



Libyan nuclear materials in secure storage at Y-12

PSAs teach children to be 'Energy Hog Busters'

DOE, EPA sign science research MOU



U.S. Department of Energy



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

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

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

Circulation Office: 202-586-2050

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

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

HQ cc:mail:
THISMONTH.DOE

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

DOE PA-0027-3
Vol. 27, No. 3

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

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On our cover

On March 15, Secretary of Energy Spencer Abraham detailed for reporters a major success in the Administration's nuclear nonproliferation efforts—the removal of 55,000 pounds of nuclear materials and equipment from Libya. The press briefing and display of some of the unclassified materials were held at the Department of Energy's Y-12 National Security Complex, a National Nuclear Security Administration facility in Oak Ridge, Tenn.

A joint American and British team that included personnel from the U.S. Departments of Energy, State, and Defense brought the materials back to the United States for evaluation, testing, and destruction, and placed them under secure storage at the Y-12 facility. Some future shipments of materials will be stored at Y-12 as Libya carries out its decision to dispose of its holdings of weapons of mass destruction.

For more on this nuclear nonproliferation success story, see page 3. ❖

DOE helps secure Libyan nuclear materials

On Dec. 19, 2003, the Government of Libya announced several decisions regarding its holdings of weapons of mass destruction. The United States, the United Kingdom, and the Government of Libya began a period of intense cooperation to assist Libya in carrying out its decision to dispose of these holdings. The International Atomic Energy Agency (IAEA) also played a central role for the nuclear program, and Libya and the IAEA will continue their close coordination in the future.

On Jan. 27, 2004, a joint American and British team that included personnel from the U.S. Departments of Energy (DOE), State, and Defense removed from Libya 55,000 pounds of uranium hexafluoride, centrifuge equipment, and other items. Along with Libya's detailed nuclear weapons designs, the materials were brought back to the U.S. for evaluation, testing, and destruction, and placed under secure storage at DOE's

Y-12 National Security Complex, a National Nuclear Security Administration facility in Oak Ridge, Tenn.

The 55,000 pounds of nuclear materials and equipment constitutes the largest recovery, by weight, conducted under U.S. nonproliferation efforts. This represents less than five percent, by weight, of the total amount of equipment and materials being recovered from Libya. The first shipment was determined by U.S. and British experts to be some of the most sensitive items in the Libyan nuclear weapons program.

"By any objective measure, the United States and the nations of the civilized world are safer as a result of these efforts to secure and remove Libya's nuclear materials. Libya itself is safer, too," Secretary of Energy Spencer Abraham said during a March 15 press briefing at the Y-12 facility. "The success of our mission in Libya underscores the success of our Administration's broader

nonproliferation efforts around the world, and I for one am proud of the role the Department of Energy is playing."

These efforts include working closely with the Russian Federation and accelerating material protection programs inside Russia, including:

- Securing 41 of 64 identified nuclear warhead sites and 41 percent of approximately 600 metric tons of weapons usable nuclear material by the end of Fiscal Year 2005;
- Downblending more than 200 metric tons of highly enriched uranium from dismantled nuclear weapons for use in U.S. nuclear power plants; and
- Working to shut down the last plutonium production plants and replacing their electricity production with coal burning power plants.

DOE's nonproliferation efforts also have expanded to other parts of the globe, including China and the world's busiest seaports. ❖

DOE, EPA sign science research MOU

The Department of Energy (DOE) and Environmental Protection Agency (EPA) signed a Memorandum of Understanding (MOU) on Feb. 18, 2004, that will increase collaboration on research and computing resources. The MOU builds on prior research and computing collaboration between the two agencies.

"Today's agreement allows us to further our collaborative efforts and leverage the expertise of both agencies," Secretary of Energy Spencer Abraham said. "I am particularly happy that EPA will benefit from the tremendous store of scientific knowledge and expertise in the Department of Energy's national laboratories."

Under the agreement, DOE and EPA will link supercomputers in EPA's North Carolina facility and DOE's Sandia National Laboratories. High performance computing allows better and faster runs of environmental models such as the Community Multi-Scale Air Quality model, an important tool

for states to meet upcoming deadlines for their air quality attainment plans.

"Linking and leveraging these two great research resources will strengthen the scientific foundation for environmental, energy, and public health issues," EPA Administrator Mike Leavitt said. "By bridging the boundaries between our agencies, we both can better serve the public need."

Work in computational toxicology—the application of computer-based statistical techniques and molecular genetics—also will be accelerated by the agreement. Computational toxicology can reduce animal testing and provide better and quicker toxicity information for chemicals.

EPA also will benefit under the



EPA Administrator Mike Leavitt (left) and Secretary of Energy Spencer Abraham shake hands after signing the science research MOU.

MOU from access to DOE's Joint Genome Institute. Genomics holds the potential to reveal the molecular pieces of the toxicity pathway and improve chemical risk assessments and the evaluation of the health of ecosystems.

The text of the MOU is available at <http://www.epa.gov/ord/>. ❖

ENERGY STAR® partners earn awards

The Department of Energy (DOE) and the Environmental Protection Agency (EPA) hosted the 12th annual ENERGY STAR® awards ceremony on March 2 in Washington, D.C. Over 50 businesses and organizations were recognized for their efforts to promote energy efficiency and awareness of the ENERGY STAR label.

"Thanks to the thousands of private and public sector organizations who have worked together with us to establish the ENERGY STAR brand over the years, Americans have the ability to make smart energy choices, helping the nation achieve our goal of advancing new, cleaner energy technologies," Secretary of Energy Spencer Abraham said when he presented the awards

The ENERGY STAR label helps consumers identify the most energy-efficient products in the marketplace by looking for the label. Last year, the United States, with the help of the ENERGY STAR program, saved enough energy to power 20 million homes and avoid greenhouse gas emissions equivalent to those from 18 million cars while saving \$9 billion.

The ENERGY STAR award winners include:

- **Manufacturer Partner of the Year – Products:** General Electric Consumer Products
- **Manufacturer Partner of the Year – Appliances:** Whirlpool Corporation
- **Manufacturer Partner of the Year – Lighting:** SYLVANIA
- **Manufacturer Partner of the Year – Windows:** Gorell Enterprises, Inc.
- **National Product Campaign:** Maytag Corporation Appliance Campaign
- **Excellence in Appliance Retailing:** Sears, Roebuck and Co.

EPA created ENERGY STAR in 1992 to promote energy efficient computers. In 1996, DOE and EPA formed a partnership to expand the scope of the program



Secretary Abraham (back row, third from left) and some of the 2004 ENERGY STAR award winners.

to include highly efficient appliances, residential windows, doors and skylights, compact fluorescent bulbs and fixtures, consumer electronics, heating and air conditioning systems, homes, and more.

Additional information on the ENERGY STAR program and a complete listing of the award winners are available at <http://www.energystar.gov>. ❖

Energy efficiency PSA campaign targets youth

On March 9, Secretary of Energy Spencer Abraham launched a national public service advertisement (PSA) campaign designed to make children and their parents aware of energy efficiency and smart energy choices. Fifth graders from Amidon Elementary School in Washington, D.C., helped Secretary Abraham kick off the campaign at the Department of Energy's (DOE) Headquarters Forrestal Building.

