DOE This Month

U.S. DEPARTMENT OF ENERGY

DECEMBER 2003

Secretary Abraham, Minister Rumyantsev announce U.S.-Russia business project

Secretary Abraham hosts Russian Minister Rumyantsev visit

International hydrogen partnership formally established

Power outage task force releases interim report

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U.S. Department of Energy

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Inside

On our cover

Secretary of Energy Spencer Abraham hosted Russian Minister of Atomic Energy Aleksandr Rumyantsev during his visit to the United States, Nov. 4-7, 2003, in continuation of their ongoing work in nuclear nonproliferation. The visit included meetings and discussions in Washington, D.C.; a trip to Philadelphia, Pa., for the first-ever U.S. trade show and exhibition of Russian high technology; and joint keynote addresses at the United Nations in New York, N.Y.

A tour of technologies at the trade show included a stop at the Russian Transition Initiatives booth sponsored by the Department of Energy's (DOE) National Nuclear Security Administration. Secretary Abraham (at the podium) and Minister Rumyantsev (left) announced a groundbreaking project between the U.S. firm Numotech, Inc., Northridge, Calif., and Spektr-Conversion, LLC, a Russian company founded in a closed nuclear city. At right is Terri Olascoaga of DOE's Sandia National Laboratories. Sandia provided critical technical and management support to the joint venture.

For more on the visit and events, see pages 3 and 4. ❖

Secretary Abraham hosts Russian Minister Rumyantsev during U.S. visit

U.S. Secretary of Energy Spencer Abraham hosted Russian Minister of Atomic Energy Aleksandr Rumyantsev during his visit to the United States, Nov. 4-7, 2003, to continue their ongoing work in nuclear nonproliferation. The two participated in various meetings, discussions, and events over the four-day period, including the first-ever U.S. exhibition of Russian high technology in Philadelphia, Pa., and joint keynote speeches at the United Nations in New York, N.Y.

Following meetings with Members of Congress and other Administration officials on Nov. 4 in Washington, D.C., Secretary Abraham and Minister Rumyantsev traveled to Philadelphia on Nov. 5 to open and participate in the Partnerships for Prosperity and Security Exhibition and Conference. The two-day exhibition was sponsored by the Department of Energy's (DOE) National Nuclear Security Administration (NNSA). After their opening remarks, Secretary Abraham and Minister Rumyantsev toured the technologies on display.

At the DOE Russian Transition Initiatives booth, the two announced a groundbreaking project between a U.S. firm and a Russian company founded in a closed nuclear city. "This first foreign joint venture in any of the closed nuclear cities of Russia will represent yet another milestone in the Department of Energy's Russian Transition Initiatives program," Secretary Abraham said. "To date, this program has engaged nearly 15,000 weapons workers. Its successes have been critical to safeguarding vulnerable Russian nuclear expertise, facilities, and know-how."

Minister Rumyantsev and Secretary Abraham stand beside the Liberty Bell in Philadelphia, Pa.

Secretary Abraham addresses the United Nations as Minister Rumyantsev listens with the aid of an interpreter.

Numotech, Inc., a Northridge, Calif., medical devices company, and Spektr-Conversion, LLC, a private Russian firm currently employing nearly 100 former Russian nuclear weapons complex workers, will design and manufacture medical components, equipment, and devices for international commercialization. Projects include the Back Support System, the first clinically proven product to prevent and heal pressure ulcers for those confined to wheelchairs, and the Numobag, a unique oxygen bath system for healing wounds, pressure sores, burns, and incisions. DOE-funded civilian research and development efforts at Spektr formed the basis for the partnership. DOE's Sandia National Laboratories provided critical technical and management support.

Over 130 technologies from world-class scientific institutes in Russia, Ukraine, and Kazakhstan, many previously inaccessible to U.S. companies, were showcased at the exhibition. "I think today's trade show is an early step, a bridge from nuclear weapons to peaceful uses of nuclear energy," Minister Rumyantsev said. The trade show attracted over 300 U.S. industry and national laboratory representatives and was the catalyst for a new partnership agreement between Fuelco LLC, a Midwest-based utilities service company, and Optima, a Moscow-based systems integrator and software development company.

Following the trade show and some sightseeing in Philadelphia, Secretary Abraham and Minister Rumyantsev traveled to New York City, where they addressed the United Nations First Committee on Disarmament and International Security. The two leaders addressed over 170 diplomats and outlined progress that the U.S. and Russia have made in reducing the spread of weapons of mass destruction and ways that "all responsible nations" can overcome present challenges, including those arising from Iran and North Korea.

Secretary Abraham and Minister Rumyantsev returned to Washington, D.C., for additional high-level meetings on Nov. 6 and the signing of a joint statement on the return of Russian research reactor fuel on Nov. 7 (see related article, page 4).

Additional information on the visit and events and Secretary Abraham's remarks are available at **http://www.energy.gov**; click on "Press Room" and then click on "Press Releases" and "Speeches." ❖

Power outage task force releases interim report

On Nov. 19, 2003, the United States-Canada Power System Outage Task Force released its interim report on the massive North American blackout that began Aug. 14, 2003. Task force chairmen U.S. Secretary of Energy Spencer Abraham and Canadian Minister of Natural Resources Herb Dhaliwal summarized the report's findings at a press conference at Department of Energy Headquarters, Washington, D.C.

"One major conclusion of the Interim Report is that this blackout was largely preventable," Secretary Abraham said. "However, the report also tells us that once the problem grew to a certain magnitude, nothing could have been done to prevent it from cascading out of control."

The investigation was conducted by three working groups that focused on specific aspects of the outage. The Electric System Working Group found that the initial events that led to the cascading blackout occurred in Ohio when three high-voltage transmission lines operated by FirstEnergy Corporation short-circuited and went out of service when they came into contact with trees that were too close to the lines. A series of factors followed that contributed to the blackout, including human error, system failures, poor communications, and mechanical breakdowns—from FirstEnergy to the Midwest Independent System Operator to the PJM Interconnection.

Secretary Abraham and Minister Dhaliwal outline the power outage task force report for reporters at DOE Headquarters.

The Nuclear Working Group determined that all affected nuclear plants in the U.S. and Canada functioned properly. The Security Working Group found no evidence to date of terrorist activities, foul play, or sabotage.

With the release of the interim report, phase two of the investigation begins. Public meetings this month in Cleveland, Ohio; New York, N.Y.; and Toronto, Ontario, will give the public an opportunity to comment on the interim report's findings and present ideas for improving the reliability of the electric infrastructure and preventing future blackouts. The task force will issue a final report containing its recommendations for improving the electric system and for any appropriate follow-up actions.

