind energy and enable wind turbines to produce more power. "We are looking at methods of building larger, stronger blades using a hybrid of carbon graphite fibers and fiberglass that sweep a greater area without greater cost," says Paul Veers, manager of Sandia's Wind Energy Technology Department. By next summer, the researchers hope to have six to 12 different blades to test at the National Wind Technology Center near Boulder, Colo., using its large blade test facilities, and at the Department of Agriculture's research station in Bushland, Texas, using three experimental turbines. (Chris Burroughs, 505-844-0948) ❖

# COMING Events

**December**

**12** NSLS-II Workshop: The Future National Synchrotron Light Source, Upton, N.Y. Sponsored by the Department of Energy's Brookhaven National Laboratory. NSLS-II is a proposed state-of-the-art medium energy storage ring designed to deliver world leading brightness and flux in the 0.3-20 keV energy range with top-off operation for constant output. Members of the scientific community wishing to provide input and feedback on the design and direction of NSLS-II, its beamlines, and instrumentation should attend. The workshop features an overview of NSLS-II; perspectives of Federal, state, and local officials; plenary lectures by highly distinguished researchers; breakout sessions; and open discussion. For registration and additional information, call 631-344-2297 or visit **http://www.nsls2.bnl.gov**. ❖

# Education NOTES

The Department of Energy's (DOE) **Office of Economic Impact and Diversity** (ED) has established a new partnership with New Mexico Mathematics, Engineering, Science Achievement Inc. (MESA), the University of New Mexico, and public schools in New Mexico. The partnership will provide educational enrichment for Albuquerque-area high school and college students majoring in mathematics and science-related courses. ED will provide $150,000 over two years; additional support will be provided by the university, MESA, and the City of Albuquerque. The program consists of program support, incentive awards, and student internships.

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About 200 middle and high school students from the Amityville, Longwood, and Rocky Point school districts in New York visited the science museum at the Department of Energy's (DOE) **Brookhaven National Laboratory** (BNL) on Oct. 15, 2003, to learn all about living and working in space from Ronald Ernst of the National Aeronautics and Space Administration (NASA). The students also toured the new interactive exhibit on Mars recently installed in the museum. Ernst's talks were given in conjunction with the dedication of the NASA Space Radiation Laboratory at BNL. The $34 million facility, built in a cooperative effort by DOE's Office of Science and NASA's Johnson Space Center, is one of the few places in the world that can simulate the harsh space radiation environment. Scientists from some 20 institutions in the U.S. and abroad will learn about the biological effects of radiation in space on humans.

The Department of Energy's **Sandia National Laboratories** has established the President Harry S. Truman Fellowship in National Security Science and Engineering to seek out the nation's best new Ph.D. scientists and engineers for postdoctoral research. The Truman Fellowship provides the opportunity for recipients to pursue independent research of their own choosing that supports the national security mission of Sandia. Candidates for the fellowship may have expertise in any of Sandia's research focus areas. The fellowship is a three-year appointment generally commencing on October 1. The application deadline for the 2004 fellowship is Dec. 31, 2003. For more information, visit **http://www.sandia.gov/employment/employment/special/truman/index.html**. ❖

# Diesel research fueling student's future

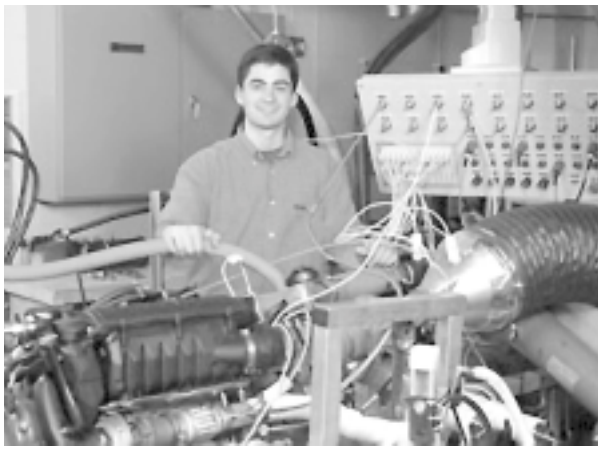
Normally, college students don't look to diesel to fuel their education. However, Eric Nafziger is fueling his future in mechanical engineering with diesel and a light-duty Mercedes-Benz engine as part of the Department of Energy's (DOE) Higher Education Research Experiences (HERE) program.