"The Energy Efficiency Campaign will raise public awareness of the benefits of making smart energy choices at home," Secretary Abraham said. "By developing an appreciation for energy efficiency at an early age, children are able to make smart energy choices and encourage their parents to do the same."

The campaign includes television, radio, and Internet PSAs primarily

targeted at children between the ages of eight and 13. Headlining the campaign is a new spokes-villain—the Energy Hog, an energy waster. The computer-generated creature appears in the homes of families not using energy efficiently. In all of the PSAs, children are the first to identify the Energy Hog as the source of the problems. The spots direct audiences to <http://www.energyhog.org> where they can train to become Energy Hog Busters and learn fun and simple ways to use energy more efficiently.

The Advertising Council and Energy Outreach Colorado developed the Energy Hog and the PSAs. Campaign sponsors DOE, The Home Depot, the North American Insulation Manufacturers Association, the National Fuel Funds Network, and the Colorado Governor's Office of

Energy Management and Conservation were present at the kick-off event. In addition to Colorado, 19 state energy offices also are campaign sponsors.

"The new PSAs empower kids to practice good energy-saving activities with their parents," Peggy Conlon, President and CEO of The Advertising Council said. "We hope children and their families will be inspired by the advertisements and learn about smart energy usage through the fun and informative website," added Skip Arnold, Executive Director, Energy Outreach Colorado.

The PSAs will be distributed to media outlets nationwide and will run and air in advertising time and space donated by the media. The Energy Efficiency Campaign will span several years and target parents and teachers in future phases. ❖

Kansas City Plant, Pantex form partnership, improve performance

In 2001, Pantex BWXT invited the Department of Energy's Kansas City Plant (KCP) to share best business practices with the goal of improving productivity, quality, delivery performance, and capacity constraints without increasing costs. Since that time, KCP has worked closely with Pantex employees to make significant improvements, particularly in the areas of pit repackaging, mass properties, quality and root cause analysis, information systems, and knowledge preservation.

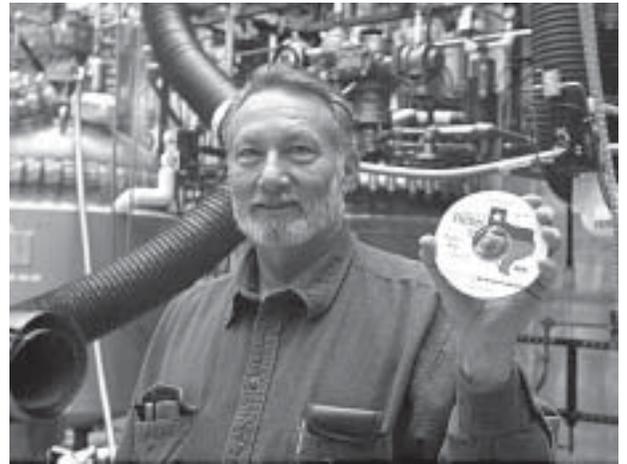
"The past few years have seen several opportunities for Pantex and the Kansas City Plant to share information and technical expertise," said Virgil Hughes, one in the original group of Kansas City Plant managers who went to Pantex when BWXT Pantex took over. "Both plants have worked together to improve the weapons complex by leveraging corporate resources and knowledge as it relates to nuclear resources and production."

Jim Lula, a staff engineer in KCP's materials engineering organization, went to Pantex not because they were having problems, but because they

needed to capture knowledge before it goes out the door. Lula helped Pantex capture some of their critical processes.

Lula examined Pantex processes, interviewed Pantex experts, studied procedures, and then made extensive process maps. After reviewing initial maps, experts familiar with the processes made suggestions for further refinement.

"The process maps were videotaped, the engineers were interviewed, and we put it all together in a knowledge-preservation package," Lula said. The final product includes 57 process maps linked to 195 videos covering the process overview, step-by-step instructions, and interviews with subject-matter experts. As a result of assistance from Kansas City Plant, Pantex now uses Six Sigma process mapping, as well as the KCP web-based delivery



Pantex scientist Tim Quinlin holds the product of the knowledge preservation process—a disk that will help future workers understand the synthesis and formulation of high explosives.

system, to capture knowledge for critical process information.

The success of the Kansas City Plant and Pantex collaboration has not escaped the notice of the National Nuclear Security Administration. KCP's Six Sigma team received a Defense Programs Award of Excellence for its work at Pantex. ❖

DOE, lab go digital to sign on the bottom line

Jeff Day in the Department of Energy's (DOE) Pacific Northwest Site Office signs off on about 150 Laboratory Directed Research and Development (LDRD) proposals submitted annually by DOE's Pacific Northwest National Laboratory (PNNL). This year, for the first time, he did it without lifting a pen.

Day digitally signed a business application using Entrust TruePass software, eliminating the time and cost of traditional paper-intensive processes. "As part of efforts by PNNL and DOE to automate applications, we can now use a few keystrokes to serve as a secure, uniquely identifiable and official signature," said Mark Hadley, a senior research scientist working on information technology infrastructure at PNNL.

While PNNL has been using secure digital signatures for work-related



L-r, PNNL staff members Mark Hadley, Jaralyn Carroll, and Pamela Hughes join DOE's Jeff Day (seated) for the first use of a common digital signature to link DOE and national laboratory workflow systems.

business for more than a year, the concurrence signatures on the LDRD proposals mark the first time a common digital signature has been

used to directly link together DOE and PNNL workflow systems. The improved LDRD proposal system is a web-based workflow system that routes data electronically for concurrence. The process previously required routing hard copies of documents, waiting for as many as six physical signatures per proposal, and keeping papers on file as part of required record keeping.

"With the electronic digital signature capability, we have decreased overall program costs, and streamlined the process for approving our LDRD projects, enabling our staff to begin their research work more quickly," said Pamela Hughes, who manages PNNL's LDRD program. "The electronic system also makes it easier for DOE to check the status of approved projects." ❖

Hanford's first open-air demolition progresses

Crews have successfully removed 13 of 29 concrete roof and wall sections from the 233-S Plutonium Concentration Facility at the Department of Energy's Hanford Site, leading to final slab on grade demolition. The roof and walls of the facility are cut into large blocks that are lifted into disposal containers or wrapped and shipped on flatbed trucks. In the photograph, a piece of the facility's wall is lowered to the ground by a crane.

To date, the demolition materials have been taken to Hanford's Environmental Restoration Disposal Facility in the middle of the Hanford Site. The bottom floor of 233-S contains higher levels of contamination, and some of those demolition materials will be "right-sized" and placed into containers that will eventually go to the Waste Isolation Pilot Plant in New Mexico as transuranic (TRU) waste.

The project is the first demolition of a plutonium processing facility at Hanford and the first "free-air"



demolition of a plutonium facility in the DOE complex. Innovative techniques, such as using fixatives to "glue" contamination to wall surfaces and using fogging and misting during demolition to control dust, are being

shared with other DOE project sites outside of Hanford.