Secretary Abraham's press conference statement is available at **http://www.energy.gov**; click on "Press Room" and then click on "Speeches." A link to the report can be found at the end of the text. ❖

Statement signed on Russian reactor fuel return

A Joint Statement to repatriate Russian-origin highly enriched uranium (HEU) research reactor fuel to Russia was signed by U.S. Secretary of Energy Spencer Abraham and Russian Federation Minister of Atomic Energy Aleksandr Rumyantsev on Nov. 7, 2003, at Department of Energy Headquarters, Washington, D.C. The Joint Statement is one of the final steps to a bilateral agreement on repatriation of research reactor fuel. The signing concluded a four-day visit by Minister Rumyantsev with Secretary Abraham (see article, page 3).

"The Joint Statement that we are signing today reaffirms our common objective of reducing, and to the extent possible, ultimately eliminating the use of highly enriched uranium in civil nuclear activity," Secretary Abraham said. "The goal of minimizing international commerce in HEU has long been a pillar of U.S. nonproliferation policy. This program exemplifies the strength of the U.S. and Russian Federation partnership to reduce the threat of terrorism and prevent the spread of weapons of mass destruction."

The U.S. and the Russian Federation, in cooperation with the International Atomic Energy Agency, began work on fuel return in December 1999. The program was designed to support the return of Soviet or Russian supplied fresh and irradiated HEU fuel, currently stored at foreign research reactors, to the Russian Federation.

Secretary Abraham and Minister Rumyantsev sign the joint statement.

"Under this program, we are focusing our efforts on repatriating Russian-supplied fuel from more than 20 research reactors in 17 countries," Secretary Abraham said. "Moreover, we plan to convert these targeted research reactors so that they use low-enriched uranium fuel instead of HEU."

The text of the joint statement and transcript of the press briefing announcement are available at **http://www.energy.gov**; click on "Press Room" and then click on "Press Releases." ❖

World energy leaders meet, formally establish international hydrogen economy partnership

Energy leaders from 14 nations and the European Commission join U.S. Secretary of Energy Spencer Abraham (center) at the inaugural meeting of the International Partnership for the Hydrogen Economy.

Secretary of Energy Spencer Abraham convened the inaugural meeting of the International Partnership for the Hydrogen Economy (IPHE) on Nov. 19, 2003, at the Omni Shoreham Hotel in Washington, D.C. The attendees included representatives from 15 nations and the European Commission (EC); the International Energy Agency (IEA); various Federal, state, and local government entities from across the United States; academic and public policy institutions; and energy and transportation industries.

Secretary Abraham called for the creation of the IPHE in a speech to the IEA Ministerial Meeting in Paris, France, April 28, 2003, (*DOE This Month*, May 2003). In a June 16, 2003, address to the European Union Conference on Hydrogen in Belgium, Secretary Abraham called on the international community to join him in a Ministerial-level conference to formally define and establish the IPHE (*DOE This Month*, July 2003). The IPHE supports the Hydrogen Fuel Initiative announced by President Bush in his January 2003 State of the Union address.

"I am extraordinarily pleased at the turnout here this week," Secretary Abraham said in welcoming meeting participants. "Every one of our nations should and will benefit when the hydrogen age arrives. Indeed, virtually every nation on the planet should benefit. That is why it is so important that we work together, joining forces in those areas that will best serve the interests of unlocking the door to the hydrogen future."

The inaugural IPHE meeting featured formal ministerial statements on hydrogen policies and programs in each of the 15 participating nations—Australia, Brazil, Canada, China, France, Germany, Iceland, India, Italy, Japan, Korea, Norway, Russia, the United Kingdom, the United States—and the EC. Breaks in the meeting sessions included a tour of hydrogen technologies and a "drive and ride" of the latest in fuel cell hydrogen concept vehicles on Nov. 20 at the RFK Memorial Stadium parking lot in Washington, D.C.

The meeting culminated on Nov. 20 with the 15 nations and the EC signing an agreement that formally establishes the IPHE. The Terms of Reference formally creates the IPHE as an international mechanism to coordinate multinational hydrogen research and hydrogen technology development and deployment.

"Today marks a significant advancement in countries from around the globe working together for a safe and environmentally benign hydrogen economy," Secretary Abraham said. "The vision of the International Partnership for the Hydrogen Economy is that a participating country's consumers will have the practical option of purchasing a competitively priced hydrogen power vehicle, and be able to refuel it near their homes and places of work, by 2020."

The IPHE will leverage limited resources, bring together the world's best intellectual skills and talents to solve difficult problems, and develop interoperable technology standards. It will foster public-private collaboration that addresses the technological, financial, and institutional barriers to a cost-competitive, standardized, widely accessible, safe, and environmentally benign hydrogen economy.

Secretary Abraham's welcoming and keynote remarks are available at **http://www.energy.gov**; click on "Press Room" and then click on "Speeches." Information about the IPHE is available at **http://www.usea.org/iphe.htm**. ❖

Awards recognize energy efficiency efforts

The Department of Energy (DOE) recently honored its energy managers and other Federal employees with the presentation of the Departmental Energy Management Awards and the Federal Energy and Water Management Awards. Both awards programs are sponsored by DOE's Federal Energy Management Program (FEMP) in the Office of Energy Efficiency and Renewable Energy.

Deputy Secretary of Energy Kyle McSlarrow and Assistant Secretary for Energy Efficiency and Renewable Energy David Garman presented the Departmental awards, Oct. 28, 2003, in a ceremony at DOE Headquarters, Washington, D.C. Six organizations, one small group, one individual, two regional offices, and two "energy champions" from DOE facilities across the country were recognized for implementing energy efficiency improvements and making extraordinary contributions to the President's initiative to increase energy efficiency and renewable energy and save taxpayer dollars. The awards were established in 1979 by the In-House Energy Management Program, which is part of FEMP.

The 2003 Departmental Energy Management Award winners are:

- **Outstanding Individual Effort:** Allen W. Carbaugh, Argonne National Laboratory (ANL).
- **Organizations:** 2002 ENERGY STAR® Supply Facility, DOE Headquarters Germantown; Central Supply Facility, ANL; Transportation Systems Management Program, Lawrence Livermore National Laboratory (LLNL); Sustainable NREL Program, National Renewable Energy Laboratory; Wind Blows Green Energy into National Laboratory, Pacific Northwest National Laboratory (PNNL); Plug into Savings Project, PNNL.
- **Small Groups:** Fermilab Industrial Building Controls Retrofit, Fermi National Accelerator Laboratory.
- **Demonstrating Leadership in Energy Management:** Energy Efficient Office Showcase, Atlanta Regional Office; Energy Efficiency Program, Seattle Regional Office.
- **Energy Champions:** Ernest Fossum, Idaho National Engineering and Environmental Laboratory; Mike J. Moran, Jr., PNNL.

