

DOE

U.S. DEPARTMENT OF ENERGY

This Month

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Fiscal Year 2003 budget briefing

\$21.9 billion requested for Fiscal Year 2003

Department, 'Big Three' launch Freedom CAR program

Accelerated cleanup planned for Department sites

U.S. Department of Energy



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On our cover

On Feb. 4, Secretary of Energy Spencer Abraham released the Department of Energy's (DOE) Fiscal Year 2003 budget request to Congress.

The \$21.9 billion request is an increase of over \$580 million, or 2.7 percent, from the current fiscal year's appropriations.

There was a large turnout at the press and formal stakeholder briefings and program-specific breakout sessions at DOE Headquarters in Washington, D.C. Joining Secretary Abraham (at the podium) at the formal budget briefing for stakeholders are Deputy Secretary Francis S. Blake (far left) and (l-r) Under Secretary for Nuclear Security and Administrator, National Nuclear Security Administration, John A. Gordon; Under Secretary for Energy, Science, and Environment Robert G. Card; and Chief Financial Officer Bruce M. Carnes.

For more on the Department's FY 2003 budget, see page 3.

Secretary releases FY 2003 budget request

On Feb. 4, Secretary of Energy Spencer Abraham released the Department of Energy's (DOE) Fiscal Year (FY) 2003 budget request to Congress. The \$21.9 billion request is an increase of over \$580 million, or 2.7 percent, from the FY 2002 budget.

"The 2003 budget is forward-looking and fiscally responsible," Secretary Abraham said. "It will boost the Department's ability to contribute to the war on terrorism, enhance deterrence, build a stronger foundation for energy security in the 21st century, and allow us to invest in science and technology that will increase today's sources of energy and discover the fuels of tomorrow."

The funding priorities for the FY 2003 budget focus on the National Nuclear Security Administration (NNSA), energy, environment, and science.

The total FY 2003 funding request for NNSA is \$8 billion, an increase of \$433 million, or 5.7 percent, over the FY 2002 appropriations. The request includes about \$5.9 billion for weapons activities to support the stockpile stewardship program, a comprehensive weapons certification program, and a robust infrastructure for nuclear weapons production. Also included is

\$358 million for activities in response to the events of Sept. 11, 2001. The \$1.1 billion request for defense nuclear nonproliferation includes an additional \$223 million for activities related to the war on terrorism.

The FY 2003 request of about \$2.4 billion for energy is a decrease of \$78 million, or 3.2 percent, from the FY 2002 appropriations. If approved by Congress, the \$1.3 billion requested for energy efficiency and renewable energy will be the largest amount of funding for these programs in over 20 years. The \$277.1 million requested for the Weatherization Assistance Program supports the President's commitment to double funding for the program over the next 10 years. Approximately \$150 million is included in the budget for the new Freedom CAR initiative (see article, page 5).

The energy portion of the request also includes funding to implement the 10-year clean coal technology initiative and increased research into carbon sequestration. About \$38.5 million is allocated to launch Nuclear Power 2010, a cooperative, cost-shared initiative with industry that will lead to the startup of new nuclear plants by 2010.

A total of \$7.4 billion is requested in FY 2003 for environment, a \$169 million increase, or 2.3 percent, over the FY 2002 budget. Included is \$6.7 billion to support the goals of the new accelerated cleanup plan developed as part of the Department's top-to-bottom review of the Environmental Management Program (see related story, below). The request also includes \$527 million for the Office of Civilian Radioactive Waste Management to move forward with a permanent disposal site for nuclear waste.

The FY 2003 funding request for science programs is \$3.3 billion, an increase of 0.1 percent over the FY 2002 appropriations. The request supports increased funding for operations and instrumentation at the Office of Science user facilities, construction of the Spallation Neutron Source, and funding boosts in the areas of nanotechnology, high energy physics, and basic energy sciences.

Additional information on the budget request is available at <http://www.energy.gov> and <http://www.mbe.doe.gov/budget/03budget/index.htm>. ❖

Accelerated cleanup a funding priority

Last year, Secretary of Energy Spencer Abraham ordered a top-to-bottom review of the Department of Energy's (DOE) environmental management program. The review was completed, and Secretary Abraham previewed DOE's new accelerated cleanup plan at the Department's Fernald Environmental Management Project in Ohio on Jan. 31, 2002, and released additional details with the budget request on Feb. 4.

On the basis of the review, the Department is seeking \$6.7 billion in its Fiscal Year 2003 request. This budget will have two categories: one for basic funding at every cleanup site, and an \$800 million Expedited Cleanup Account, out of which those sites that agree to



Secretary Abraham previewed DOE's new accelerated cleanup plan during a visit to the Fernald Site on Jan. 31, 2002.

participate in the new plan will receive additional funds to fast-track cleanup. DOE is ready to expand the account with more money as

additional sites agree to move to expedited schedules.

To have access to the account, a site and DOE must reach agreement on an expedited schedule that shows measurable gains and that can be held accountable. Once an agreement is reached, there will be a roadmap for activity and budgets through Fiscal Year 2008.

A Review of the Environmental Management Program is available at <http://www.energy.gov/HQPress/releases02/febpr/ttbr.pdf>. The review and transmittal and action memorandums between Assistant Secretary for Environmental Management Jessie Roberson and Secretary Abraham are available at <http://www.em.doe.gov/ttbr.html>. ❖

Secretary will recommend Yucca Mountain for nuclear waste repository

On Jan. 10, 2002, Secretary of Energy Spencer Abraham notified Nevada Governor Kenny Guinn and the Nevada Legislature that he intends to recommend to President Bush that the Yucca Mountain site is scientifically sound and suitable for development as the nation's long-term geological repository for nuclear waste. The notification to Nevada officials was made in accordance with section 114(a)(1) of the Nuclear Waste Policy Act (NWPA).

"First, and most important, that recommendation will include the basis for and documentation supporting my belief that the science behind this project is sound and that the site is technically suitable for this purpose," Secretary Abraham said in his notification letter. "Second, there are compelling national interests that require us to complete the siting process and move forward with the development of a repository, as Congress mandated almost 20 years ago. In brief, the reasons are these:

- "A repository is important to our national security. We must advance our nonproliferation goals by providing a secure place to dispose of any spent fuel and other waste products that result from decommissioning

unnneeded nuclear weapons, and ensure the effective operations of our nuclear Navy by providing a secure place to dispose of its spent nuclear fuel.

- "A repository is important to the secure disposal of nuclear waste. Spent nuclear fuel, high-level radioactive waste, and excess plutonium for which there is no complete disposal pathway without a repository are currently stored at over 131 sites in 39 states. We should consolidate the nuclear wastes to enhance protection against terrorists attacks by moving them to one underground location that is far from population centers.
- "A repository is important to our energy security. We must ensure that nuclear power, which provides 20 percent of the nation's electric power, remains an important part of our domestic energy production.
- "And a repository is important to our efforts to protect the environment. We must clean up our defense waste sites permanently and



Secretary Abraham (right) receives a briefing on Yucca Mountain from Russ Dyer, Project Manager, Yucca Mountain Site Characterization Office, during his visit and tour of the site on Jan. 7, 2002.

safely dispose of other high-level nuclear waste."