Planning is now underway to prepare to place a concrete cap on the "footprint" of the facility once it is demolished. ❖

BPA will lease its 'own' transmission line

The 63-mile Schultz-Wautoma 500-kilovolt line from the Department of Energy's (DOE) Hanford Reservation to Ellensburg, Wash., is one of the top projects in DOE Bonneville Power Administration's (BPA) transmission infrastructure program. BPA delayed construction of the line to explore financing alternatives that would allow construction of the project without putting pressure on BPA's limit on bonds it may have outstanding with the U.S. Treasury. When completed, the line will carry enough power to serve a city the size of Seattle at a total cost, including substations, of \$175 million.

BPA will finance the construction of the Schultz-Wautoma project in part through a lease-purchase agreement with Northwest Infrastructure Financing Corp., a subsidiary of J.H. Management, which issued approximately \$116 million in taxable bonds on March 9 to finance and

own the project. The portions of the project to be financed under the lease-purchase will relate to fixtures—towers and lines. Other parts of the project—substation, roads, rights of way—will be owned and financed by BPA using traditional U.S. Treasury borrowing. BPA lease revenues will back the bonds. BPA will lease the assets from Northwest Infrastructure Financing Corp. for 30 years but will manage construction and will exclusively operate the line. At the end of the lease, after the bonds are repaid, BPA, could at its option, have full ownership.

Leasing conserves BPA's use of scarce U.S. Treasury borrowing, which otherwise is expected to be exhausted in 2008. If applied to other projects, similar non Federal financing could reduce BPA U.S. Treasury borrowing for critical transmission projects by about \$500 million.

Leasing brings private non Federal capital sources into Federal transmission construction at minimal cost to ratepayers. The cost of the leasing agreement is expected to be between 0.6 and 0.8 percent above the cost of borrowing from the U.S. Treasury. This is considerably less expensive than other third-party financing alternatives BPA has explored that could have cost up to 10 percent more than BPA's comparable borrowing rate. The President, Congress, the Office of Management and Budget, and DOE have encouraged BPA to use non Federal financing.

The federal budget will be unaffected by this deal. BPA's Fiscal Year 2005 budget has already been submitted to OMB and went to Congress on Monday, Feb. 2. Whether Schultz-Wautoma construction is funded by borrowing from the Treasury or a lease, the capital cost to BPA is still the same.❖

NNSA program to engage Iraqi scientists

A new program to provide employment opportunities to Iraqi scientists, technicians, and engineers is being initiated by the Department of Energy's (DOE) National Nuclear Security Administration (NNSA). The program will complement Administration initiatives that seek to support reconstruction efforts and prevent the proliferation of weapons of mass destruction expertise.

The new effort is in cooperation with the Arab Science and Technology Foundation (ASTF) and the Co-operative Monitoring Center at DOE's Sandia National Laboratories. The ASTF, headquartered in the United Arab Emirates, is a nongovernmental

organization established to stimulate scientific research in the Arab world. The partnership will help rebuild key elements of Iraq's critical infrastructure and develop new Iraqi business opportunities that provide sustainability to Iraqi science and technology.

"This program addresses the critical need to provide significant and meaningful employment opportunities for all scientists in Iraq," Under Secretary for Nuclear Security and NNSA Administrator Linton Brooks said. "Moreover, it is helping them rebuild Iraqi science and technology infrastructure and reintegrate Iraq into the international science community."

The first phase of this long-term effort is the current survey of Iraq's science and technology infrastructure by scientists from the ASTF. Once the survey is completed, the partners will convene a workshop in the region to bring together representative experts from Iraq, the United States, the international science community, and funding organizations to discuss priorities and options for technical cooperation. Finally, financial contributions from donor countries and funding organizations will be sought to initiate work on several of the highest priority projects, as well as to institute a merit-based nomination and review process for future work. ❖

DOE issues long-term hydrogen research plan

The Department of Energy (DOE) released its *Hydrogen Posture Plan* on March 10. The document outlines the activities, milestones, and deliverables that DOE plans to pursue to support America's shift to a hydrogen-based transportation energy system. The plan identifies milestones for technology development over the next 10 years, leading up to a commercialization decision by industry in 2015.

"This plan supports President Bush's vision of a hydrogen economy

and includes timelines that provide clear and scientific measures to track and demonstrate progress," Secretary of Energy Spencer Abraham said. "If we achieve our technical objectives, the automotive and energy industries will be in a position to begin to mass market availability of both vehicles and refueling infrastructure by 2020."

The *Hydrogen Posture Plan* addresses a National Research Council recommendation that DOE more fully coordinate its hydrogen activities within the Department. The plan

integrates research, development, and demonstration activities from the DOE renewable energy, nuclear, fossil, and science offices. An integrated hydrogen program will improve the effectiveness and accountability of DOE's research activities and increase the probability of success in achieving technical milestones on the road to a hydrogen economy.

The plan is available at <http://www.eere.energy.gov/hydrogenandfuelcells>. ❖

COMING Events

April

29-May 3 14th Annual Department of Energy (DOE) National Science Bowl®, Chevy Chase, Md. Sponsored by DOE and others; managed by DOE's Office of Science (SC). Winning teams from regional tournaments held across the United States at DOE sites, other Federal agencies, and educational institutions will participate in the national finals. For questions or to volunteer, contact Sue Ellen Walbridge, SC-1, 202-586-7231 or sue-ellen.walbridge@science.doe.gov.

Also visit the Science Bowl website, <http://www.scied.science.doe.gov>.

May

18-20 Annual Department of Energy (DOE) Pollution Prevention (P2) Televideo Conference for Headquarters and field sites. Sponsored by DOE's Office of Pollution Prevention and Resource Conservation Policy and Guidance (EH-43), Office of Environment, Safety and Health. The confer-

ence schedule is May 18 and 20, 10 am to 5 pm EST, and May 19, 10 am to 12 noon. Topics include environmentally preferable purchasing, waste reduction, pollution prevention reporting, and research and development for pollution prevention. Interactive field panel discussions, individual presentations, and question and answer sessions will be featured. For more information, contact Beverly Whitehead, 202-586-6073 or beverly.whitehead@eh.doe.gov. ❖

Rhode Island increases CNG fuel availability



The Department of Energy's (DOE) Boston Regional Office joined in the recent dedication of the State of Rhode Island's Compressed Natural Gas (CNG) Fueling Station in Cranston. Rhode Island's third fueling facility, this station will make CNG fuel more available to the state's growing CNG vehicle fleet. The new station has a total capacity of 150 cubic feet per minute (cfm) fuel delivered at either 3,000 or 3,600 pounds per square inch (psi), with the capability of fueling 150 CNG vehicles a day.

Boston Regional Office Clean Cities Project Officer Mike Scarpino spoke on behalf of DOE, addressing energy security and public health benefits of compressed natural gas. In the photograph, Boston Regional Director Hugh Saussy (right) and Scarpino stand in front of one of the Rhode Island Public Transportation Authority's CNG-powered trolleys featured at the fueling station dedication in Cranston. ❖

Idaho Lab finishes GEM project ahead of schedule



Workers at the Department of Energy's (DOE) Idaho National Engineering and Environmental Laboratory successfully completed the Glovebox Excavator Method Project on Feb. 29, 2004. A total of 454 drums of waste were removed from a portion of the one-acre Pit 9 site more than eight months ahead of the schedule agreed upon in 2002 by DOE, the State of Idaho and the U.S. Environmental Protection Agency. At left, workers use glove boxes to manually sort and repackage the recovered waste.