At the Departmental Energy Management Awards ceremony are (l-r) Deputy Secretary Kyle McSlarrow; Mike Moran, Pacific Northwest National Laboratory (PNNL) accepting his Energy Champion and another PNNL award; Assistant Secretary David Garman; and Vic Petrolati, Federal Energy Management Program.

On Oct. 29, 2003, the Department honored individuals and organizations from Federal agencies and a utility whose efforts saved the Federal Government more than $62 million in energy costs. A total of 44 awards were presented. Winners of the 2003 Federal Energy and Water Management Awards represent the Departments of Commerce, Energy, Health and Human Services, Interior, Transportation, and Veterans Affairs; the United States Air Force, Army, Marine Corps, and Navy; the General Services Administration; and the United States Postal Service. The DOE winners are:

- **Mobility Energy Efficiency Award, Organizations:** Transportation Systems Management Program, LLNL.
- **Energy Efficiency/Energy Management Award, Organizations:** 2002 ENERGY STAR® Building Label, DOE Headquarters Germantown.
- **Energy Efficiency/Energy Management Award, Small Groups:** Fermilab Industrial Building Controls Retrofit, Fermi National Accelerator Laboratory.

More information on the awards and a complete list of the 2003 Federal award winners is available at **http://www.eere.energy.gov/femp/newsevents/**; click on "Awards Program." ❖

DOE releases 20-year science facility plan

The Department of Energy's (DOE) Office of Science (SC) has prepared a 20-year science facility roadmap that prioritizes new, major scientific facilities and upgrades to current facilities to support the Department's basic science and research missions. The 28 facilities listed in the plan cover the range of science supported by DOE.

"This plan will be the cornerstone for the future of critical fields of science in America," Secretary of Energy Spencer Abraham said when he outlined the plan at the National Press Club on Nov. 10, 2003. "With this plan, our goal is to keep the United States at the scientific forefront."

The priority list for facilities, prepared by SC with input from the scientific community, will help DOE plan its future scientific investments. The list identifies 12 facilities as near-term priorities; eight, as mid-term priorities; and eight, as far-term priorities.

Priority one is the International Thermonuclear Experimental Reactor (ITER). Priority two is an UltraScale Scientific Computing Capability, to be located at multiple sites.

A document describing all 28 facilities, *Facilities for the Future of Science: A Twenty-Year Outlook*, is available at **http://www.sc.doe.gov**. Secretary Abraham's remarks are available at **http://www.energy.gov**; click on "Press Room" and then click on "Speeches." ❖

Cooperative Monitoring Center opens in Jordan

A new Cooperative Monitoring Center in Amman, Jordan (CMC@Amman), is bringing together scientists and policymakers—largely from the Middle East—to explore how technology can be used to strengthen security in the region, such as through arms control agreements, resource management, and cooperative border monitoring. The center was created by the Department of Energy's National Nuclear Security Administration (NNSA) and Sandia National Laboratories, and the Jordanian Royal Scientific Society (RSS).

The new center was formally inaugurated at an Oct. 16, 2003, ceremony attended by Jordanian and American dignitaries. Participants in the ceremony toured the center's technology display area, which provides a hands-on experience with key monitoring and verification technologies. In the photograph, General Mohammed Shiyyab, Director of CMC@Amman (center), explains cooperative monitoring technology to U.S. Ambassador to Jordan Edward Gnehm (left) and Prince Rashid bin Hassan of Jordan (right).

CMC@Amman is modeled after Sandia's Cooperative Monitoring Center in Albuquerque, N.M. The center, housed at the RSS, will draw on the technical expertise and administrative resources of the Society. Amman was selected as the site for Sandia's "sister" center because of Jordan's strategic regional location, its close relationships with neighboring countries, and the academic depth of the RSS. General Shiyyab has been deeply involved in regional security and arms control issues and in the negotiations that led to the Israeli-Jordanian peace treaty.

The new center is now the cornerstone of NNSA's regional security program in the Middle East, which fosters science and technology cooperation, strengthens regional security, and reduces incentives for proliferation. CMC@Amman will provide training to Jordanian and other scientists and policymakers from the region, conduct research and analysis on technical solutions to regional problems, and facilitate workshops on key regional security issues. The center hosted its first training workshop on cooperative monitoring this past summer. Regional projects are planned over the next year in the areas of radiation monitoring, border security, disease surveillance, sustainable land use, and water management. ❖

Department pays tribute to its veterans

The Department of Energy (DOE) held its annual ceremony to commemorate Veterans Day on Nov. 3, 2003, at DOE Headquarters, Washington, D.C. The celebration recognized the many contributions America's veterans have made and are making to our nation. The event was coordinated by the Special Emphasis Program in the Office of Economic Impact and Diversity (ED).

"Today, we are honoring a large element of our diverse workforce and of our Nation's diverse society—those men and women who put their lives on the line to defend the principles and the freedoms we celebrate," Secretary of Energy Spencer Abraham told Department employees. "I am sure the veterans at DOE know that their colleagues remember their contribution and that we are grateful for it."

Noemi Pizarro-Hyman, a U.S. Army veteran and National Program Manager for People with Disabilities, Office of Diversity Management and Equal Employment Opportunity, Department of Veterans Affairs (VA), was the guest speaker. Her remarks focused on educating veterans and non-veterans alike, with a special emphasis on defining veterans. William (Bill) Allen, Department Commander, American Veterans Organization (AMVETS), Washington, D.C., delivered a special salute to past and present veterans for their unyielding sacrifice and dedication to America.

In the photograph, Secretary Abraham accepts an award from the AMVETS in appreciation of DOE's support to veterans. Joining him are (l-r) Cynthia Brawner-Gaines, Special Emphasis Program Manager, ED; Commander Bill Allen, AMVETS; Noemi Pizarro-Hyman, VA; James Morrison, Co-Chair, DOE Veterans Task Force; Theresa Alvillar Speake, Director, ED; and Alvan Majors, Chair, DOE Veterans Task Force.

Secretary Abraham's remarks at the Veterans Day observance are available at **http://www.energy.gov/engine/content.do?BT_CODE=PR_SPEECHES**. ❖

40-year era comes to a close at Savannah River

After almost 40 years of safely receiving, handling, and storing spent nuclear fuel, employees of the Receiving Basin for Offsite Fuels (RBOF) at the Department of Energy's Savannah River Site have removed the last unit of fuel from the basin in preparation for the facility's closure. All of the fuel once stored in RBOF has now been moved to the Site's canyon facilities for processing or to the storage basin in the Site's L Area. At left, the final load of spent fuel leaves the facility.