As required by law, the Secretary of Energy's basis for recommendation and supporting materials will be available to the public once the formal recommendation is delivered to the President. The Secretary's letter, a map of nuclear waste-related sites, and a document with commonly raised topics about Yucca Mountain are available at <http://www.energy.gov/HQPress/releases02/janpr/pr02002.htm>. ❖

MOX fuel is choice for plutonium disposal

The Department of Energy (DOE) and the Bush Administration will dispose of 34 metric tons of surplus weapons grade plutonium by turning the material into mixed oxide (MOX) fuel for use in nuclear reactors. "This path forward is a workable, technologically possible, and affordable solution that meets our commitments to environmental improvement, energy and national security, and the nuclear nonproliferation policies agreed to by the United States and Russia," Secretary of Energy Spencer Abraham said. In September 2000, both nations signed the Plutonium Management and Disposition Agreement

committing each country to dispose of 34 metric tons of surplus plutonium.

The MOX decision follows an exhaustive Administration review, since early last year, of nonproliferation programs. The review included a thorough reexamination of more than 40 plutonium disposition alternatives that considered costs, workable technologies, national defense requirements, and compliance with nuclear nonproliferation agreements.

Previously, the U.S. Government endorsed a dual-track approach to dispose of the plutonium, including turning some of the material into MOX reactor fuel and immobilizing

the remaining plutonium in self-protecting radioactive glass logs for long-term storage. Eliminating immobilization saves nearly \$2 billion in funding, decreases plutonium storage costs, and facilitates closure of DOE's former nuclear weapons complex sites.

The MOX conversion process is expected to cost \$3.8 billion over 20 years. Two new conversion facilities for disassembly and fuel fabrication will be constructed at the Department's Savannah River Site in South Carolina. Construction of the facilities is set to begin in fiscal year 2004. ❖

DOE, 'Big Three' announce partnership to develop hydrogen fuel cell vehicles

At the North American International Auto Show in Detroit, Mich., on Jan. 9, 2002, Secretary of Energy Spencer Abraham and executives of Ford, General Motors, and DaimlerChrysler announced a new cooperative automotive research partnership between the Department of Energy and the U.S. Council for Automotive Research. The public-private partnership will promote the development of hydrogen as a primary fuel for vehicles.

"Under this new program, which we call Freedom CAR, the government and the private sector will fund research into advanced, efficient fuel cell technology which uses hydrogen to power automobiles without creating any pollution," Secretary Abraham said. "The long-term results of this cooperative effort will be cars and trucks that are more efficient, cheaper to operate, pollution-free, and competitive in the showroom. This plan is rooted in President Bush's call, issued last May in our National Energy Plan, to reduce American reliance on

foreign oil through a balance of new domestic energy production and new technology to promote greater energy efficiency."

The long-term goal of the Freedom CAR (Cooperative Automotive Research) program is to develop technologies for hydrogen-powered fuel cell vehicles. The transition of vehicles from gasoline to hydrogen is viewed as critical both to reducing carbon dioxide emissions and U.S. reliance on foreign oil. Freedom CAR will focus on technologies to enable mass production of affordable hydrogen-powered fuel cell vehicles and the hydrogen-supply infrastructure to support them.

Freedom CAR replaces and improves upon the Partnership for a New Generation of Vehicles (PNGV) program initiated in September 1993. The PNGV program emphasized research and development designed to triple automobile fuel efficiency and was to culminate in the production of a prototype family of autos in 2004, with the expectation that the

technologies would be incorporated into even more efficient production vehicles about four years later. A National Research Council Peer Review recommended restructuring the PNGV program because of developments and advancements in related fields.

"The PNGV wasn't cost effective and it wasn't moving a competitive automobile to the showroom," Secretary Abraham said. "It certainly had a desirable goal—an 80-mile-per-gallon vehicle—but it wasn't at all clear this vehicle would appeal to consumer tastes. What's more, the PNGV program was still wedded to gasoline as an essential source of power. We can do better than that. We can look beyond current technology and current fuels to a truly new generation of vehicles."

Freedom CAR will require a significant investment by both the Federal Government and industry and will involve a concerted long-term effort. A formal partnership agreement is expected within the next few months. ❖

Sandia fabricates world's smallest microchain drive

A microchain that closely resembles a bicycle chain—except that each link could rest comfortably atop a human hair—has been fabricated at the Department of Energy's Sandia National Laboratories. The distance between chain centers is 50 microns; the diameter of a human hair is approximately 70 microns.

Because a single microchain could rotate many drive shafts, the device would make it unnecessary to place multiple tiny microelectromechanical (MEMS) motors in close proximity. Usually, a separate driver powers each MEMS device. "All those drives take up a lot of real estate on chips," says Sandia technician Ed Vernon, who has received a patent for the silicon microchain.

The 50-link silicon microchain is designed to transmit power somewhat like the drive belt in a 19th-century sewing factory. There, a central engine shaft powered by steam turned drive belts to power distant work stations. Chain systems, unlike stroke systems, do not require back-and-forth movements but instead allow for both continuous and intermittent drive translation.

Vernon fabricated a microchain rather than a microbelt because, although silicon belts are tough and flexible, they are spring-like and produce too much torque on gears not aligned in a straight line. Each chain link, on the other hand, is capable of



The Sandia silicon microchain demonstrates engaging simulated device drive gears.

plus-or-minus 52 degrees rotation with respect to the preceding link, without creating pressure on the support structure. The wide angle means MEMS designers can be relatively unconstrained in positioning multiple devices. ❖

Fernald completes first waste cell

The Department of Energy (DOE) and its cleanup contractor, Fluor Fernald, are constructing an On-Site Disposal Facility as part of the long-term cleanup strategy for waste disposal at the Department's Fernald Environmental Management Project in Ohio. The strategy is a balance of on-site disposal of larger volumes of waste with lower contamination levels and off-site transportation and disposal of smaller volumes of waste with higher contamination levels.

The Disposal Facility is designed to hold up to 2.5 million cubic yards of waste—approximately 85 percent will be soil and 15 percent, demolition debris. When complete, most of the facility will be located above ground to preserve the natural underlying clay layer and protect the Great Miami Aquifer. The facility will have seven cells. Each cell will

measure about 400 feet by 800 feet and have its own liner system made of multilayer leak detection and leachate (waste-water) collection systems.

Cell 1 reached its design capacity of 314,000 cubic yards of waste material in September 2000. Fernald cleanup workers recently completed construction of Cell 1's multilayer final cover. The 8.75-foot-thick cover contains layers of natural clay and manmade geosynthetic (plastic) liners built over a one-foot-thick contouring layer, as well as 110,000 tons of stone and rock in the bio-intrusion barrier layer to prevent animals from burrowing and vegetation from taking root. Workers currently are seeding and



Workers weld two pieces of geosynthetic (plastic) material as part of one layer of the Cell 1 final cover.

installing erosion control matting on the final cover.

Since 1997, workers have placed about 635,000 cubic yards of waste material in the On-Site Disposal Facility. Cell 2 is 60 percent filled, and Cell 3, 25 percent complete. Phased construction of the facility will continue through 2006. ❖

OPM honors dispute resolution program

The Office of Dispute Resolution in the Office of General Counsel is responsible for encouraging the use of Alternative Dispute Resolution (ADR) throughout the Department of Energy (DOE) and with its contractors. The Office works with program offices and attorneys to prevent and resolve disputes, using techniques such as partnering, ombuds, differing professional opinion policies, dispute system design, public policy dialogues, mediation, and neutral evaluation.