"This achievement was possible because of the cooperative spirit in which the Department of Energy, the State of Idaho and the U.S. Environmental Protection Agency approached this project," Secretary of Energy Spencer Abraham said. "This was critical to moving cleanup of this portion of this site from a paper enterprise to a real one."

Options are being discussed for performing additional waste retrieval and other environmental protection actions in other portions of the 97-acre Subsurface Disposal Area. ❖

Hanford plutonium inventory now safe, stable



Beating by more than three months a commitment to the Defense Nuclear Facilities Safety Board (DNFSB), the last of approximately 18 metric tons of plutonium-bearing material at the Department of Energy's (DOE) Hanford Site has been safely stabilized and packaged by Fluor Hanford for shipment off site. At left, the last 3013 can is packaged and tagged at Hanford's Plutonium Finishing Plant.

The Plutonium Finishing Plant, where plutonium solutions were purified and converted to a more stable metal form, was the final step in the site's production process. When Hanford's last reactor was shut down in 1988 and the cleanup mission began in 1989, both weapons-grade plutonium and large quantities of plutonium-bearing material in various forms were left inside the plant's process lines and glove boxes. By the mid-1990s, the Plutonium Finishing Plant complex, a collection of 61 buildings, posed the Hanford Site's greatest plutonium hazard. Over the next few years, the facility's buildings will be closed and decommissioned. ❖

Pantex sponsors Science Bowl regional competitions

Students from across Texas converged on West Texas A&M University in February 2004 for the annual High School and Middle School Science Bowl Competitions sponsored by the Department of Energy's (DOE) Pantex Plant. For the third year in a row, a team from Dunbar High School, Fort Worth, Texas, at right, won the high school competition to represent Pantex at DOE's 2004 National Science Bowl® in Washington, D.C. Crockett Middle School won the Middle School Science Bowl for the second time and will travel to Golden, Colo. for the national competition.

"Science Bowl gives these students their opportunity to shine and show off their academic skills," said Pantex Science Bowl Coordinator Linell Carter. "The students are the key to the continued success of both the high school and middle school competitions."

BWXT Pantex awarded the winning schools for each competition \$1,000 for their science programs; second place schools, \$500; and third place schools, \$250. ❖



Energy program offices hold joint safety summit

As part of a broader effort to ensure safe, secure, and environmentally sound operations in 2004, the Department of Energy's Offices of Fossil Energy (FE) and Energy Efficiency and Renewable Energy (EE) held a joint Safety Summit on Jan. 27 in Washington, D.C. The meeting gave the energy programs an opportunity to discuss recent performance trends, emerging issues, and practical approaches to continuous involvement in the area of environment, safety and health (ES&H).

Two FE sites, the Albany Research Center and the Rocky Mountain Oilfield Testing Center, received Secretarial awards for achieving perfect safety records in 2003. Attendees included (l-r) then FE and current EE Assistant Secretaries Michael Smith and David Garman, and Under Secretary for Energy, Science and Environment Robert Card. FE and EE field site directors and ES&H managers also participated. For more information on the summit or copies of presentations, visit <http://esh.fe.doe.gov>, click on "Meetings & Workshops," or contact Craig Zamuda, FE, 202-586-6367. ❖



Naval Reactors participates in NAFEO annual conference

On March 4, Thomas H. Beckett, Deputy Director for Naval Reactors in the Department of Energy's (DOE) National Nuclear Security Administration (left), and Captain Bruce A. Grooms, Commander, Submarine Squadron SIX, U.S. Navy (right), raised educators' awareness about opportunities in the Naval Nuclear Propulsion Program (NNPP) in a presentation at the 29th Annual National Association for Equal Opportunity in Higher Education (NAFEO) Conference. Their audience consisted of academic deans, educators, and fellows from Historically Black Colleges and Universities (HBCUs).

Naval Reactors values diversity in the NNPP, a joint DOE-U.S. Navy program, and attaches importance to HBCUs as a good source of technically qualified individuals. Many training, education, and leadership opportunities are available to students through the NNPP in the Fleet, at Naval Reactors' headquarters, at DOE laboratories, and at shipbuilding and repair facilities. NNPP education programs provide economic support to students while in college, allowing them to concentrate full-time on technically demanding degrees. Moreover, the students have guaranteed employment upon graduation. ❖



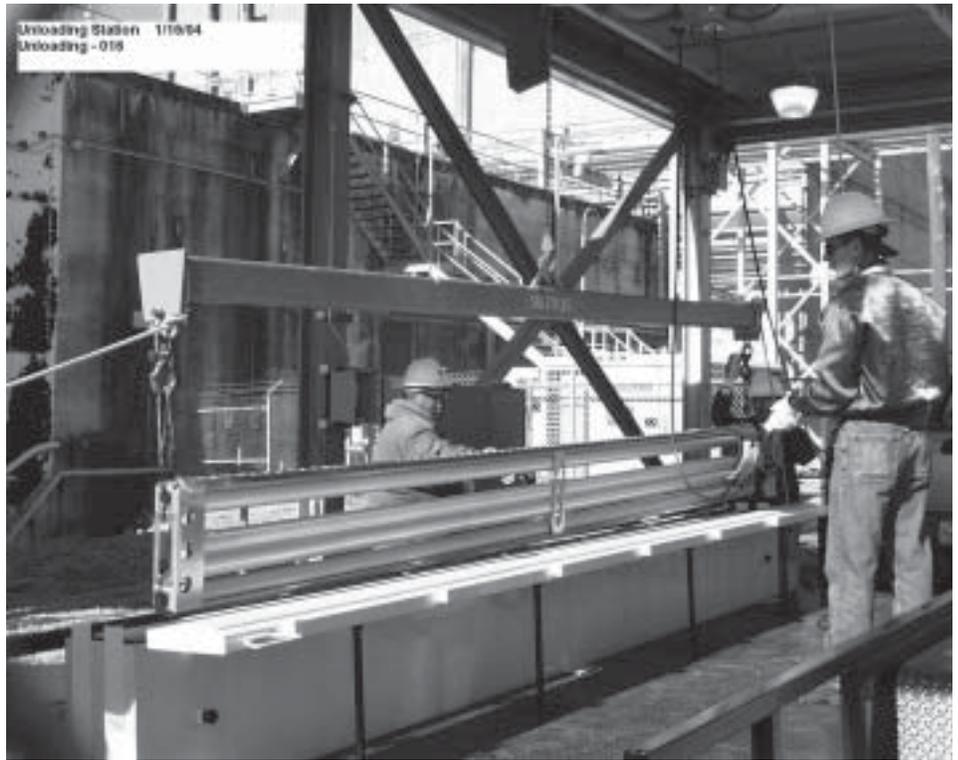
Work continues, milestone reached at Savannah River

One chapter ended and another began at the Department of Energy Savannah River Site's H Canyon, as the facility completed decades of work dissolving irradiated fuel. The facility, which has processed irradiated fuel since the 1960s, shifted smoothly into a new mission—dissolving unirradiated fuel—more than two months ahead of schedule.