In 1998, Savannah River decided to consolidate all of the stored spent fuel at multiple Site facilities into the much larger, refurbished L Basin. All the RBOF fuel was to be moved by September 2007, with a goal of completion by March 2006. With aggressive new targets set for accelerated cleanup, the goal was changed to September 2004. The task was completed nearly a year ahead of the new schedule, saving approximately $12 million per year in operating costs. ❖

Chemical diagnostic kit based on LLNL technology

A Hawaii-based company is producing chemical diagnostic kits for checking the safety of munitions. Based on technology developed at the Department of Energy's Lawrence Livermore National Laboratory (LNNL), the new kits analyze for the presence and quantity of stabilizers in propellant mixtures found in munitions, allowing inspectors to determine whether the munitions are safe for handling and storage.

The thin-layer chromatography (TLC) technology, developed by researchers in LLNL's Forensic Science Center, was licensed in July 2001 by Alu Like Enterprises LLC. The test kits, manufactured by subsidiary company Ho'olana Technologies, contain all components necessary to perform TLC in the field, including miniaturized laboratory equipment. The kits perform quantitative analysis by using digital imaging tools. Compared to traditional laboratory TLC processes, the field kits require a much smaller sample size to determine if targeted chemicals are present. At left, Rich Whipple, Forensic Science Center, LLNL, displays the elements of the chemical diagnostic kit. ❖

Science, engineering students recognized on special day

On Oct. 9, 2003, the Department of Energy's (DOE) Office of Economic Impact and Diversity hosted more than 300 high school and college science and engineering students who were recognized by the Science and Engineering Alliance (SEA) for their research during the past year. The Department, in collaboration with its Lawrence Livermore National Laboratory (LLNL) and SEA, provides students an opportunity to present the results of their work and discuss its implication for future research during the Day of Science oral and poster presentations. SEA was formed in 1991 by four Historically Black Colleges and Universities and LLNL.

The cooperation between SEA and DOE has strengthened over the past 10 years. "DOE has a unique network of world-class national laboratories whose wide range of cutting-edge technologies demonstrates the breadth of expertise at these facilities," Deputy Secretary of Energy Kyle McSlarrow (left) told the students. The caliber of DOE's national laboratories allows students to conduct quality research with outstanding scientists and to envision future careers with the Federal Government. ❖

Scrap processing begins in Hanford's K West Basin

Removal of fuel scraps from the K West Basin at the Department of Energy's Hanford Site began in October 2003, an important step in preparing the K Basins for decommissioning by 2005. Scrap consists of broken pieces of spent fuel ranging from one-quarter inch to three inches long. Over the past three years, the Spent Nuclear Fuel Project has collected over 20,000 pounds of scrap.

All scrap-processing work is done under approximately 16 feet of water that covers the fuel and all other processing equipment. Operators work over a special two-tiered scrap processing table (shown at right), using long-reach tools to push scrap onto flat screens or separators over compartments below the table. The scrap is vibrated, sorted, and sifted into various compartments. Using long-handled tools, operators slide the trays out from under the table and pour the contents into specially sized funnels and then into copper baskets. The baskets are loaded into a Multi-Canister Overpack and transported to the Cold Vacuum Drying Facility. ❖

West Valley decontamination work earns award

The Buffalo Chapter of the Project Management Institute (PMI) awarded its 2003 Project of the Year Award to West Valley Nuclear Services Company (WVNSCO) for decontamination of the Fuel Receiving and Storage Facility, which once was used to store spent fuel assemblies. WVNSCO is the site contractor at the Department of Energy's (DOE) West Valley Demonstration Project (WVDP) in New York.

Project Manager David K. Ploetz and a team of more than 50 employees cleared and packaged all debris and equipment from the facility's Fuel Receiving and Storage and Cask Unloading Pools. The team also drained and treated more than 600,000 gallons of water contained in the pools, applied a fixative to the pool walls, and grouted the pool floors. The project was completed five weeks ahead of schedule.

In the photograph, DOE-Ohio/WVDP Acting Director Timothy J. Jackson (left) congratulates Ploetz on receiving the award. ❖

Fernald completes 100th rail shipment of waste material

In November 2003, cleanup workers at the Department of Energy's (DOE) Fernald Closure Project in Ohio shipped the 100th rail shipment of low-level radioactive waste, at right, from the site's 37-acre waste pit to the Envirocare disposal facility near Clive, Utah. After nearly four years of steady operation, Fernald has shipped 5,931 railcars containing over 630,000 tons of waste. The volume of waste processed, treated, and shipped is equivalent to 31,908 truckloads.

"After evaluating several cleanup options with regulators and stakeholders, we decided that rail shipment was the safest and most efficient disposal approach considering the nature and volume of waste pit material," said Dave Lojek, DOE-Waste Pits project manager. To manage the six-year remediation project, Fernald constructed new waste handling facilities and an 11-track rail yard, and procured 250 double-lined railcars.

The use of rail transportation has allowed Fernald to expedite cleanup schedules and substantially reduce labor and shipping costs. Waste processing and shipping will be completed in 2004, and the processing facilities, dismantled in 2005. ❖

Fossil Energy presents ESS&H Achievement Awards

On Nov. 4, 2003, Assistant Secretary for Fossil Energy Mike Smith presented the Office of Fossil Energy (FE) Environment, Security, Safety and Health (ESS&H) Achievement Awards for 2003. Teams from the Department of Energy's (DOE) National Energy Technology Laboratory (NETL) and the Strategic Petroleum Reserve (SPR) received individual achievement plaques and monetary awards for their efforts.

The NETL team was recognized for its efforts in establishing the Electronic ES&H Job Hazard Survey System. The system allows workers to identify their training needs based on the hazards and risks of their jobs and allows managers to stay current with the training needs of staff. Considerable cost savings are realized with the electronic survey compared to the paper-based process previously used. The award-winning project contributes to better protection of the NETL workforce by ensuring that training needs are given priority by management.

Business processes that integrate the National Environmental Policy Act and the facility's Environmental Management System (EMS) earned the SPR team its award and recognition. The team developed an innovative approach of integrating policy into the business processes in an environmentally responsible manner. In light of President Bush's Executive Order requiring Federal organizations to establish an EMS, this project puts SPR in a leadership position in the area of environmental stewardship. This initiative has created a model for the DOE complex.

The ESS&H Achievement Award, established in 1995, honors, encourages, and publicizes Fossil Energy individuals or teams who have significantly improved efficiency, reduced costs, or improved quality in these areas. Since its inception, nominated projects have represented a cost savings to FE of over $40 million. Current and past nominated and award-winning projects may be viewed on the best practices section of FE's Office of Environment, Security, Safety and Health intranet site at **http://esh.fe.doe.gov/**. ❖

NETL award-winning team (l-r): Sue Willard, Martin Dombrowski, Jim Wachter, and Bill Lowry.

SPR award-winning team (l-r): Dan Kelley; Bill Vierling; Mike Huff; Hoot Gibson, SPR Project Manager; Bill Bozzo; Nate Ellis; and Brent Smith. Not pictured is Kathy Batiste.