Assistance has been provided in resolving disputes between employees and managers, DOE and its contractors, and DOE and other state and Federal agencies, and in helping reduce tensions between the Department and community groups. The types of cases include whistleblower, discrimination, sexual harassment, property damage, contract, intellectual property, and environmental.

Recently, the Headquarters Mediation Service received the Office of Personnel Management Director's

Award for outstanding ADR program. The service was recognized as a "maturing program that has constantly evolved to fit the particular needs of its customers." Of special note was the strong use of coaching and guiding disputants before and through the mediation process.

In mediation, the participants are encouraged to discuss their issues with each other and, with the mediator's assistance, reach mutually satisfactory agreement. Since the service began in 1995, nearly every program office has participated in mediation and several hundred cases have been mediated, with a settlement rate of 67 percent.

The Headquarters Mediation Service was designed by Phyllis Hanfling, Director, Office of Dispute Resolution. Pamela Pontillo manages the program, which provides professional mediation services to any DOE



Mark Robbins, General Counsel, Office of Personnel Management (OPM) presents the OPM Director's Award to Phyllis Hanfling (far left) and DOE General Counsel Lee Liberman Otis.

Headquarters employee for any type of workplace concern. Employees may contact Pontillo at 202-586-4002, or they may be referred to mediation by the Office of Civil Rights, Employee and Labor Relations, the National Treasury Employees Union, the ombuds, or the Employee Assistance Program. ❖

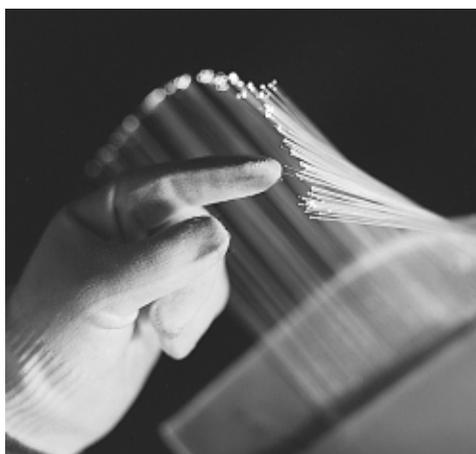
PNNL science, technology at work to help keep America safe

For many years, the Department of Energy's (DOE) Pacific Northwest National Laboratory (PNNL) has delivered breakthrough science and technology in the areas of energy, environment, health, fundamental sciences, and national security. Today, several counterterrorism technologies are under development at the laboratory.

The Acoustic Inspection Device (AID) originally was developed by PNNL for U.S. and Russian chemical weapons bilateral treaty verification and for inspection of chemical weapon stockpiles in Iraq following the 1991 Gulf War. The handheld device, roughly the size and shape of a large flare gun and containing a sensor head, is tethered to a personal digital assistant, linked to a data library, and can determine the contents of sealed, liquid-filled containers and examine bulk-solid commodities for foreign objects, contraband, or hidden explosives. Mehl, Griffin and Bartek, Arlington, Va., currently is customizing AID for the U.S. Customs Service. A similar version of the device now is being used along the borders in Eastern Europe for detecting smuggled goods.

PNNL has had a holography program in place for nearly 30 years and originally developed nondestructive evaluation technologies for nuclear reactors. In the mid-1980s, the Federal Aviation Administration (FAA) expressed interest in the potential this technology had for scanning people passing through airports. The millimeter wave Holographic Imaging System was designed for the FAA to detect both metallic and nonmetallic items concealed under clothing. A transceiver reflects a harmless millimeter-wave signal off the body and any objects carried on it.

Plutonium Measurement and Analysis (PUMA) is a radiation monitoring system that uses glass fibers containing lithium-6 atoms



The PUMA system uses glass optical fibers containing lithium-6 and cerium to detect radionuclides.

and cerium ions to detect the presence of radionuclides, such as plutonium. The flexible, lightweight, low-power detection system can be used to monitor an inventory of nuclear materials. PUMA is being commercialized by NuSAFE, Knoxville, Tenn.

BEADS, short for Biodetection Enabling Analyte Delivery System, isolates bacteria, spores, viruses, and their DNA from air, dirt, or water samples. The technology is fully automated so that detectors can analyze samples and monitor for threats without requiring a person to manually prepare the samples. DOE is pursuing BEADS as a front-end technology for multiplexed biodetection units for homeland defense applications.

PNNL scientists have developed a novel polymer material for detecting chemical agent threats. When the polymer is applied to a chemical microsensor, the sensor can detect nerve agents with high sensitivity and reliability. This technology has been transferred to Microsensor Systems Inc. for incorporation into its HAZMATCAT™ handheld chemical agent detector.

Information on PNNL's science and technologies programs is available at <http://www.pnl.gov>. ❖



Eric Seaborg, son of the late Dr. Glenn Seaborg, Nobel Laureate and former Chairman of the Atomic Energy Commission (AEC)—a Department of Energy (DOE) predecessor agency—visited DOE's Headquarters site in Germantown, Md., late fall 2001 to hike the historic Glenn Seaborg Trail. Dr. Seaborg established the trail on the site during his tenure as AEC Chairman from 1961 to 1971; he often walked the trail with his colleagues. Eric Seaborg, a resident of Virginia, is a writer, science editor, and, like his father, an avid hiker. In a second visit, Eric Seaborg presented a lecture to Department employees and signed copies of his father's autobiography, which he co-authored.

The lecture was introduced by DOE Historian Marie Hallion with a slide show of Dr. Seaborg using old photographs from the DOE historical archives. Information on the Glenn Seaborg Trail is available at <http://www.sc.doe.gov/SC-80/>. ❖

Coal fly ash tested as building block material



Researchers in the Buildings Technology Center at the Department of Energy's (DOE) Oak Ridge National Laboratory (ORNL), working with the Tennessee Valley Authority (TVA) and Babb International, Ringgold, Ga., are testing a new wall system using autoclaved aerated concrete block material. The block, one-fifth the weight of an ordinary concrete block, is composed of 70 percent recycled fly ash produced by TVA's coal-fired power plants.

Preliminary tests indicate the fly ash block walls produce a thermal mass effect. "One of the unique aspects of this particular research project is that it helps the supply of energy by utilizing historic waste stream—being fly ash from coal-fired power plants—and enhances the country's efforts to improve energy efficiency by providing an energy-efficient construction material," said Jeff Christian, Director of the ORNL Center.

This wall test marks the 200th user of the Buildings Technology Center, which has provided whole-wall performance evaluations of 67 different wall systems for industry users. ❖

DOE, NREL staff tour Ponnequin Wind Facility



Xcel Energy and the Denver Federal Executive Board showed their appreciation in late November 2001 to staff from the Department of Energy's (DOE) Golden Field Office and National Renewable Energy Laboratory (NREL) and other Federal agencies that have purchased wind power by hosting a tour of the Ponnequin Wind Facility in northern Colorado. Ponnequin is the only commercial wind farm in Colorado.

In April 2000, DOE and NREL committed to purchase wind-generated electricity through Xcel Energy's "Windsourse" program and through other local utilities' wind energy programs. Windsourse is the largest customer-driven wind energy program in the nation.