The unirradiated fuel was intended for use in the Site's production reactors, but the reactor shut down before it was needed. Uranium from the unirradiated fuel will be recovered by H Canyon and blended with natural uranium to form low enriched uranium (LEU). The LEU will be used in commercial power generating reactors owned by the Tennessee Valley Authority.

Another milestone was reached at the Site's Defense Waste Processing Facility (DWPF). Six million pounds of radioactive glass have been poured since the facility began operations and the 200th canister has been produced with the new melter. DWPF leads the world in pouring environmentally acceptable borosilicate glassified waste and is the largest facility of its kind in the world.

The facility converts highly radioactive liquid waste, currently stored in 49 underground tanks at Savannah River, into a solid glass form suitable for long-term storage and disposal.



The first unirradiated fuel bundle is surveyed at the H Canyon Bundle Off-Loading Station.

Operations began in March 1996 and are expected to continue until about 2020. Jeff Barnes, DWPF facility manager, said employees have safely and efficiently operated the process and consistently met or exceeded performance expectations.

The heart of DWPF operations is its 65-ton melter. The first one

operated continuously for more than eight years, including six years of radioactive operations—more than three times its design life. It produced more than 1,300 waste glass canisters. The new melter was installed in January 2003 and began pouring radioactive glass in March 2003. ❖

Materials distributed for Earth Day observance

The Federal Energy Management Program (FEMP) in the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) is asking Federal facilities and others to celebrate Earth Day on April 22 and throughout the year. The FEMP theme this year, "Smart Energy, Choices for Our Future," is in line with DOE's "Smart Energy" campaign and ties into that theme for Earth Day 2004.

The official poster features a number

of renewable energy photographs inset into the letters, "Smart Energy." The message promotes the idea that, by helping to spread awareness about the benefits of renewable energy and making smart energy choices, we can help our nation achieve a healthier environment and a stronger economy. Collectively, all actions that increase Federal use of renewable energy will expand our energy supply, prevent pollution and increase our national security.

Packages of materials were scheduled for mailing to Federal agencies the third week of March to arrive the first week of April. The materials include 18" x 24" and 12" x 16" Earth Day posters, key tags, post it notes, sunflower seed packs, and champion posters (for selected recipients).

Limited additional quantities of selected items are available from the EERE Information Center at 1-877-337-3463. Additional Energy Champion posters are not available. ❖

DOE suspends proposed safety rulemaking

In a Feb. 23, 2004, letter to the Defense Nuclear Facilities Safety Board (DNFSB), Secretary of Energy Spencer Abraham announced that he is suspending rulemaking on proposed changes to the Department of Energy's (DOE) worker safety rules and requirements, Worker Safety and Health, Title 10 CFR, Part 851.

"As you know, ensuring the safety and health of workers at Department of Energy sites is a top personal priority for me," Secretary Abraham told DNFSB Chairman John Conway. "In January of this year, at the Department's Senior Leadership Summit, I designated 2004 the 'Year of Safety,' and intend to continue to communicate the meaning and

breadth of this action through a series of Safety Summits.

"...As you are aware, the incidences of injury and days lost as a result of workplace injury have fallen at the DOE for the third straight year and are now well below the rates experienced in private industry. Nevertheless, as I have made clear to my senior managers, we must and will strive to do even better in the years to come.

"I am deeply concerned by the perception expressed by the Board and others commenting that the approach of the proposed rule may not be consistent with that goal. Consequently, I have directed that the current proposed rulemaking be suspended to allow further consultations

with the Board and to consider the concerns of other interested stakeholders as appropriate."

Secretary Abraham has directed Under Secretary for Energy, Science and Environment Robert Card and Assistant Secretary for Environment, Safety and Health Beverly Cook to work with the Board and DOE's Office of Security and Safety Performance Assurance to address the concerns that have been raised. Secretary Abraham stressed that any final rule will reflect the direction and intent of Congress and reflect his policy that safety standards will not be "written by contractors," but instead will be subject to the personal approval of more senior Federal officials than is the case today. ❖

New, cooler process produces 'pure' hydrogen

Devinder Mahajan, a chemist at the Department of Energy's (DOE) Brookhaven National Laboratory, has developed a novel, low-temperature process of producing "pure" hydrogen for use in fuel cells. The process may help address one of the most significant difficulties in developing efficient and affordable fuel cells—how to extend the life of the catalysts that make them work.

Fuel cells combine hydrogen and oxygen without combustion to produce direct electrical power and water. An important problem facing today's most promising fuel cell technologies is that the same hydrogen that feeds the reaction often contains high levels of carbon monoxide (CO) formed during the hydrogen production process. The CO "poisons," or degrades, the expensive platinum catalysts that convert hydrogen into electricity within the fuel cell, leading to deterioration in efficiency over time and eventual replacement.

Fuel cell researchers have tried to solve the CO-poisoning problem in several ways. By adding metals like ruthenium or molybdenum to the platinum, scientists have been able to formulate more tolerant catalysts, but even these are poisoned by relatively low levels of CO—100 parts per



Devinder Mahajan uses a chromatograph to analyze carbon monoxide levels in hydrogen purified using his patented process.

million or higher. A second option is to send the hydrogen through a second process to remove most of the CO before feeding it into the fuel cell. This process typically employs a high-temperature catalytic reaction known as water-gas-shift, which leaves unacceptable levels of CO in the finished product.

In Mahajan's new process, a ruthenium trichloride or similar metal catalyst is mixed with a nitrogen complex

to form a homogeneous solution in a methanol and water mixture. The hydrogen feed containing CO is then introduced, and, at relatively low temperatures between 80 and 150 degrees C, the catalyst reacts with the CO and water to convert nearly 100 percent of the CO into carbon dioxide and, as a side benefit, additional hydrogen. The resulting hydrogen feed

contains only a few parts per million of CO and is at the correct temperature to be fed directly into a fuel cell. The process also minimizes the amount of waste produced during the reaction due to low temperature operation, high product selectivity, and high catalytic activity.

Mahajan recently was issued U.S. Patent 6,596,423 for developing the process. His research is funded by DOE's Office of Fossil Energy. ❖

Electronic-Voluntary Protection Program (e-VPP) system rolls out

The Department of Energy's (DOE) Office of Environment, Safety, and Health (EH) has developed a "web-based" system for handling Department of Energy Voluntary Protection Program (DOE-VPP) applications. The system, called Electronic-Voluntary Protection Program, or e-VPP, gives users the ability to submit applications for DOE-VPP via the Internet instead of a paper application document consisting of several hundred pages.

The e-VPP initially was conceived and planned as an "E-Gov" activity, directly supporting the Department in meeting the President's Management Agenda. The main objectives of the system are:

- To enable and expand the use of secure Internet and computer resources in providing Government services, i.e. better serving citizens through "Electronic" Government (E-Gov);
- To directly support the President's direction regarding E-Gov by

making Government more responsive and cost effective; and

- To support field activities by greatly simplifying and reducing their workload in preparing, transmitting and amending VPP applications—cutting resource requirements by more than half.