DOE-funded researchers achieve genomics advance

Researchers funded by the Department of Energy's (DOE) "Genomes to Life" program have achieved a significant scientific advance in their efforts to piece together DNA strands. The Institute for Biological Energy Alternatives (IBEA) has succeeded in synthesizing the genome of and creating an active phage, a harmless microscopic virus that infects bacteria. This was accomplished in 14 days from start to finish, reducing the time required to synthesize such a microbe from many months, even years, to days. An article by Dr. Craig Venter, IBEA head, and his IBEA colleagues describing their accomplishment is in press with the *Proceedings of the National Academy of Sciences*.

"This research is a next logical step in the efforts to understand the key elements that comprise a biological system," Secretary of Energy Spencer Abraham said. "This is a major goal of the biological research carried on by the Nation's major public and private research organizations, including…DOE's Office of Science."

The Biological and Environmental Research program office in the Office of Science funds the IBEA research as part of the Genomes to Life program. In September 2002, DOE awarded a three-year $3 million grant to IBEA to develop a synthetic genome, as part of IBEA's efforts to use biology and genetics to reduce carbon dioxide emissions and to produce cost-effective, efficient biological energy sources. In April 2003, DOE increased IBEA's funding by $9 million over three years. With the new funding, IBEA scientists will determine the genetic sequences of all the microorganisms occurring in a natural microbial community.

A special subcommittee of DOE's Biological and Environmental Research Advisory Committee will conduct a thorough review of IBEA's research to recommend ways to accelerate this research and identify the full range of potential benefits to energy missions. The new subcommittee will be chaired by Dr. Ray Gesteland, Vice President of Research and Professor of Genetics, University of Utah.

The Genomes to Life program aims to use DOE's computational capabilities and research facilities to understand the activities of single-cell organisms on three levels: the proteins and multi-molecular machines that perform most of the cell's work; the gene regulatory networks that control these processes; and microbial associations or communities in which groups of different microbes carry out fundamental functions in nature. More information on the program is available at **http://www.doegenomestolife.org**. ❖

Education NOTES

Undergraduates representing more than 40 colleges and universities gave a record number of presentations at the 14th annual Symposium for Undergraduates in Science, Engineering and Mathematics held by the Department of Energy's **Argonne National Laboratory**, Oct. 24-25, 2003. The event was organized by Argonne's Division of Educational Programs and Central States Universities, Inc. Students presented papers in a dozen disciplines, ranging from cell biology to nuclear physics. Symposium organizers sent out 4,000 calls for abstracts to Midwestern colleges and universities with two-to-four-year programs. Their efforts culminated in a list of 138 papers—the largest number of student presentations in the event's history. The symposium also featured keynote talks by prominent scientists on how their research is providing new insights about how the world works.

Scientists from the Department of Energy's **Los Alamos National Laboratory** (LANL) in New Mexico took the cold, hard hand of science to local elementary, middle, and high schools in November 2003. Armed with a box of robot kits and a cumulative 100-plus years of professional experience, they presented a show-and-tell that turned some students' heads. The Los Alamos Space Science Outreach (LASSO) Program and LANL's Center for Space Science and exploration sponsored the outreach effort. The researchers explained some of the basic science principles, showed how robotics and related sciences are important to the nation's space exploration effort, reviewed safety checklists, and helped students build their own small robots. For more information on the LASSO program, visit **http://set.lanl.gov/programs/lasso/**.

Assistant Secretary for Energy Efficiency and Renewable Energy David K. Garman visited Thurgood Marshall Academy Public Charter High School in Washington, D.C., on Oct. 28, 2003, to **introduce science students to hydrogen and fuel cell technology**. "Investing in our students today will insure the transformation of our energy future from one dependent on foreign petroleum to one that utilizes the most abundant element in the universe—hydrogen," Assistant Secretary Garman said. "It is important that we begin to prepare and inspire the next generation of scientists and engineers who will lead the transition to a hydrogen-based economy and build hydrogen fuel cell powered cars." Hydrogen and fuel cell information for students and teachers is available at **http://www.eere.energy.gov/hydrogenandfuelcells/education.html**. ❖

Students explore science at INEEL expo

Science and technology came alive for more than 7,500 visitors—including 5,000 students from 32 Idaho schools—to the third annual INEEL Science and Engineering Expo sponsored by the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL). From a mockup of a futuristic space transport vehicle to an airworthy replica of the Wright brothers' flyer and a robot designed for urban search-and-rescue operations, the demonstrations and exhibits gave students a hands-on opportunity to explore the worlds of science, mathematics, engineering, and technology.

INEEL sponsored the three-day Expo in partnership with the American Chemical Society during National Chemistry Week, Oct. 23-25, 2003. The Expo was supported by businesses, schools, and individuals. More than 60 interactive exhibits, science experiments, simulations, and presentations were featured in the newly refurbished Museum of Idaho, a "big top" tent, and other nearby venues in downtown Idaho Falls.

Students explored the wonders of science during the third annual INEEL Science and Engineering Expo.

About 100 experts staffed learning stations, including INEEL scientists, researchers, and engineers participating at 23 interactive exhibits. Former National Aeronautics and Space Administration astronaut Millie Hughes-Fulford, who conducted medical experiments aboard the Space Shuttle Columbia in 1991, kicked off the Expo with a look at the earth's atmosphere and beyond.

Through the Expo, businesses and industry joined professional societies and universities to interact with students in the massive educational outreach effort. The Expo is geared toward students in grades five to nine, with the objective of stimulating interest in scientific and technological careers. Designed to augment the traditional science curriculum in K-12 schools, all Expo activities are linked to national and state science education content standards.

In three years, the Expo has grown from a one-day event involving about 900 students to a three-day extravaganza reaching thousands of students and teachers in eastern Idaho. Using the INEEL Expo as a blueprint, the College of Southern Idaho, Twin Falls, organized a similar one-day science exposition this fall for 1,000 sixth graders in south-central Idaho. ❖

ARM Program opens information kiosk in Alaska

At the Department of Energy's (DOE) Atmospheric Radiation Measurement (ARM) Program field research sites in northern Alaska, scientists continuously collect new data on cloud and radiative processes in high latitudes. These data are important assets for understanding arctic climate, refining global climate models, and simulating climate change.

On Oct. 9, 2003, DOE unveiled to the Barrow, Alaska, community a new touch-screen kiosk that provides an interactive forum for weather enthusiasts of all ages to learn about clouds, solar energy, and climate from a cultural perspective. The kiosk, entitled "Climate Change: Science and Traditional Knowledge," was developed by the ARM Education and Outreach staff in partnership with the Iñupiat Heritage Center in Barrow and community members. Located at the center's museum, the kiosk allows the ARM Program to present general information on climate change as well as more in-depth interactive modules for students.