On the tour, l-r, are Mike Hacskaylo, Administrator, Western Area Power Administration; Richard Truly, Director, NREL; Bill Becker, Director, Denver Regional Office; and Frank Stewart, Manager, Golden Field Office, recently retired. ❖

Archaeology - can you dig it?



Cleanup workers at the Department of Energy's Fernald Environmental Management Project have had a rare opportunity to explore what life in southwest Ohio might have been like thousands of years ago when they discovered more than 170 Native American sites during soil excavation activities. "So it seemed fitting to create an educational tool for Ohio teachers and students to learn about the people who once lived in their backyards," said Joe Schomaker, Fluor Fernald cultural resources coordinator.

The result was "Archaeology: Can You Dig It?", a unique curriculum for grades three through seven produced in partnership with the Hamilton County Park District. The program features hands-on activities and includes a field trip to a nearby park where students can discover the skills needed to be an archaeologist. At left, Schomaker helps sixth grade students from Ross Middle School screen material from a mock archaeological dig site.

Since 1996, 210 teachers and over 13,900 students have participated in the program. ❖

Livermore Lab creates virtual star for Keck telescope

Scientists at the Department of Energy's Lawrence Livermore National Laboratory, in collaboration with the W.M. Keck Observatory in Hawaii, have created a "virtual" guide star for use with adaptive optics on the Keck II telescope to greatly increase the resolution of fine details of astronomical objects.

The Keck adaptive optics system enables astronomers to minimize the blurring effects of the Earth's atmosphere. The system uses light from a relatively bright star to measure atmospheric distortions and correct for them, but only about one percent of the sky contains sufficiently bright stars. The virtual guide star will enable Keck astronomers to study nearly the entire sky with the high resolution of adaptive optics.

In the 20-minute time-exposure photo at right, the laser emerging from the dome of the Keck II Telescope, atop 14,000-foot Mauna Kea volcano in Hawaii, creates the virtual guide star. The motion of the stars has made "trails" or streaks in the sky. ❖



Russian mayor thanks Kansas City Plant

The Department of Energy's Kansas City Plant and its contractor Honeywell continue to facilitate partnerships between United States companies and weapons scientists and technicians from the Former Soviet Union as part of the Department's Initiatives for Proliferation Prevention (IPP) program, under the jurisdiction of the National Nuclear Security Administration. Recently, a group of Russians involved in the program visited the Plant to discuss current projects.

Anatoliy Oplanchuk (right), Mayor of Snezhkink, Russia, a closed "nuclear city," made the trip to personally thank the Kansas City Plant and Kansas City Mayor Kay Barnes (left) for the significant economic and social impact the IPP program has had on his community of 80,000 citizens. The partnership involves manufacturing high-performance, after-market titanium components for collectable automobiles for Utah-based Kirkham Motorsports. The Kirkham team uses Snezhkink's technical staff to help design and develop a new generation of automobiles and parts using the experience they gained from manufacturing lightweight military components and assemblies. ❖



Y-12 Safety Expo expands to community event

When BWXT Y-12, which operates the Y-12 National Security Complex in Oak Ridge, Tenn., for the Department of Energy's National Nuclear Security Administration, planned its first Safety Expo late last fall, the idea was to hold the event on site. However, heightened security measures at Y-12 led to the decision to hold the Expo in a shopping mall in the center of Oak Ridge.

Taking the Safety Expo off site opened up the event to the families of employees and the community in a much larger venue. The original 52 exhibits and booths grew to 102, with several displays targeted more for community and family and several work-related safety training classes for Y-12 employees added to the program.

One safety class (right) involved rock climbing. BWXT Y-12 expects its employees to approach safety daily at work just as they approach climbing a rock wall—following the correct path without injury or equipment failure. ❖



Office of Power Technologies honors research

On Dec. 13, 2001, David Garman, Assistant Secretary for Energy Efficiency and Renewable Energy, and Robert Dixon, Deputy Assistant Secretary for Power Technologies, presented the 2000 Office of Power Technologies Research and Development Awards in a ceremony at Department of Energy (DOE) Headquarters, Washington, D.C. The awards recognize the dual importance of achieving research or scientific results and effective management. The recipients, noted for excellence throughout the research and development community, included young national laboratory investigators, DOE research managers, and private sector partners.

The **Research Leadership Award** was presented to **Stephen Waslo**, Program Manager, DOE Chicago Operations Office. The award recognizes Office of Power Technologies research managers for outstanding accomplishments in research management.

The **Young Investigator Award** honors scientists and engineers who show exceptional potential for future leadership in developing groundbreaking power technologies. The five winners are:

- **Dr. Ronald P. Reade**, Superconductivity for Electric Power Systems, Lawrence Berkeley National Laboratory;

- **Dr. Yanfa Yan**, Photovoltaic Technology, National Renewable Energy Laboratory (NREL);
- **Dr. Tihu Wang**, Solar Energy and Photovoltaic Technologies, NREL;
- **Dr. Karl J. Gross**, Hydrogen Program, Sandia National Laboratories; and
- **Dr. Beihai Ma**, High Temperature Superconductivity for Electric Power Systems, Argonne National Laboratory (ANL).

The **Research Partnership Award** recognizes outstanding research partnerships between the Department's national laboratories and private companies and/or universities that have resulted in technology advances having national energy significance. The winning partnerships are:

- **Ceramic Stationary Gas Turbine Development** – William Ellingson and Jiangang Sun, ANL; Peter Tortorelli and Karen More, Oak Ridge National Laboratory (ORNL); Jeff Price and Mark van Roode, Solar Turbines Inc.; Dennis Landini and Phillip Craig, Honeywell Advanced Ceramics, Inc.; Roberta Hines, B. F. Goodrich, Inc.; and Harry Eaton and Gary Linsey, United Technologies Research Center.



Assistant Secretary David Garman (left) presents the Research Leadership Award to Stephen Waslo, Chicago Operations Office.

- **Thin Film PV Partnership Program** – NREL; 12 solar industry partners, and 25 universities.
- **Superconductivity Program for Electric Systems, 3M Coated Conductor Development Project** – ORNL; Los Alamos National Laboratory; 3M Company; Southwire Company.
- **Wind Energy Research Partnership, Next Generation Turbine Development Project, Near-Term Research and Testing Project, Value Engineered Turbine Project** – Sandy Butterfield, Walt Musial, and Brian Smith, NREL; Craig Christenson and Ralph Blakemore, Enron Wind Corporation. ❖

NEW Publications

Office of Inspector General (IG) reports: **Management of the Stockpile Surveillance Program's Significant Finding Investigations** (DOE/IG-0535); **Follow-on Inspection of the Department of Energy's Value Engineering Program** (DOE/IG-0536); **Telecommunications Infrastructure** (DOE/IG-0537); **Management Challenges at the Department of Energy** (DOE/IG-0538). 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/>.