Prior to e-VPP, applications for VPP recognition both within DOE and in the private sector took weeks of work and resulted in paper applications containing hundreds of documents. Compiling such applications was resource intensive, and the mailing or transmittal of applications was difficult. Various attempts had been made at DOE sites to reduce the burden of the "typical" application process, including scanning documents, transferring them to diskettes and CDs, and placing them on the site's Intranet, which produced concerns regarding security. Using these "lessons learned," in 2002, EH undertook the commitment to develop, test, and provide a true,

web-based process for filing VPP applications.

The e-VPP system was successfully tested in 2003 at the Oak Ridge Institute for Science and Education (ORISE), which recently earned STAR status in the DOE-VPP. Bob Kapolka, Director of Environment, Safety and Health, ORISE, stated that the e-VPP system will make applying for the DOE-VPP less labor intensive and time consuming for all who use it. Kapolka went on to say that he wished the e-VPP system had been available when ORISE started the application process.

The success of the e-VPP system has resulted in planning for additional e-VPP projects as well as encouraging the private sector and other State and Federal agencies to use the DOE e-VPP as a model program. For more information on e-VPP and additional projects, visit http://tis.eh.doe.gov/vpp/articles/evpp_rollout.html. ❖

NEW Publications

Office of Inspector General (IG) reports: ***FY 2003 Annual Performance Report and FY 2004 Annual Performance Plan*** (DOE/IG-APP-006); ***Office of Inspector General Semiannual Report to Congress*** (DOE/IG-0031); ***Electricity Transmission Scheduling at the Bonneville Power Administration*** (DOE/IG-0637); ***Recovery of Highly Enriched Uranium Provided to Foreign Countries*** (DOE/IG-0638); ***The Department's Audit Resolution Process*** (DOE/IG-0639); ***Reestablishment of Enriched***

Uranium Operations at the Y-12 National Security Complex (DOE/IG-0640). 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>.

From the Energy Information Administration (EIA): ***Voluntary Reporting of Greenhouse Gases*** (DOE/EIA-0608/2002) details data submitted by 228 U.S. companies and other entities on 2,027 projects to reduce or sequester greenhouse gases in 2002; available at <http://www.eia.doe.gov/oiaf/1605/>

vrprt/pdf/0608(02).pdf. Performance Profiles of Major Energy Producers (DOE/EIA-0206/04) reports profits of major U.S. energy companies were \$20.6 billion in 2002, almost 50 percent lower than in 2001; available at <http://www.eia.doe.gov/emeu/perfpro/>. Information on these and other EIA reports is available from the U.S. Department of Energy, National Energy Information Center, EI-30, 202-586-8800, or at <http://www.eia.doe.gov>. ❖

Education NOTES

On Feb. 19, 2004, Secretary of Energy Spencer Abraham announced a new effort in cooperation with regional, state, and local partners to educate state and local government officials about the vision of a hydrogen economy. **“Hydrogen Power: The Promise, The Challenge”** is a six-city national tour that commenced in Lansing, Mich., March 23, in partnership with Lansing Community College and Michigan’s NextEnergy. The second stop for “Hydrogen 101” is in Austin, Texas, on April 16, 2004, in cooperation with the Texas State Energy Conservation Office and the Texas Clean Air Working Group. The series will travel to cities in the Northeast, Mid-Atlantic, Southeast, and West before wrapping up in fall 2004.



Idaho Governor Dick Kempthorne has awarded the Department of Energy’s **Idaho National Engineering and Environmental Labora-**

tory (INEEL) a Brightest Star Award for its sponsorship of the Hispanic Youth Symposium. With the recognition, INEEL received a \$5,000 check that will be used for scholarships at the 2004 symposium in April. Each spring, about 300 Hispanic teens gather in Sun Valley, Idaho, to hear motivational speakers and participate in interactive workshops, all designed to promote staying in school and seeking brighter futures. INEEL has been sponsoring the symposium since 1990.



In celebration of Colorado Energy Education Day on Feb. 11, 2004, Governor Bill Owens launched the Renewable Energy and Energy Efficiency on Wheels (RnE2EW) program at the State Capitol in Denver. The program is the product of a partnership among the Department of Energy, its **National Renewable Energy Laboratory**, BP America, and the

Governor’s Office of Energy Management and Conservation. RnE2EW will travel to schools and public events to bring energy, math, science, and technology education to teachers, students, and consumers throughout Colorado.



The Department of Energy’s **Los Alamos National Laboratory** and the University of California further enhanced its partnerships with New Mexico academic institutions by signing two memoranda of understanding on research and education and on intellectual property with New Mexico State University on Feb. 13, 2004. Research areas covered under the agreements are modeling and simulation, such as predictive science, decision making and engineering design; and security, including applications to homeland security and defense, environmental security, sensor and detection technology and information intelligence. ❖



The Department of Energy’s Argonne National Laboratory recently held its ninth annual Rube Goldberg machine contest for high schools. Teams from 11 Chicago, Ill., area high schools built machines that took at least 20 steps to select, mark, and cast an election ballot. At left, a student from Riverside-Brookfield High School explains her team’s machine to the judges. Rube Goldberg machine contests are inspired by Reuben Lucius Goldberg, whose cartoons combined simple household items into complex devices to perform trivial tasks. ❖

People IN ENERGY

Nobel Laureate **Russell Hulse**, a scientist at the Department of Energy's Princeton Plasma Physics Laboratory, has been elected a Fellow of the American Association for the Advancement of Science. He was cited for the "discovery of the pulsar in a binary system and the resulting evidence for gravitational energy radiation." Hulse won the 1993 Nobel Prize in Physics jointly with Princeton University Professor Joseph Taylor for their 1974 discovery of the first binary pulsar.



President George W. Bush recently announced his intention to nominate **Jerald S. Paul** as Principal Deputy Administrator of the Department of Energy's National Nuclear Security Administration. Paul currently serves as a Member of the Florida House of Representatives and as a partner in the law firm of McKinley, Ittersagen, Gunderson and Berntsson, P.A. The nomination is subject to Senate confirmation.

James Sethian, Head of the Mathematics Group at the Department of Energy's Lawrence Berkeley National Laboratory, has received the prestigious Norbert Wiener Prize in Applied Mathematics by the American Mathematical Society and the Society for Industrial and Applied Mathematics for his applications of computational ideas in science and engineering.

Jill Sigal has been appointed Principal Deputy Assistant Secretary for Congressional and Intergovernmental Affairs at the Department of Energy.

Most recently, Sigal served as Deputy Assistant Secretary for Environment and Science in the Office of Congressional and Intergovernmental Affairs. Previously, Sigal founded and operated Jill Sigal Associates, a government relations consulting firm, and served as a consultant and attorney at several Washington, D.C., firms.

Karen Boardman, Manager of the National Nuclear Security Administration's (NNSA) Sandia Site Office has been named Director of the NNSA Service Center, succeeding **James Hirahara**, who has retired. **Patty Wagner**, Deputy Manager of the Sandia Site Office, has moved up to become Manager. **Steve Goodrum**, Deputy Associate Director at the NNSA Service Center, will become the new Deputy Manager of the Sandia Site Office.