"The dedication was a resounding success," said Wanda Ferrell, ARM Program Director, DOE Office of Science. "We were very pleased to see a full complement of [Iñupiat] Elders at the event. Because their traditional influence on the community is so great, we expect the kiosk to be a respected and well-used feature of the museum for a long time to come."

Arctic residents and scientists are seeing and experiencing environmental changes that include increased thawing of permafrost, changes in the extent and thickness of sea ice, shifts in patterns of rainfall and snowfall, and changes in tundra growth. Effects related to these changes include increased erosion, changes in tundra health, and impacts on traditional activities.

The ARM Program is involved in K-12 education and public outreach activities in the communities that host the program's data-gathering field sites. The integration of traditional knowledge into classroom science brings a more balanced approach to the learning environment. ARM's work on the North Slope of Alaska includes curriculum development, teacher enrichment, teacher workshops, and integrating climate information from the ARM sites around the world for classroom projects.

Marja Springer, project leader for the ARM kiosk in Barrow, Alaska, describes the kiosk to attendees at the dedication.

Additional information about the ARM Program is available at **http://www.arm.gov**; click on "Outreach" for information on education and community outreach. ❖

DOE oil field takes pioneering role in large-scale CO_2 sequestration

The Department of Energy's (DOE) "Teapot Dome" oil field in Wyoming will anchor a pioneering scientific venture that ultimately could prove one option of large-scale, region-wide carbon sequestration. The project will be managed by DOE's Rocky Mountain Oilfield Testing Center (RMOTC), which operates Teapot Dome, also known as Naval Petroleum Reserve No. 3.

RMOTC will link the concepts of carbon sequestration and enhanced oil recovery through underground injection of carbon dioxide gas (CO_2) into older fields to boost production that has declined. The research project also will involve Anadarko Petroleum Corp. and several universities and national laboratories.

The Teapot Dome project could grow to be one of the three largest sequestration tests in the world. With a potential surface area spanning 50 square miles, the test area encompasses the contiguous Salt Creek oil field of Anadarko Petroleum Corp. Anadarko's plans for enhanced oil recovery there make the Teapot Dome investigation possible.

Anadarko plans ultimately to inject about 7,200 tons a day of CO_2 gas into the declining, century-old Salt Creek field, which will boost production from about 5,300 barrels a day to 35,000 barrels. The company is building a 125-mile pipeline extension to move byproduct gas there from its origin at the Shute Creek natural gas processing plant in western Wyoming. A short spur will deliver CO_2 for injection at Teapot Dome. RMOTC will piggyback Anadarko's Salt Creek effort to minimize government costs. In-kind contributions from Anadarko and others may total about two-thirds of the early costs.

Among its potential benefits, the RMOTC project would:

- immediately store large amounts of byproduct carbon;
- serve as a national field laboratory;
- develop a prototype for large scale sequestration; and
- establish the means to evaluate and locate potential Rocky Mountain sequestration reservoirs.

CO_2 injection would begin about 2006 and continue for seven to 10 years. DOE laboratories participating in the project are Idaho National Engineering and Environmental Laboratory and Lawrence Berkeley, Lawrence Livermore, and Los Alamos National Laboratories. ❖

Research DIGEST

Hundreds of millions of plastic food and beverage containers are manufactured each year in the United States. All of these packages must undergo sterilization, which at present is done using high temperatures or chemicals. Both methods have drawbacks. Chemicals often leave a residue that can affect the product's safety and taste, and heat requires costly heat-resistant plastics that can withstand the high temperatures. Scientists at the Department of Energy's **Princeton Plasma Physics Laboratory** believe plasma could be the answer. A team is conducting a small-scale research project studying plasma sterilization. This method, if successful, could be used to sterilize food and beverage containers at enormous savings to manufacturers. (Tony DeMeo, 609-243-2755)

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A mouse population that once totaled more than 200,000 is down to zero at the Department of Energy's **Oak Ridge National Laboratory** (ORNL), but it is all part of the plan. Beginning in the next few weeks and continuing for several years, the mouse colony will be replenished from stocks of embryos frozen in special freezers chilled by liquid nitrogen. The stock consists of more than 900 strains, some dating back to the 1940's. About 300 strains will be restocked. The new mice will be housed in ORNL's brand new 30,000-square-foot pathogen-free Russell Laboratory for Comparative and Functional Genomics. Because the facility is sterile, ORNL will be able to exchange its specially mutated mice with other research institutions and be eligible for research funding previously unavailable to the laboratory. (Ron Walli, 864-576-0226)

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Engineers at the Department of Energy's **Sandia National Laboratories** have designed a miniature power supply device with potential applications in drug delivery systems, medicine, portable detection and analysis, and a host of electronic devices. The device, including the circuit board assembly, measures 0.6 (width) by 1.45 (length) by 0.8 (height) inches in overall size. It serves as a miniature modular high voltage power supply system and features voltage regulation, current sinking, current monitoring, and electronic float—a combination unavailable on any existing supply. The device was designed specifically for powering Sandia's μChemLab™ device—a portable, hand-held chemical and biological detection system—at high voltages and low currents with low power consumption. Sandia designed the power supply when it found no existing commercial products that met the system's requirements. Industry partners are being actively solicited by Sandia to license, manufacture, and sell the new technology. (Mike Janes, 925-294-2447) ❖

NEW Publications

Office of Inspector General (IG) reports: ***Transuranic Waste Retrieval and Processing at the Hanford Site*** (DOE/IG-0624); ***Reporting of Security Incidents at the Lawrence Livermore National Laboratory*** (DOE/IG-0625); ***Management Challenges at the Department of Energy*** (DOE/IG-0626). 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**. ❖

DOE seeks partners for nuclear plant licensing

The Department of Energy (DOE) is moving ahead with the next major phase of the Nuclear Power 2010 program, seeking formal applications from nuclear generating companies to partner with DOE in licensing activities that would enable a new nuclear plant to be ordered and licensed for deployment early in the decade. The activities include preparation and submittal of combined construction and operating ("one-step") license applications to the Nuclear Regulatory Commission and certification of advanced, Generation III+ nuclear plant designs.

"Nuclear power is clean energy and we want to expand its use in the U.S.," Secretary of Energy Spencer Abraham said. "It accounts for 20 percent of America's energy needs. This phase of the program could lead to licensing and construction of the first new nuclear plant in this country since the 1970s."

Under the Nuclear Power 2010 initiative, DOE matches industry investments over the next several years to demonstrate the key regulatory processes designed to make new plants more efficient, effective, and predictable. The program currently is working with three U.S. utilities to obtain permits for sites at which new plants could be built. In this latest phase of the initiative, DOE is seeking proposals from teams led by U.S. power generating companies to develop and implement plans to license and build new plants.