Occupational Radiation Exposure Profile for the Office of Science Laboratories, 1996-2000, from the Department of Energy's Office of Laboratory Operations and Environment, Safety and Health (SC-80) in the Office of Science, examines trends over the last five years in collective dose, average worker dose, and the dose

distribution, as well as reportable occurrences for loss of radioactive material, spread of contamination, and personnel contamination. The report, available at <http://www.sc.doe.gov/SC-80/sc-83/docs/scradprof.pdf>, also presents a summary of radiological control information for each laboratory; a summary of occupational doses; and the contract performance measures for control of occupational dose and contamination. ❖

Scientists at the Department of Energy's **Brookhaven National Laboratory** have developed strains of bacteria able to live in harsh environments while consuming carbon-rich materials such as coal. The bacteria's digestive action removes potentially harmful pollutants and could be used to yield more efficient, cleaner-burning coal. By gradually altering the food source of the bacteria and other environmental variables such as temperature and acidity, chemists Mow Lin and Eugene Premuzic developed several strains of coal-adapted bacteria that can survive under extreme conditions—up to 185°F, pressures up to 2,500 pounds per square inch, over wide ranges of pH and salinity, and in the presence of toxic metals. The two chemists, who previously developed bacterial strains that digest oil, were recently awarded a patent for the coal-purifying bacteria. (Karen McNulty Walsh, 631-344-8350).

Using materials developed at the Department of Energy's **Ames Laboratory**, researchers have successfully demonstrated the world's first room temperature, permanent-magnet, magnetic refrigerator. The refrigerator was developed by Milwaukee-based Astronautics Corporation of America as part of a cooperative research and development agreement with Ames. Instead of ozone-depleting refrigerants and energy-consuming compressors found in conventional vapor-cycle refrigerators, this new style of refrigerator uses gadolinium metal that heats up when exposed to a magnetic field, then cools down when the magnetic field is removed. "Previous successful demonstration refrigerators used large superconducting magnets, but this is the first to use a permanent magnet and operate at room temperature," said Ames senior metallurgist Karl Gschneidner, Jr. (Kerry Gibson, 505-294-1405)

Groundbreaking was held recently for the \$13.9 million Laboratory for Comparative and Functional Genomics at the Department of Energy's **Oak Ridge National Laboratory** (ORNL). The 36,000 square-foot facility, scheduled for completion in 2003, will replace the 56-year-old "Mouse House" located at the Oak Ridge Y-12 National Security Complex. The new facility will help researchers better understand gene function and disease by studying more than 60,000 mice that will be housed there. Scientists will conduct mammalian genetics research aimed at developing treatments for illnesses such as cancer, obesity, and Alzheimer's disease. The new Mouse House will be specific-pathogen-free, minimizing variables such as outside diseases that can affect the mice. This will enable ORNL to share its mouse resources with other research institutions. (Frank Juan, 865-576-0885) ❖

Potato technology may help move mail

Researchers at the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL) are teaming with a small Idaho business to experiment with destroying anthrax using ozone. Unlike chlorine dioxide, a hazardous chemical used to treat potatoes and disinfect anthrax-contaminated facilities, ozone leaves no residue and, for potatoes, takes just seconds to work.

O₃Co, Aberdeen, Idaho, has developed a patented process to deliver high concentrations of ozone—300 to 800 parts per million—to freshly harvested potatoes. The ozone destroys harmful bacteria and allows farmers to safely store their potato crops for months.

The INEEL scientists believe this same process can be used to sterilize

mail. They are testing their theory on harmless surrogates for anthrax spores. The ozone tests are just one part of the ongoing research INEEL is conducting to combat terrorism in support of the Department's national security mission.

The ozone is created through a high-voltage system such as O₃Co's patented Corona Discharge Ozone Generator. The electricity breaks apart oxygen molecules and releases one atom. Some of these single atoms attach themselves to a standard oxygen molecule, creating an unstable and temporary form of oxygen—ozone. The unstable ozone seeks to attach to something and carbon is its favorite something. Since viruses and bacteria such as anthrax are virtually all carbon, the

extra oxygen molecules attach themselves and create carbon dioxide. This oxidation cremates the bacteria.

The INEEL research will reveal just how great the concentrations of ozone need to be and how long the ozone must be applied to destroy anthrax in mail. Preliminary tests subjected the simulated spores to concentrations as great as 12,000 parts per million for periods up to two hours. Biologists then try to grow bacteria cells from the "ozonated" samples. No growth means the spores died and the process worked. Early results indicate that a 60-minute exposure to high levels of ozone inactivates the spores. ❖

Los Alamos cleanup project saves money, time

A major cleanup accomplishment was achieved at the Department of Energy's (DOE) Los Alamos National Laboratory (LANL) on Dec. 19, 2001, under budget and two years ahead of schedule. Retrieval of the final transuranic waste drums from the Transuranic Waste Inspectable Storage Project was completed by the University of California, LANL's management and operating contractor.

In 1993, the New Mexico Environment Department issued LANL a Compliance Order to remove, and

place into safe/inspection-ready storage, 17,000 55-gallon drums and 200 fiberglass-reinforced plywood boxes from the earth-covered asphalt storage pads at the TA-54 storage facility by Dec. 31, 2003. The estimated total cost for this project was \$54.6 million. Using a number of management tools—performance metrics, make/buy analysis, benchmarking, work smart standards initiatives, and learned efficiencies—lowered the final cost of the cleanup to \$35.6 million, a savings of \$19 million.

"This project was truly a collaborative effort between the Federal and contractor staff," said James Nunz, Waste Management Program Manager, Los Alamos Area Office. "Most significant of all is this project was performed safely, no radioactive material was released to the environment, and it was extremely cost-effective." The waste will be characterized and certified for shipment to the Department's Waste Isolation Pilot Plant in Carlsbad, N.M. ♦

Occurrence reporting online tool revamped

The Occurrence Reporting Binned Information Trending Tool (ORBITT) is an easy-to-use online trending and feedback tool for use by all levels of the Department of Energy (DOE) and its contractors. The system promotes continuous improvement in defining and planning work and is useful for determining the performance of program, facility, and contractor management in terms of adequacy of work controls and effectiveness of event corrective actions (prevention of recurrence).

ORBITT, <http://orbitt.net>, uses an integrated, user friendly, web-enabled PC browser interface capable of generating trended bin specific

operational event data, topical lessons learned listings, and Occurrence Reporting and Processing Systems (ORPS) reports from user specified key words. The system has been revised to include plotting by occurrence category (emergency, off-normal, or unusual) and trending by the total number of occurrence reports, in addition to trending by the total number affected for a bin/sub-bin search.

Reports can be generated from available menu-driven user selections, including program office, operations office, area office (if applicable), ORPS facility name, contractor, bin (event classification

category) or sub-bin, and date range, or any combination of these fields. The database is compiled from subject matter expert review of all DOE occurrence reports dating back about six years for most categories.

ORBITT is maintained by the DOE Quality Assurance Working Group (QAWG). The group recommends that you check out this tool for applicability to your work and its ability to provide an insight into operational data. If you need assistance in querying ORBITT or have any questions, contact Tom Rotella, QAWG Chairperson, NA-53, 301-903-2649, or Chris Coccagna, SAIC, 301-353-8302. ♦

COMING Events

March

8-9 Brookhaven National Laboratory (BNL) Center for Functional Nanomaterials Workshop, Upton, N.Y. Sponsored by the Department of Energy's Office of Basic Energy Sciences, Office of Science. The emphasis of the workshop is to discuss BNL's future nanoscale science research and to gather input and feedback from potential users of a planned major nanoscale research facility. A multidisciplinary group of prominent materials researchers will discuss topics such as nanoscience in

novel functional materials, catalytic systems, molecular materials, and magnetics. For information and registration, contact Grace Webster, BNL, 631-344-3227, gwebster@bnl.gov, or visit <http://www.bnl.gov/nanocenter>.