Leonard K. Peters, Director of the Department of Energy's Pacific Northwest National Laboratory, is the recipient of the Oak Ridge Associated Universities (ORAU) Outstanding Leadership Award. The award recognizes individuals who have demonstrated sustained leadership and support of ORAU activities involving member universities and/or national laboratories and includes a grant to support a conference or symposium on atmospheric chemistry.



Gary Lavine is the Department of Energy's new Deputy General Counsel for Environment and Nuclear Programs. Lavine has been involved with energy issues for nearly 25 years, most recently as counsel to Swidler, Berlin,

Shereff, Friedman in Washington, D.C. Before joining the law firm, Lavine retired as Senior Vice President and Chief Legal Officer of Niagara Mohawk Holdings. He previously served on the staff of the New York State Legislature in various positions.

Charles V. Shank, Director of the Department of Energy's Lawrence Berkeley National Laboratory (LBNL), has announced his intention to leave the position by the end of the year. He joined LBNL and the University of California, Berkeley faculty in September 1989. Shank will be returning to the Berkeley campus as a faculty member, where he is a tenured professor in three departments—Physics, Chemistry, and Electrical Engineering and Computer Science.

The Chinese Institute of Engineers/USA has named **Wu-chun Feng**, leader of the Research and Development in Advanced Network Technology Team in the Computer and Computational Sciences Division at the Department of Energy's Los Alamos National Laboratory, the 2004 Asian American Engineer of the Year. He was honored for his research and innovations in supercomputing and high-speed networks.

Brian Davison has been named Director of the Life Sciences Division at the Department of Energy's Oak Ridge National Laboratory (ORNL). Previously, he was leader of the Biochemical Engineering Research Group and Director of ORNL's Bioprocessing Research and Development Center. Also at ORNL, **Gary Jacobs** has been named Director of the Environmental Sciences Division. Most recently, he was Deputy Director of the division. ❖

Milestones

YEARS OF SERVICE

March 2004

Headquarters

EIA – Dorothy Pritchett (40 years), Kenneth A. Vagts (35), Robert T. Eynon (30), Velton T. Funk (30), Barry M. Yaffe (30). **Energy Assurance** – Brenda G. Davis (30). **Energy Efficiency & Renewable Energy** – Clotilda G. Marchione (35), Richard P. Klimkos (30). **Environmental Management** – Kathleen P. Keating (30), Sunil S. Patel (25). **FERC** – Herbert Grossman (45), Helen Fitzgerald (30), Richard F. Armstrong (25), John T. Carlson (25), William R. Cary (25), Robert T. Catlin (25), Ronald A. Colter (25), Bettie J. Darnaby (25), Deborah A. Frazier (25), Robert W. Fulton (25), Mark Klose (25), Barry E. Sullivan (25), Lotfy N. Sidrak (25), Tiquana M. Taylor (25).

Fossil Energy – F. Jerome Hinkle (30), Tawanna M. Griffin-Harris (25). **General Counsel** – Marcia B. Suber (35), Nancy J. Mahoney (30). **Management, Budget & Evaluation** – Ivan D. Johnson (30), Geneva H. Keyes (30), James J. Webber (30), James G. Powers (25), Barbara J. Uzzell (25). **NNSA** – William L. Barker, Jr. (30), Joseph E. Manzanares (30), Richard E. Young, Jr. (30), Samuel M. Graziano, Jr. (25), David B. Williamson (25). **Radioactive Waste** – Roy D. Capshaw (35). **Security** – Joseph S. Purvis (25).

Field

Albuquerque – David O. Bourne (30).

Bonneville Power – John W. Calvert (40), Paul F. Arnold (35), Shirley M. Buckmier (35), Albert W. Ide (35), Peter W. Kirk (35), Allen T. Reay (35), John P. Sporysz (35), Caroline A. Whitney (35), Joseph F. Bennett (30), James G. Coleman (30), Stephen P. Cross (30), Terry L. Hastings (30), Marg C. Nelson (30), Charles R. Ronsheimer (30), Mark A. Shaw (30), Charles C. Alton (25), Kurt R. Casad (25), Keith W. Syth (25). **Idaho** – Dolores A. Ferri (25), Joan C. Ng (25).

NETL – Charles J. Drummond (30), Richard D. Rogus (30), Thomas M. Torkos (30), Richard W. Hammack (25), Kirby C. Rothrock (25). **Nevada Site/NNSA** – Dennis L. Armstrong (25), Irma B. Ginyard (25). **NNSA Service Center** – Debra A. Allison (25), Sally K. Murphree (25), Maria L. Otero (25). **Oak Ridge** – Leslie D. Boggs (30), Gary S. Hartman (30), Betty J. Gattis (25). **Oakland** – Kensley Rivera (25). **Oakland/NNSA** – Wen-Hsiung Kao (25). **Pittsburgh Naval Reactors/NNSA** – William F. Watson (30). **Richland** – Walter J. Pasciak (30), Jean F. Schwier (30), Dale H. Splett (30), Donald H. Alexander (25), Oliver A. Farabee (25). **Sandia Site/NNSA** – Stacy K. Kubasek (25). **Savannah River** – George R. Hannah, Jr. (25),

William W. Huxford, Jr. (25). **Southeastern Power** – Kenneth E. Legg (30). **Southwestern Power** – Thomas O. Burton (30), David B. Reynolds (30), James R. Carnahan (25). **Western Area Power** – James H. Charters (35), David E. Gest (35), Jesse E. Long (35), Roy S. Stewart (35), John B. Dake (30), Mary A. Luna (30), George R. Perkins (30), Kenneth B. Williams (30), Arthur Diaz-Gonzalez (25), Brenda D. Lopez (25), Laurie D. Moore (25), Nick G. Zusmer (25).

RETIREMENTS

January 2004

Headquarters

Chief Information Officer – Vickie L. Highling (29 years). **Counterintelligence** – Robert B. Dandridge (21). **Economic Impact & Diversity** – Donald M. Wirick (25). **EIA** – Diane L. Jackson (36), Suraj P. Kanhouwa (29), Roger L. Sacquety (39). **Energy Efficiency & Renewable Energy** – Joyce G. Bolden (37), Judy S. Davis (35), Ute I. Debus (35), Ralph E. Gierens (31), Thomas J. Gross (36), Thomas J. Hall (30), Beverly J. Johnston (31), Robert A. Kost (26), Kitt Lente (34), Richard E. Putnam (35), Elizabeth L. Shearer (30), Andre W. Van Rest (32), Mary A. Washington (41). **FERC** – Hedley M. Burrell (28), John R. Murphy (23), Charles E. Scaggs (32), Josephine A. Scott (26), Hugh Stewart (34).

Fossil Energy – Clifford P. Tomaszewski (31). **General Counsel** – William J. Dennison (27), Steven E. Ferguson (30), Jeanette K. Helfrich (21), Edward C. Jiran (33). **Inspector General** – George G. Daugherty (34), Rolando Dela-Cruz (36), Henry C. Minner III (32). **Intelligence** – Gilbert M. Arriola (36). **Management, Budget & Evaluation** – Kenneth C. Baker (35), Jerome M. Butler (31), Susan L. Champion (30), Thomas F. Fisher (33), Patricia A. Mason (31), Stephen G. Perin (34), Dean L. Smith (32), Daniel M. Steckler (32), William C. Talbot (36).