Copies of the solicitation number DE-PS07-04ID14435 can be obtained from DOE's interactive procurement web site, **http://e-center.doe.gov**. Information on DOE's nuclear programs is available at **http://www.nuclear.gov**. ❖

People IN ENERGY

Eric W. Abelquist, Director of the Radiological Safety, Assessments, and Training Program at the Department of Energy's Oak Ridge Institute for Science and Education, is the 2003 recipient of the Elda E. Anderson Award from the Health Physics Society. The award is presented each year to an outstanding young member of the Society for excellence in research or development, discovery or invention, or other significant contributions to the health physics profession.

Secretary of Energy Spencer Abraham has appointed **William F. Martin** as Chairman of the Department of Energy's (DOE) Nuclear Energy Research Advisory Committee, an independent panel that provides advice on the direction of DOE's nuclear program. Martin, a leading U.S. energy economist, is the founder and Chairman of Washington Policy and Analysis. He served as Deputy Secretary of Energy and Executive Secretary of the National Security Council under President Ronald W. Reagan.

Frances Marshall has been named Manager of the Irradiation Test Programs Department at the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL). Marshall, an engineer with over 20 years experience in the nuclear field, previously was Manager of INEEL's Engineering Specialists Department.

Valerii Vinokur, a Senior Scientist and Director of the Materials Theory Institute at the Department of Energy's Argonne National Laboratory, is the winner of the prestigious Humboldt Research Prize for his work in the area of superconductivity and nanophysics. The Alexander von Humboldt Foundation awards the annual prize to scientists and scholars in recognition of their academic qualifications and lifetime achievements. Winners receive approximately $90,000 and are invited to carry out research projects of their choice in Germany in cooperation with colleagues.

Physicists **Robert Kaita** and **Neil Pomphrey** of the Department of Energy's Princeton Plasma Physics Laboratory (PPPL) have been elected Fellows of the American Physical Society in recognition of their contributions to the field of plasma physics. Kaita is the co-principal investigator of the Current Drive Experiment-Upgrade and Head of Diagnostic Operations for the National Spherical Torus Experiment at PPPL. Pomphrey's current work at PPPL focuses on the National Compact Stellarator Experiment.

Senior Physicist **Li Hua Yu** of the Department of Energy's Brookhaven National Laboratory (BNL) is the recipient of the 2003 Free Electron (FEL) Prize sponsored by the 25th International Free Electron Laser Conference. The award—consisting of $3,000, a certificate, and a plaque—was given in recognition of Yu's outstanding contributions to FEL science and technology. Yu joined BNL as a research associate in 1984 and rose through the ranks to become a senior physicist in 2000.

Two researchers in the Fundamental Science Directorate at the Department of Energy's (DOE) Pacific Northwest National Laboratory have been elected Fellows of the American Association for the Advancement of Science: **Tom Ackerman**, a Battelle Fellow and chief scientist for DOE's Atmospheric Radiation Measurement program, and **Paul Ellis**, a Laboratory Fellow and scientist in the field of magnetic resonance spectroscopy.

William J. Taylor has been appointed Director of the Department of Energy's (DOE) Fernald Closure Project near Cincinnati, Ohio. He will lead the final cleanup and closure of the former uranium metals production facility. Previously, Taylor was Assistant Manager for Waste Treatment and Immobilization Plant at DOE's Office of River Protection in Richland, Wash.

David Eaglesham, Chief Technologist in the Chemistry and Materials Science Directorate at the Department of Energy's Lawrence Livermore National Laboratory, has been named Vice President (President-Elect) of the Materials Research Society. The nonprofit organization brings together scientists, engineers, and research managers from industry, government, academia, and research laboratories to share findings on new materials of technological importance.

Dan Stachelski and **Terry Shaw**, employees at the Department of Energy's (DOE) West Valley Demonstration Project in New York, have been recognized for their involvement in and dedication to the national DOE Voluntary Protection Program (VPP). Stachelski, a Certified Industrial Hygienist and Certified Safety Professional for the DOE Ohio Field Office at West Valley received the DOE-VPP Federal Champions Award. Shaw, a decontamination operator for site cleanup contractor West Valley Nuclear Services Company, received the DOE-VPP Outreach Award. ❖

CORRECTION

DOE This Month, October 2003, page 4, lists Lawrence Berkeley National Laboratory as Los Alamos National Laboratory's (LANL) partner and co-winner of the R&D 100 Award for the Biological Aerosol Sentry and Information System. Lawrence Livermore National Laboratory was LANL's partner on the project and co-winner of the award. ❖

Milestones

YEARS OF SERVICE
November 2003
Headquarters

Economic Impact & Diversity – Linda C. Rudnick (35), Effie A. Young (35). **Energy Efficiency & Renewable Energy** – Sheila A. Perez (40). **Environment, Safety & Health** – Faye R. Johnson-Langhorn (30), Sharon L. Brown (25). **FERC** – Michael A. Coleman (30), Thomas F. Papsidero (30), George H. Taylor, Jr. (30), Barbara K. Christin (25), Gregory M. Ganey (25), Debra A. Lowe (25), Cynthia A. Marlette (25), Denise H. Tabbs (25), Laura L. Turner (25), Richard A. White (25). **Fossil Energy** – John D. Shages (30). **General Counsel** – James W. Rowe (30).

Inspector General – Vincent V. Labon, Jr. (35), Herbert Richardson (30). **Management, Budget & Evaluation** – James R. Morrison (35), Sterling A. Ross (35), Linda S. Sapp (35), Eli B. Bronstein (30), Dean G. Olson (30), E. Stephen Logan (25). **NNSA** – Thomas H. Beckett (35), Shirley S. Greear (30), Charles H. Hembree (30), Rebecca Rivera (30), Kathleen Y. Foley (25), Diane McDonald (25). **Nuclear Energy** – Sylvia J. Hardenburgh (35). **Policy & International** – Jacqueline Z. Hubbard (25). **Science** – Joseph V. Martinez (30), Theda J. Moore (25).

Field
Albany Research Center – William D. Riley (30), David K. Smith (25). **Bonneville Power** – Robyn M. Edwards (35), Robert E. Kiser (35), David D. Kittrell (35), Dennis A. Stevens (35), Robert R. Vose (35), Montgomery D. Bonner (30), Wrayanne Layne (30), Raymond W. Ronald (30), Sandra K. Smith (30), Gary R. Swoboda (30), Curtis A. Wilkins (30), Marc H. Bauman (25), Cynthia D. Franke (25), Patricia A. Freeman (25), Stephen R. Larson (25), Linda I. McDonald (25), Gerald A. Stege (25), Joan F. Traversie (25).