12 10th National Energy Modeling System/Annual Energy Outlook Conference, Arlington, Va. Sponsored by the Department of Energy's Energy Information Administration (EIA). The conference focuses on

energy issues particularly related to EIA's *Annual Energy Outlook 2002* and the National Energy Modeling System. Session topics include the status and future prospects of electricity deregulation, electricity demand in buildings, new developments in international energy modeling, and the prospects for renewables in the U.S. energy supply. For information, contact Peggy Wells, EIA, 202-586-0109, peggy.wells@eia.doe.gov; or visit <http://www.eia.doe.gov/oiaf/aeo/conf/index.html>. ♦

Education NOTES

Thirty-one employees of the Department of Energy's **Oakland Operations Office** have successfully completed an aggressive education program designed to meet new contract specialist qualification standards. The Oakland office teamed with California State University, Hayward (CSUH) to structure a program for the employees' needs. The employees were enrolled as Special Session students in accelerated evening classes over five weeks. The curriculum consisted of standard courses offered in most collegiate schools of business, which can be used in a CSUH degree program or transferred to another accredited university. The employees were expected to meet all the same academic standards as regular university students, including term papers, finals, readings, homework, and class discussions and participation—and to fulfill their daily job responsibilities. A total of 12 classes were offered; four employees took 9 of the 12 classes and maintained a 3.5 or better GPA.



The Department of Energy's **Argonne National Laboratory** hosted a Technology Demonstration Day on Jan. 29, 2001, to open a venture development competition for university students. Teams of students from universities nationwide heard presentations by four Argonne scientists who have made recent scientific discoveries in advanced materials, energy storage, lasers and optics, and nanotechnology. The competition requires the student teams to select one of the technologies and to develop a commercialization plan. Project entries will be evaluated by Argonne scientists and a group of venture formation experts; semifinalists will be invited for a final presentation on May 1, 2002. Additional information about the competition is available at <http://www.anl.gov>, click on "University contest"; or at <http://projects.dep.anl.gov/>. ❖

Student research programs offer opportunity

The Department of Energy's (DOE) Office of Science funds three undergraduate research programs aimed at broadening the pipeline of students entering careers in science, technology, engineering, and mathematics. These programs, in part, will help address the shortage of technical and scientific specialists in the Department. A July 10, 2001, report by DOE's Inspector General indicated a shortfall by as many as 577 people in these professions.

With about 51 percent of the nation's students attending community colleges, these institutions are an enormous, somewhat untapped, store of future talent. The Community College Institute of Science and Technology (CCI) was created to increase the number of students from community colleges entering careers in science and technology. The program is open to all qualified community college students. Selected students spend 10 weeks as summer interns at any of the participating national laboratories under the jurisdiction of the Office of Science.

The Pre-Service Teacher Program (PST) allows undergraduates who are preparing to become K-12 teachers of mathematics, science, or technology to work in summer internships with mentor scientists and master teachers performing basic and applied research. Students from the 50 states, Puerto Rico, and the U.S. Virgin Islands can apply to this program.

The Energy Research Undergraduate Laboratory Fellowship (ERULF), which has been open to undergraduates nationwide for the past eight years, continues to draw hundreds of students from across the United States. The ERULF program, which operates in the summer and also during the fall and spring semesters, is open to students from any accredited two- or four-year college with some restrictions.

Additional information on these programs and other educational opportunities are available at <http://www.scied.science.doe.gov>. ❖



Jennifer Wassmuth, Lewis-Clark State College, Lewiston, Idaho, participated in the Summer 2001 Pre-Service Teacher Program at Pacific Northwest National Laboratory.

At the annual Thunder and Lightning Powwow in Cabazon, Calif., the Native Americans celebrate their culture; but this year, they also were given the chance to better understand energy efficiency and renewable energy thanks, in part, to Laura Harlan, a Paiute from the Fort Bidwell reservation and a D-Q University student. Harlan participated in the Native American Faculty and Student Intern Program sponsored by the Department of Energy's National Renewable Energy Laboratory (NREL). She spent her time at NREL learning about renewable energy and assisted in designing and building a renewable energy trailer that is currently touring northern California Indian reservations. The trailer contains a 12-volt photovoltaic (PV) system, 24-volt wind/PV hybrid system, solar oven, and photographs of various Native American renewable energy projects. ❖



People IN/ENERGY

Robert W. Presley of the Facilities Infrastructure Services Group at the Department of Energy's Y-12 National Security Complex (formerly the Y-12 Plant) in Oak Ridge, Tenn., has been appointed by President George W. Bush to serve on the Advisory Board on Radiation and Worker Health. The Advisory Board advises the Secretary of Health and Human Services on activities under the Energy Employees Occupational Illness Compensation Program Act. Presley has more than 35 years experience in nuclear weapons work.



Secretary of Energy Spencer Abraham has named **Stephen J. Wright** as Administrator of the Department of Energy's Bonneville Power Administration (BPA), a position he has held in an acting capacity since November 2000. "Steve exerted outstanding leadership through some of the most turbulent times for the electricity industry and has effectively worked with diverse constituencies in the region," Secretary Abraham said. Wright began work in BPA's conservation office in 1981. Since that time, he has held several management positions, including Manager of BPA's Washington, D.C. office and Corporate Senior Vice President.

Bruce Tarter, Director of the Department of Energy's Lawrence Livermore National Laboratory (LLNL), has announced his plans to step down from the position in 2002 after heading the laboratory for seven years. Tarter began his career at the laboratory in 1967 in the Theoretical Physics Division and later became head of that division. He has held a number of management positions at LLNL, including



Associate Laboratory Director for Physics, Deputy Laboratory Director, and Acting Laboratory Director. Tarter has agreed to continue as LLNL Director until a new director is named.

Three scientists at Department of Energy laboratories and projects have been elected Fellows by the American Association for the Advancement of Science: **Doon Gibbs**, Deputy Chair, Physics Department, Brookhaven National Laboratory; **Thomas Mason**, Associate Laboratory Director, Spallation Neutron Source, Oak Ridge National Laboratory; and **Gopal Shenoy**, Senior Scientific Advisor, Advanced Photon Source, Argonne National Laboratory.

Steven A. Parker of the Department of Energy's (DOE) Pacific Northwest National Laboratory (PNNL) has begun his term as the 2002 national president of the Association of Energy Engineers. Parker is the PNNL lead for the DOE Federal Energy Management Program's new technology demonstration program. The association is an 8,000-member international society focused on energy efficiency, innovative energy service options, and enhanced environmental management programs.



Dwight Jaeger of the Associate Directorate for Weapons Engineering and Manufacturing at the Department of Energy's Los Alamos National Laboratory, recently received the Department of Defense Exceptional Public Service Award. The award recognizes Jaeger's work for two years as special scientific advisor to the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs.

J. Murray Gibson is the new Associate Laboratory Director for the Advanced Photon Source at the Department of Energy's Argonne National Laboratory (ANL). Previously, Gibson was Director of ANL's Materials Science Division. **George Crabtree**,

Associate Division Director of the Materials Science Division, has been appointed Director of the division, succeeding Gibson.