NNSA – Peter G. Armstrong (35), Ronald G. Ater (24), Linda S. Atwell (28), Edward T. Cassidy (40), Gerald E. Green (16), Edward T. Lovett (33), Andrew C. Millunzi (39), Walter F. Pasedag (27), Garline C. Perry, Jr. (30), Jill D. Williams (18), Alv D. Youngberg (35). **Nuclear Energy** – Jo Ann B. Poffinberger (37). **Radioactive Waste** – Sharon L. Skuchko (36), Stephan J. Brocoum (22). **Science** – Jeffrey J. Auchmoody (34), James R. Carney (37), John R. Clark (35), Kaye C. Coates (34), Ted W. Griffin (28), Gerald J. Peters (37), Susan L. Rose (28), Brenda L. Smith (30), Patricia A. Snyder (37).

Field

Chicago – Carl G. Ahlberg (31), Julie H. Betz (25), Jean C. Black (34), Mona L. Bradford (20),

Mary W. Caldwell (19), Renee L. Irwin (29), James A. Miller (37), David E. Ramirez (32), Mary A. Roark (34), Frederick T. Sienko (34), Richard R. Stenzel (28). **Idaho** – Leonard H. Anderson, Jr. (41), Frances C. Fugate (22), Teresa M. Horkley (26). **Kansas City Site/NNSA** – Kenneth H. Bauer (42), Leta F. Johnston (35). **Los Alamos Site/NNSA** – Thomas R. Rush (25). **NETL** – Perry D. Bergman (38), Richard F. Hickey (26), Leo E. Makovsky (35). **Nevada** – Linda C. Schmith (29). **Nevada Site/NNSA** – Linda K. Hiltbrand (31), Alison D. Marks (30).

NNSA Service Center – Sharon D. Adams (22), Joyce A. Augustine (27), Peggy M. Baca (35), Glenn V. Binns (41), Richard L. Busboom (34), Priscilla G. Cannady (19), Onesima N. Casco (31), Linda A. Clawson (16), Raymon D. Cox (39), Daniel Dea (35), William J. Donahoe (12), Bradley D. Eichorst (15), John L. Gonzales (35), Velva T. Gonzales (25), Donna J. Hansen (27), William L. Harrell (33), Kay A. Henry (35), Anne M. Hubbard (22), Karen N. Jones (36), Marguerite E. Knight (27), Linda M. Kriesel (30), Valerie A.L. Moore (23), Norine J. Naranjo (39), Dennis E. Neely (30), Janet L. Rego (33), Jacqueline A. Rhodes (29), Mary A. Robinson (20), Jeri A. Simmons (29), Janet M. Smith (30), Judy M. Soesbe (31), Theresa M. Sullivan (30), Madonna J. Tilman (35), Doreatha D. Williams (23).

Oak Ridge – Shirley E. Adams (23), Leonard F. Blankner (39), Jerry M. Conley (28), M. Dalton Cooper (37), Judy L. Di Gregorio (26), Cheryl E. Estes (26), Janice E. Fife (22), Carolyn W. Fuller (35), Sandra G. Haworth (25), J. Christopher Hill (32), Brenda G. Ivey (23), Betty J. Watson (31), Deborah B. Widener (30). **Pittsburgh Naval Reactors/NNSA** – Martha N. Rubino (25). **Rocky Flats** – Ravi Batra (14), Jerry L. Stakebake (9). **Sandia Site/NNSA** – Robert R. Adair (33), David M. Anglen (15). **Savannah River** – Malcolm E. Gentry (30), Ronald D. Jernigan (31), Willard R. Lyde (30). **Savannah River Site/NNSA** – Marion R. Moody (25).

Schenectady Naval Reactors/NNSA – John J. Le May, Jr. (29), Alfred F. Riccio (33). **Southwestern Power** – Jackie L. Cude (28), Donna M. Heslar (42), Jeffrey C. Morman (25), Eddie J. Smith (34). **Strategic Petroleum Reserve** – Rose M. Gaillard (29). **Western Area Power** – Vicky L. Claassen (36), Ronald R. French (37), Arlie W. Gordon (36), Robert B. Grundborg (30), Bobbi L. Jensen (11), Duane L. Johnson (29), Ronald H. Miller (34), Irvell N. Morford (30), John P. Rynerson III (35), James R. Schurz (34), Leo Wandler (34), R. Steven Warner (34).

(The February 2004 retirees will be listed in the next issue.) ❖

DOE seeks round two clean coal proposals

The Department of Energy (DOE) has released a solicitation for a second round of proposals under the Clean Coal Power Initiative (CCPI). DOE plans to provide approximately \$280 million in Federal funds for demonstrating technologies that sharply reduce and ultimately eliminate pollution in coal-based power plants.

Prospective projects must ensure coal is used for at least 75 percent of the fuel energy input to the process, while electricity is at least 50 percent of the energy-equivalent output from the technology demonstrated. Proposals also must show the potential for rapid market penetration upon successful demonstration of the technology concept. Coal gasification system advances and carbon emission management technologies are being strongly encouraged.

For each project selected by DOE, industrial sponsors must be willing to at least match the Federal-funding share. A requirement for repayment from commercially successful technologies will be used to underwrite future clean coal research. The deadline for proposals is June 15, 2004. DOE anticipates selection of winning projects by the end of the calendar year. More information on CCPI and the solicitation are available at <http://fossil.energy.gov/programs/powersystems/cleancoal/>.

March 2004

AROUND DOE

PNNL training programs among industry's best

Training magazine has selected the Department of Energy's Pacific Northwest National Laboratory (PNNL) as having one of the top 100 training programs among organizations in a variety of industries, ranging from manufacturing to insurance and banking to government. PNNL placed 28th from a field of more than 550 applicants.

"We are extremely honored to be selected to receive this award from *Training* magazine," Paul Linnen, Vice President and Director, PNNL Human Resources, said. "It acknowledges the investment we make in our people and reinforces the high value we place on development and training."

PNNL's training programs have saved an estimated \$5.6 million in recruiting, hiring, and relocation costs in the last five years as a result of the laboratory's management skills development program.

Office of Science issues 20-year strategic plan

On Feb. 12, 2004, the Department of Energy's Office of Science issued its Strategic Plan, which charts a course for science over the next 20 years that promises dramatic increases in knowledge and scientific achievements. "We worked very closely with the U.S. scientific community to identify the scientific programs the Office of Science should pursue over the next two decades that will enable our nation to stay at the forefront of innovation," Dr. Raymond L. Orbach, Director, Office of Science, said.

The plan sets seven short-term (five to 10 year) scientific priorities, including the ITER fusion science experiment and nanoscale science for new materials and processes. Seven long-term (10 to 20 year) scientific goals also have been set. The plan has been developed so that progress toward these and other scientific programs can be tracked over the next two decades.

The *Office of Science Strategic Plan* is a companion to the previously released document, *Facilities for the Future of Science: A Twenty-Year Outlook*. Both documents are available on compact disk and in printed versions, and can be downloaded at the Office of Science website, <http://www.science.doe.gov>. ❖

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

Official Business