Chicago – Bradley W. Smith (25). **Idaho** – Stephen R. Pulley (35), Elizabeth A. Weyler (30), Carey R. Warren (25), Sue Whited-Holverson (25). **Los Alamos Site/NNSA** – Raymond A. Ortiz (30). **NETL** – Patricia F. Kelly (30), Thomas J. Obrien (25). **NNSA Service Center** – Peggy S. Kaniho (30), Richard W. Phillips (25). **Oak Ridge** – Rickey E. Daniels (30), Rosa Trivette (25). **Ohio** – Michael J. Kepler (30). **Richland** – Doroteo M. Collado (35), Eugene W. Higgins (25).

Sandia Site/NNSA – Beatrice V. Pineda (25). **Savannah River** – Timothy J. Armstrong (30), Malcolm E. Gentry (30), Jessie E. Morgan (30), Howard L. Pope (30). **Southeastern Power** – Jane A. Crenshaw (30). **Southwestern Power** – Linda A. Morris (30). **Strategic Petroleum Reserve** – Gerald W. Labove (25), Sharon A. Weiss (25). **Western Area Power** – Roland V. Erickson (30), Jo A. Penunuri (30). **Y-12 Site/NNSA** – James R. Martin II (25).

RETIREMENTS
October 2003
Headquarters

Chief Information Officer –Talmage B. Corbett, Jr. (34), John L. Przysucha (34). **Congressional & Intergovernmental** – Marguerite V. Adams (31), Barbara L. Barnes (37), Ellen K. Ocheltree (32), Cynthia K. Woodland (22). **EIA** – John E. Vetter (32). **FERC** – Edward M. Meyers (30). **Fossil Energy** – Donald A. Juckett (14). **NNSA** – James S. Gray (29).

Field
Bonneville Power – Leo E. Baker (32), Jon R. Biemer (23), Danny A. Bradley (27), Barton N. Evans (26), Michael A. Jeffries (33), Charles F. Jones (29), Bruce E. Lavier (31), Frances J. Petersen (25), Patricia A. Spray (25), Allen A. Stroklund (26), Monica E. Wardwell (27). **Idaho** – John S. Morton (31). **Carlsbad** – Rita J. Smotherman (25). **Ohio** – Stephen J. Albracht (25), Debra L. Hoover (29), Lorinda M. Leduc (27).

Richland – Larry G. Musen (27), Robert N. Reid (30), Robert Southworth (27). **Rocky Flats** – Richard G. Bartlett (31), Jane M. Monroe (14), Dero W. Sargent, Jr. (14). **Savannah River** – Marvin L. Garcia (31), John W. Geiger (35), George W. Painter (30). **Southeastern Power** – Oscar F. Knighton (28). **Western Area Power** – Joe M. Albrecht, Jr. (37), Deanna L. Wendt (35).

November 2003
Headquarters

Congressional & Intergovernmental – Janet M. Ayton (41), Barbara A. Crapa (20). **Energy Efficiency & Renewable Energy** – Robert H. Brewer (35). **NNSA** – Jon R. Lindgren (19).

Field
NNSA Service Center – Jerry F. Bledsoe (25). **Rocky Flats** – Gary N. Huffman (30). **Western Area Power** – Robert G. Gray (35). ❖

NEW ON THE Internet

2004 Fuel Economy Guide

The latest edition of the web-based Fuel Economy Guide is available on a new and improved web site, **http://www.fueleconomy.gov**. Developed cooperatively by the Department of Energy and the Environmental Protection Agency, the web site features fuel economy, emissions, and safety data for model year 2004 vehicles, as well as fuel-saving tips. Special sections provide links to information on hybrid and fuel cell vehicles. Printed copies of the guide will be available later at car dealerships, public libraries, and credit unions nationwide.

Sandia Chem/Bio program

The Department of Energy's Sandia National Laboratories has launched an external web site devoted to its Chemical/Biological Defense (Chem/Bio) program. The site, **http://www.ca.sandia.gov/chembio**, is a prelude to a new, revamped page Sandia is developing to provide information to the public on its wider range of homeland security activities. The Chem/Bio page offers information and background on technology projects, facility protection, urban monitoring tools, and systems analysis studies. ❖

E-filing streamlines natural gas import, export approval

Under provisions of the Natural Gas Act of 1938, anyone in the United States wanting to import or export natural gas to or from another country first must obtain U.S. Government authorization through the Department of Energy (DOE). Traditionally, paper forms are submitted by mail or fax. Now, prospective natural gas importers and exporters can request authorization using a new "E-filing" system available on DOE's Office of Fossil Energy web site at **http://www.fossil.energy.gov**, then click on "Natural Gas Regulation."

"We are launching this new Internet-based system at a time when it is becoming increasingly important that the United States expedite its regulatory processes for trading in global natural gas markets," Secretary of Energy Spencer Abraham said. "By improving digital communications… we can streamline the approval process for getting these gas supplies into our market and to consumers."

Initially, the electronic process will be available for the most common requests, specifically, short-term authorizations to trade with Mexico and Canada, or for importing liquefied natural gas. DOE processes more than 100 of these applications each year. DOE ultimately plans to incorporate provisions for long-term import authorizations into the online process.

December 2003

AROUND DOE

INEEL earns DOE safety performance award

For the second year in a row, the Department of Energy's (DOE) Idaho National Engineering and Environmental Laboratory (INEEL) has received the Department's "Star of Excellence," one of the nation's highest awards for safety performance. The award signifies that INEEL met the goals of DOE's Voluntary Protection Program (VPP) and demonstrated strong involvement in VPP mentoring and community outreach. The DOE-VPP is managed by the Office of Environment, Safety, and Health.

The Star of Excellence is used throughout the DOE complex to encourage workers to participate in and "own" the safety processes in the workplace. INEEL is recognized for having an injury/illness rate at least 75 percent lower than the average in its industry code, as determined by the U.S. Bureau of Labor Statistics.

DOE, Washington State agree on Hanford waste

After several months of negotiations, the Department of Energy (DOE) and the State of Washington recently reached agreement on the retrieval, storage, and processing of mixed waste at DOE's Hanford Site. The agreement would make significant changes to the M-91 milestone series of the Hanford Federal Facility Agreement and Compliance Agreement, also known as the Tri-Party Agreement. Area Tribes and the Hanford Advisory Board will be consulted and public comments considered prior to the agreement becoming final.

Once final, the agreement would require DOE to:

- complete retrieval of contact-handled low-level and transuranic waste by 2010;
- complete retrieval of remote-handled low-level and transuranic waste by 2018;
- complete treatment by December 2009 of contact-handled mixed low-level waste currently in above-ground storage and that which has been retrieved as of June 2009; and
- classify and treat newly generated mixed low-level waste.

The agreement also calls for the parties to seek an expedited judicial resolution of their dispute regarding whether the State can require treatment of mixed transuranic waste destined for DOE's Waste Isolation Pilot Plant in New Mexico. ❖

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

Official Business