Charles D. Harrington, Project Leader for Science and Program Management for the Yucca Mountain Project at the Department of Energy's Los Alamos National Laboratory, recently was inducted as one of the original members of the Outstanding Alumni Academy at the College of Arts and Sciences, Department of Geosciences, at Western Michigan University. Harrington also received the Alumni Achievement Award from the university for his outstanding personal and professional achievements.



Four physicists at the Department of Energy's Lawrence Livermore National Laboratory have been named Fellows of the American Physical Society: **Peter Beiersdorfer**, Group Leader, Atomic Spectroscopy; **Siegfried Glenzer**, Plasma Physics Group Leader in Inertial Confinement Fusion; **David Munro**, Laser Fusion Target Design, National Ignition Facility; and **Karl van Bibber**, Chief Scientist, Physics and Advanced Technologies Directorate.

Garman Harbottle, a senior chemist at the Department of Energy's Brookhaven National Laboratory, is the 2002 recipient of the Pomerance Award for Scientific Contributions to Archaeology from the Archaeological Institute of America.

Physicist **Larry Grisham** of the Department of Energy's Princeton Plasma Physics Laboratory has received the Kaul Foundation Prize for Excellence in Plasma Physics from Princeton University. The award recognizes Grisham for his contributions to the understanding and improvement of the first generation of high-power negative-ion-based neutral beams for fusion applications. ❖

Milestones

YEARS OF SERVICE

February 2002

Headquarters

Chief Information Officer - Bruce R. White (25 years). **EIA** - Mary K. Paull (35). **Energy Efficiency & Renewable Energy** - Marian V. Gunter (30), Frank C. McCann (25). **Envir. Management** - Carol J. Hanlon (25). **Envir., Safety & Health** - Edward B. Blackwood (35).

FERC - Edward A. Abrams (30), Wilbur C. Earley, Jr. (30), John E. Estep (30), Ellen L. French (30), Marian Moore (30), Cathie L. Nocero (30), Mary T. Trainum (30), Charles Goggins (25), Kenneth J. Kohut (25).

General Counsel - Eric J. Fygi (35), Paul T. Michael (25). **Hearings & Appeals** - Thomas L. Wieker (30). **Independent Oversight & Performance Assurance** - Michael A. Kilpatrick (30). **Intelligence** - Michael L. Hutton (25). **Management, Budget & Evaluation** - Vincent A. Brooks (35), Nancy H. Canody (30), Wayne L. Evelhoch (30), Jeffrey Rubenstein (30), Mary E. Veit (25).

NNSA - Carol W. Lee (35), Renee B. Bradford (25). **Radioactive Waste** - Kay F. Dennis (35), Ronald A. Milner (35), Sharon R. Pollock (25). **Science** - Linda K. Twenty (30), Jeffrey C. Hoy (25). **Security** - Robert J. Walsh (30).

Field

Albany Research Center - Edward R. Argetsinger (30). **Albuquerque/NNSA** - Glenn V. Binns (40), Timothy R. Coalson (30), David M. Fredrickson (30), Leslie W. Gage (30), Victor W. Simpson II (30), Anna S. Wolfe (30), Jerry L. Evans (25), Jeanette M. Norte (25), Odelia M. Thorpe (25).

Bonneville Power - John W. Gallinger (30), Rae E. Griffith (30), Arnold Gutierrez (30), Steven G. Hickok (30), Thomas S. Roseburg (30), Joel K. Sanford (30), David R. Thomas (30), Carolyn A. Antes (25), Edwin L. Arnold, Jr. (25), Richard W. Chapman (25), Brenda S. Coachman (25), William D. Doel (25), Michael E. McBrearty (25), Randall W. Melzer (25), Randy L. Ridenhour (25), Douglas E. Riehl (25), Richard R. Wolff (25), Richard L. Zaldivar (25).

Chicago - Carl G. Ahlberg (30), Karen A. Papp (30), Brenda E. Farries (25). **Idaho** - John A. Herritt (25). **Naval Petroleum Reserves CA** - Jackie W. Nisbett (30). **NETL** - Fred R. Vinton (30). **Nevada/NNSA** - Ruby A. Lopez-Owens (25), Darrel G. McPherson (25). **Oakland/NNSA** - Wayne Bryan (35), Nancy A. Shimosaka (30). **Richland** - Verneice Skinner (25).

Savannah River - Virgil W. Sauls (35). **Savannah River/NNSA** - Jeffrey A. Klapper (25). **Southwestern Power** - Norman D. McIlravy (25). **Strategic Petroleum Reserve** - Marvin T. Huntsman (30). **Western Area Power** - Judith C. Madsen (35), David R. Taylor (35), Marvin E. Dolph (30), Mary E. Barger (25), Janice H. Dietz (25), Brenda A. McKissack (25), Clifford L. Moter (25).

RETIREMENTS

December 2001

Headquarters

Chief Information Officer - George J. Hofman (29 years), Marlene K. Lydick (24), Peter A. Richards (26). **Economic Impact & Diversity** - Margaret Batchelor White (24). **Envir. Management** - Patricia A. Lee (20), W. Ileen Sweet (25). **Envir., Safety & Health** - Deloris A. Johnson (31), Thomas E. McSpadden (30). **FERC** - Charles T. Raabe (42). **General Counsel** - Janine M. Sweeney (11). **Inspector General** - William S. Beck (35). **Management, Budget & Evaluation** - Asa H. Hardison III (31), Robert E. Jankovits (10), Jeanne A. Jones (13), Patricia S. Porter (24). **Radioactive Waste** - Mackaye W. Smith (31)

Field

Albany Research Center - Lawrence M. Peck (16). **Albuquerque** - Bernice F. Fox (9), Thomas J. Reese (27). **Albuquerque/NNSA** - Dora C. Garcia (16), Robert T. Henderson (29). **Chicago** - James E. Anderson (20). **Idaho** - Kermit R. Peters (37). **NETL** - Ta-Kuan Chiang (12). **Oak Ridge** - Theresa M. Crisler (26), Juan A. Gil-Borgos (10), Lois J. Jago (23), Joyce C. McBride (17), Ray T. Moore (30), Thomas P. Richardson (15).

Richland - Sidney J. Altschuler (8), Wu Sheng Chin (25), Lowell E. Ellingson (29), Julia L. Hathaway (27), Phillip G. Loscoe (6), Gail M. McClure (24), Patsy L. Morehouse (30), Cheryl A. Runyon (21), Shona L. Sailor (10), Nelson G. Thomas (26), Lila L. Trout (31). **Rocky Flats** - Willard K. Johnson (28). **Savannah River** - M. Brent Armstrong (27), Lowell E. Tripp (30). **Southwestern Power** - Gary G. David (22), Ralph D. VanWinkle (34).

January 2002

Headquarters

Chief Information Officer - Marvin E. Holder (35), Howard M. Landon (25), Michael S. Orosz (30). **Congressional & Intergovernmental** - James D. Threlkeld (41). **EIA** - Sherry A. Beri (37), Carol K. Bingham (35), Harriet V. McLaine (12), Bruce F. Quade (33), John N. Ryan, Sr. (40), Charles W. Skinner (37).