The University of Tennessee mechanical engineering graduate has performed research at the National Transportation Research Center (NRTC) for the past three years, but this has been Nafziger's first year under HERE. The program is administered by the Department's Oak Ridge Institute for Science and Education (ORISE).

"Eric is responsible for the design and construction of engine test stands as well as performing complex experiments," said Dr. Robert Wagner, Nafziger's mentor. "His most recent project was to set up and instrument a Mercedes engine. The Mercedes test stand is being used to study novel combustion regimes in diesel engines."

Nafziger set up the Mercedes engine and support systems during his first six weeks. The next phase of the project is to start testing the engine, where Nafziger and his colleagues will investigate new engine control strategies with the purpose of discovering innovative ways to achieve reduced emissions in diesel engines.

Thirty researchers are involved in the NRTC's Fuels, Engines and Emissions Research Center. Nafziger is well known and well liked among the group for his dedication and work ethic. "There's always new stuff to learn, and there's always a challenge," he said.



*Eric Nafziger studies diesel engines under the Department of Energy's Higher Education Research Experiences program.*

ORISE manages more than 100 education programs for DOE and other Federal agencies. For more information, visit **http://www.orau.gov/orise/Educ.htm** or call 865-576-3424. ❖

# People IN ENERGY

**Becky Verastegui**, Director of the Networking and Computing Technologies Division and Chief Information Officer at the Department of Energy's Oak Ridge National Laboratory, has been appointed to the Tennessee Information Systems Council by Governor Phil Bredesen. The council is responsible for overseeing Tennessee procedures for telecommunications and computer or computer-related equipment and services with state government, and evaluates how those systems are managed.

President George W. Bush has nominated **Susan Johnson Grant** to be Chief Financial Officer for the Department of Energy. Grant currently serves as Director for Corporate Resources for the Defense Finance and Accounting Service (DFAS). She previously served as program manager at DFAS and also as a budget analyst for the Under Secretary of Defense. The nomination is subject to Senate confirmation.

**Bobbi Bowen** is the new Director of Communications and Public Affairs at the Department of Energy's Argonne National Laboratory. The office is responsible for communications with employees, the community, news media, and other external audiences. Previously, Bowen was Executive Producer and Communications Manager for Motorola Inc.

**Paul Kearns**, Deputy Director of the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL) and Vice President of managing and operating contractor Bechtel BWXT Idaho, has been appointed Acting Director of INEEL, succeeding Dr. Bill Shipp who plans to retire at the end of the year.

**Paul Divjak** has been named President and General Manager of Bechtel BWXT Idaho.

Physicists **Edward Beebe** and **Alexander Pikin** of the Department of Energy's Brookhaven National Laboratory were presented the Ion Source Prize, known as the "Brightness Award," at the Tenth International Conference on Ion Sources held in Dubna, Russia, Sept. 9, 2003. The award recognizes and encourages innovative and significant recent achievements in the fields of ion source physics and technology.

**Frazier R. Lockhart** has been appointed Manager of the Department of Energy's Rocky Flats Field Office, succeeding **Eugene "Gene" Schmitt** who has returned to DOE Headquarters' environmental management program. Lockhart, an 18-year veteran of Rocky Flats, has held multiple assignments in building operations, closure project management, strategic planning, and environmental remediation. He will lead the final stages of cleanup and closure of the Rocky Flats Site.

Secretary of Energy Spencer Abraham has named **Rosita O. Parkes** as Chief Information Officer for the Department of Energy. Most recently, Parkes served in the same capacity for the Federal Emergency Management Agency (FEMA). Previously, she was Deputy Chief Information Officer and Deputy Assistant Director for FEMA's Information Technology Services Directorate. Prior to joining FEMA, Parkes was Chief Information Officer for the Defense Commissary Agency.

Senior Scientist **Orlando Auciello** of the Department of Energy's Argonne National Laboratory is the recipient of a 2003 Outstanding Technical Achievement Award from the Hispanic Engineer National Achievement Award Corporation. The award recognizes the contributions of outstanding Hispanic-American science, engineering, and technology professionals. His recent research also has earned Auciello and colleagues a 2003 R&D 100 Award for the Large-Area Ultrananocrystalline Diamond Film and Deposition System. ❖

*Secretary of Energy Spencer Abraham recently presented the Secretary's Gold Award to Joseph S. Mahaley in recognition of his outstanding performance and superior leadership while serving as the Department of Energy's (DOE) Director of Security. The award was presented during a retirement ceremony for Mahaley at DOE Headquarters, Washington, D.C. It is the Department's highest honorary award and includes a plaque with citation, a medallion, and a rosette. Mahaley retired from the Senior Executive Service on Sept. 30, 2003, after more than 23 years as a career Federal employee. He served as DOE's Director of Security for over six years.* ❖

# Milestones

***YEARS OF SERVICE***
**November 2003**
**Headquarters**

**EIA** – Patricia A. McAfee (35 years), Rebecca A. McNerney (30), John D. Pearson (30), Robert M. Schnapp (30), Thomas M. Raysor, Jr. (25). **Energy Efficiency & Renewable Energy** – Judy S. Davis (35), Ute I. Debus (35), Brenda J. Edwards-Jones (25), John E. Ferrell (25), Deborah J. Rose (25), Thomas W. Sacco (25). **Environment, Safety & Health** – Steven Simon (30), Paul M. Lin (25). **Environmental Management** – Percy W. Fountain (25).

**FERC** – Tawanna S. Lewis (35), Nora E. Donovan (30), Michael H. Henry (30), Brenda J. Bailey (25), Sandra L. Elliott (25), Daniel J. Nowak (25), Milada C. Pajaczkowski (25), John D. Ramer (25). **Fossil Energy** – Ellen E. Russell (35). **Management, Budget & Evaluation** – Harry L. Callis (35), Beverly D. Pershing (30), Jacqueline D. Graham (25), Robert M. Myers (25), Charles E. Patterson (25).

**NNSA** – Janet F. Severn (35), Joseph M. Bohensky (25). **Nuclear Energy** – Edward F. Branagan, Jr. (30). **Policy & International** – Terrenthia V. Sweeney (25). **Radioactive Waste** – Ethel M. Herring (35). **Science** – Warren A. Marton (40), John R. Clark (35), Sam E. Berk (30), Cathy L. Slaughter (30). **Security** – Leo D. Sullivan (30).

**Field**
**Albany Research Center** – Thomas V. Barnes (25). **Chicago** – Francis P. Orlowicz (30). **Idaho** – William C. McQuiston (30), Kellie J. Blessinger (25), William C. Lattin (25). **Kansas City Site/NNSA** – Barbara A. Thomas (40), Charles W. McClain (25). **Livermore Site/NNSA** – Nancy L. Adair (30). **Los Alamos Site/NNSA** – Michele A. Craig (25). **Nevada Site/NNSA** – Alison D. Marks (30), Vickie L. Parker (25). **NNSA Service Center** – Bertha Crisp (30), Velva T. Gonzales (25), Joseph L. Murphy (25).