Energy Efficiency & Renewable Energy - Carl E. Adams (26), Ronald W. Bowes (30), Charles J. Glaser (26), Fred Glatstein (35), Sandra K. Guill (35), Kenneth L. Heitner (20), Nancy R. Joyner (38), Patricia M. Pickering (29), Thomas P. Stapp (31), Jonathan M. Stone (31), Mattie B. Towns (30), Cecelia L. Young (39).

Envir. Management - Joyce H. Anthony (41), Larry G. Blalock (33), Charles E. Bradley, Jr. (22), Charles Head (35), William H.H. King (30), John W. Lum (21), Carolyn J. McCall (29), Terry L. Plummer (34), Mary C. Reed (42), Peter J. Ritzcovan (33), Susan A. Sappington (38), Lawnie H. Taylor (29), Louise I. Turner (31), Fredrita F. Williams (33).

Envir., Safety & Health - Leo Derderian (34), Neal Goldenberg (32), Donald G. Harlow (5), Elizabeth R. Harrison (30), Stanley Lichtman (24), George W. Schlossnagle (28), Russell S. Scott (31), Daniel M. Smoot-Wood (24). **FERC** - Walter S. Boyle (31), Martha A. Martin (27), Robert J. Solovey (33), Fred E. Springer (31), Jeanne M. Zabel (33).

Fossil Energy - Robert G. Bidwell, Jr. (37), Clifford F. Duchaine, Jr. (31), Thomas W. Dukes (29), Nancy M. Ellett (37), Gracie M. Gordon (30), Patricia A. Hicks (37), Kenneth L. Hong (31), Jean L. Lerch (38), Larry E. Mills (25), Lawrence Saroff (26), Mary H. Walsh (29). **General Counsel** - Ralph D. Goldenberg (37), Eleanor J. Henderson (32), Paula S. Lipman (31), Eugene Margolis (32), Judith A. Quinn (30). **Hearings & Appeals** - Betty A. Hudson (33), Carol J. Oakley (28). **Inspector General** - Phillip L. Holbrook (37), Stanley R. Sulak (33).

Management, Budget & Evaluation - Wendell K. Allen (29), Robert L. Bates (21), Samuel D. Baughman (39), Anthony J. Carlisi (28), Stanley T. Cobb (27), Sheila C. Convis (22), Jesse Cunningham, Jr. (31), Martha R.E. Davis (29), Mary Jo Edwards (33), Owilda D. Fields (34), Arnold A. Gjerstad (33), Marie E. Hallion (30), Joan M. Harris (24), Lynwood H. Henderson (29), H. David Huey, Jr. (32), Robert C. Jackson (27), Mary E. Johnson (31), Melvin S. Johnson (36), Thomas G. Knight (30), Michael L. Maust (30),

Ammie E. McCoy (28), Juanita B. McDuffie (35), Camellia McKie (35), Jean M. Morgan (26), Marcia L. Morris (37), Ulysses A. Owens, Jr. (24), Deborah S. Pagnato (28), Grace M. Plummer (32), Francis G. Porcheddu (25), Richard A. Reda (32), John M. Richards (27), Gerald F. Shaw (32), Scott E. Sheffield (30), Isaac C. Smith (41), Janice R. Stark (30), Linda J. Stott (32), John C. Strahler (27), Linda G. Sye (33), Franklin W. Warner (29), Yvonne C. West (38), Earl J. Young (42).

NNSA - Eric M. Boyd (25), Suzanne B. Coffey (11), Raymond Cooperstein (29), Dorothy C. Donnelly-Shaner (26), Mary W. Essex (32), Larsen L. Furr (34), Mildred A. Jones (26), Joseph F. King (14), C. Lynne Leatherman (37), Gerald H. Prudom (33), Magal H. Rao (30), Betty M. Shorter (20), Arnold F. Sirulnik (31). **Nuclear Energy** - Sarah A. Baker (38), Linda L. Zombro (38).

Policy & International - Frederick H. Abel (36), Ray G. De La Torre (34), Peter P. Jodoin (32). **Radioactive Waste** - Russell B. Baumeister (32), James H. Carlson (33), Bruce D. Hutchinson (36), Gerald J. Parker (35), Dennis C. Royer (37), Edith D. Williams (23).

Science - Donald W. Altom (29), Margaret M. Beatty (29), William G. Burrier (37), James R. Love (30), Robert S. Marianelli (22), Robert E. Price (33), Walter L. Sadowski (40). **Security** - Robert J. Ghetti (33), Nancy C. Maus (40), Merle T. Morsell (28), Finn K. Neilsen (36), William M. Pollack (32), Arlie B. Siebert, Jr. (37), Thomas E. Tuccinardi, Jr. (26), Mary A. Wallace (34).

(January 2002 field retirements will appear next month.) ♦

Northwest makes major cuts in energy use

The Department of Energy's Bonneville Power Administration (BPA), Portland, Ore., reports that the northwest United States saved roughly 85 megawatts of electricity region-wide in 2001, enough to serve more than 80,000 homes. "Utilities and the public responded vigorously to the energy crisis last year," Secretary of Energy Spencer Abraham said. "Those savings will stretch far into the future."

BPA, which provides about 45 percent of the region's electricity, accelerated many programs in response to energy shortages and rising energy costs in a drought year. Today, 132 utilities throughout the region are receiving credit from Bonneville on their wholesale power bills for actions taken to conserve energy. BPA and its customers shared the savings with customers of investor-owned utilities, which fund and operate their own conservation programs.

In one of its most successful initiatives, Bonneville and its utility customers distributed 1.8 million discount coupons for the purchase of compact fluorescent lamps in partnership with the Northwest Energy Efficiency Alliance. The response far exceeded expectations with an estimated five million bulbs actually installed, saving more than four megawatts of power during the year.

February 2002

AROUND DOE

EIA will begin natural gas storage survey in May

Weekly regional and national estimates of natural gas in storage are scheduled to be published by the Department of Energy's Energy Information Administration (EIA) starting May 9, 2002, with data for the week ending May 3. The American Gas Association (AGA) will continue to publish the data until that time. EIA's new survey ensures there will be no lapse in coverage.

EIA plans to provide weekly estimates of working gas in storage for the same three regions of the United States for which AGA has provided estimates. While similar, the EIA data may not be identical because of some differences in respondents and methodology. A description of EIA's methodology will be provided to help industry analysts and data customers adjust to any differences.

INEEL, Mound share cleanup technologies

A provision in the management and operating contract for the Department of Energy's (DOE) Idaho National Engineering and Environmental Laboratory (INEEL) is paying big dividends for the Department's Miamisburg Environmental Management Project (Mound facility) in Ohio. In a contract stipulation requiring corporate reinvestment, a percentage of the annual INEEL contract fee is set aside for Corporate Funded Research and Development.

INEEL, managed and operated by Bechtel BWXT Idaho, LLC, will use these corporate funds to help with cleanup activities at the Mound facility. Mound, on track for site closure in 2006, is managed by BWX Technologies, a member of the Idaho laboratory contractor.

INEEL and Mound engineers have worked on several initiatives to help meet the Mound site's goal of cleaning up and closing the site. "Benefiting from INEEL's Corporate Funded Research and Development program is like having a supporting arm to lean on since we are a closure site with limited research capabilities," says Don Krause, Mound project manager. "For a closure site like Mound to have free access to DOE's lead environmental management laboratory and its capabilities has been unbelievable." ❖

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