**Oak Ridge** – Anita G. Hawkins (25). **Ohio** – Judith A. Leuzinger (25). **Pantex Site/NNSA** – Nancy R. Pyzel (30). **Pittsburgh Naval Reactors/NNSA** – James A. Bullian (30). **Richland** – Gregory Z. Morgan (25). **Rocky Flats** – Gregory N. Moore (25). **Savannah River** – Frederick J. Schultz, Jr. (40). **Schenectady Naval Reactors/NNSA** – John M. Halvorsen (30). **Y-12 Site/NNSA** – Terry B. Olberding (25).

**Bonneville Power** – Kathryn S. Kinish (35), William C. Sullivan (35), James D. Tarver (35), Robert E. Topham (35), Steven S. Baltazar (30), Gary C. Insley (30), Ronda R. Kadow (30), Ronald D. Larson (30), Donald L. Peterson (30), Paula E. Poitras (30), John W. Weaver (30), Phyllis A. Wells (30), Jon W. Bright (25), Craig D. Daeda (25), Gary T. Deleo (25), Kathleen J. Gish (25), Antony T. Rodrigues (25), Jesus B. Rubio (25), Gregory L. Vassallo (25).

**Southeastern Power** – Leon Jourolmon, Jr. (35). **Southwestern Power** – Gary L. Swartzlander (30). **Western Area Power** – James V. Bouvia (35), Stephen E. Kerr (35), John P. Rynerson III (35), John C. Dimatteo (30), Daniel R. Fogg (30), Debra G. Green (30), James L. Koehn (30), Jacqueline K. McRee (30), Kathleen G. Nafts (30), Ralph W. Duxbury (25), Mark V. Hollenbeck (25), James O. Miest (25).

***RETIREMENTS***
**September 2003**
**Headquarters**

**Chief Information Officer** – Rickey D. Hall (33 years), Joseph C. Juras (28). **Economic Impact & Diversity** – Mary K. Hembree (29). **EIA** – William A. Dorsey (36). **Energy Efficiency & Renewable Energy** – Steven M. Huff (24). **Environmental Management** – Brenda J. Auxier (20), Violet C. Crossman (18), Howard J. Eckert (16), Beverly D. Trice (27), Larry W. Wolford (16).

**FERC** – Timm L. Abendroth (26), Mac T. Bautista (29), Merle O. Bess (38), Martha V. Billings (23), L. Ann Griffith (31), Lillian M. Hilton (30), Mary C. Liebman (24), Ronald G. Lucas (32), Peter J. McGovern (27), Robert T. Peacock (11), Albert J. Rogers (28), Mark S. Shaffer (27), Ira B. Simmons (32), Akbar S. Tahiry (26), James S. Taylor (33), Sarah V. Triplett (36), Josephine D. Wiggins (33).

**Fossil Energy** – Sun W. Chun (28), Curly A.Y. Gilbert (36), Jill M. Neilsen (22), Robert C. Porter (28). **NNSA** – Jim Kapsales (25). **Policy & International** – Jean E. Vernet, Jr. (29). **Security** – Joseph V. Hawkins (33), Joseph S. Mahaley (23), Dorothy R. Turner (33).

**Field**
**Bonneville Power** – Suzanne H. Sivyer (28). **Carlsbad** – Sandra S. Countiss (13). **Idaho** – Isamu Aoki (27), R. Jeffrey Hoyles (33), Gloria A. Keller (39), John R. Martin (30). **Naval Petroleum Reserves CO, UT, WY** – Kenneth R. Roberts (33), Donald V. Ross (28). **NETL** – Charles R. Carter (33), Jo E. Dalton (28), James D. Devault (30), Gerst A. Gibbon (29), James J. Grabulis (30), Melvin C. Keller (35), Larry W. Kisner (35), Alice Q. Murphy (29), Michael R. Schoffstall (36), Susann M. Schreiber (21), Suellen A. Van Ooteghem (11).

**Oak Ridge** – Robert G. Atkin (37), Clayton S. Gist (16), James G. Hart, Jr. (29), Anthony T. Manion (29), Mary A. Reeves (29), Ronald W. Rucker (24). **Ohio** – Pamela S. Riedinger (8). **Rocky Flats** – Richard J. Di Salvo (17), Michael S. Karol (32), Evelyn R. Peacock (14). **Schenectady Naval Reactors/NNSA** – Denis D. Durnan (46).

**Strategic Petroleum Reserve** – Marion M. Bonvillain (26), Patricia A. Broschofsky (32), David C. Callahan (34), John C. Kilroy III (42), Ronnie C. Landry (21), Linda B. Rogers (22), Donald E. Smith (32). **Western Area Power** – Thomas A. Carllon (29), S. J. Dorrenbacher (27), Robert B. Dwinell (33), Lynard M. Hamada (35), Keith G. Lamb (36), Randy E. McAdams (32), Rodney L. Meyer (24), Robert E. Parkins (31), Stephen P. Szarka (36). ❖

# NEW Publications

Office of Inspector General (IG) reports: ***The Advanced Mixed Waste Treatment Facility Contract at the Idaho National Engineering and Environmental Laboratory*** (DOE/IG-0622); ***Reindustrialization of the East Tennessee Technology Park*** (DOE/IG-0623). 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**. ❖

## Solar Decathlon attracts 20 teams for 2005 contest

Students from around the world will converge on the National Mall in Washington, D.C., in fall 2005 to participate in the Department of Energy's second Solar Decathlon. The competition will feature 20 teams from across the United States, Europe, and Canada.

The competitors are: California Polytechnic Institute – San Luis Obispo, Carnegie Mellon University, Concordia University – Montreal, Cornell University, Crowder College, Florida International University, New York Institute of Technology, Universidad Politécnica Madrid, University of Colorado – Denver and Boulder, University of Maryland, University of Massachusetts – Dartmouth, University of Michigan, University of Missouri – Rolla and Rolla Technical Institute, University of Puerto Rico – Mayagüez, University of Southern California, University of Texas at Austin, University of Virginia, Virginia Polytechnic Institute and State University, Rhode Island School of Design, and Washington State University.

The student teams will design and build a solar-powered house and then assemble it on the National Mall. Contest rules require that each house generate enough energy to operate a household, a home-based business, and related transportation. For more information, visit **http://www.solardecathlon.org**.

*November 2003*

# AROUND DOE

## Geothermal resource maps reveal energy potential

New, first-of-a-kind geothermal resource maps produced by the Department of Energy's (DOE) Idaho National Engineering and Environmental Laboratory (INEEL) show low- to moderate- and high-temperature geothermal energy resource locations in 13 Western states—Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming. The maps were developed as part of DOE's GeoPowering the West program.

Using Geographical Information System technology, INEEL prepared the maps to show areas with potential for geothermal electricity production and direct use, known geothermal wells and springs, existing geothermal power plants, direct-use applications, and land ownership. The state maps and a regional map are available at **http://geothermal.id.doe.gov/maps-software**.

## Hanford Site completes declassification project

The Hanford Declassification Project team at the Department of Energy's Hanford Site in Washington has completed its review of all of the site's document holdings. More than 1.3 million pages of documents have been reviewed and declassified since the project began in 1995. The team had a budget of $2 million per year for the project, which was scheduled for completion at the end of Fiscal Year 2003. The review was completed six months ahead of schedule and $500,000 under budget.

Included in the 1.3 million pages of documents declassified are over 85,000 photographs of Hanford workers and facilities. Most of the photographs were taken between 1943 and 1960. The review also included over 500 drawings and aperture cards. The local Native American Tribes were briefed on the project and were provided digital copies of historical photographs on compact disks to review for potential sensitivity prior to the images being released to the public.

The completion of the project benefits the current Hanford cleanup/closure mission as well as provides historical Hanford information for the interested public. The documents and images that were made publicly available can be found on the Internet at **http://www2.hanford.gov/declass/**. ❖

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

Official Business