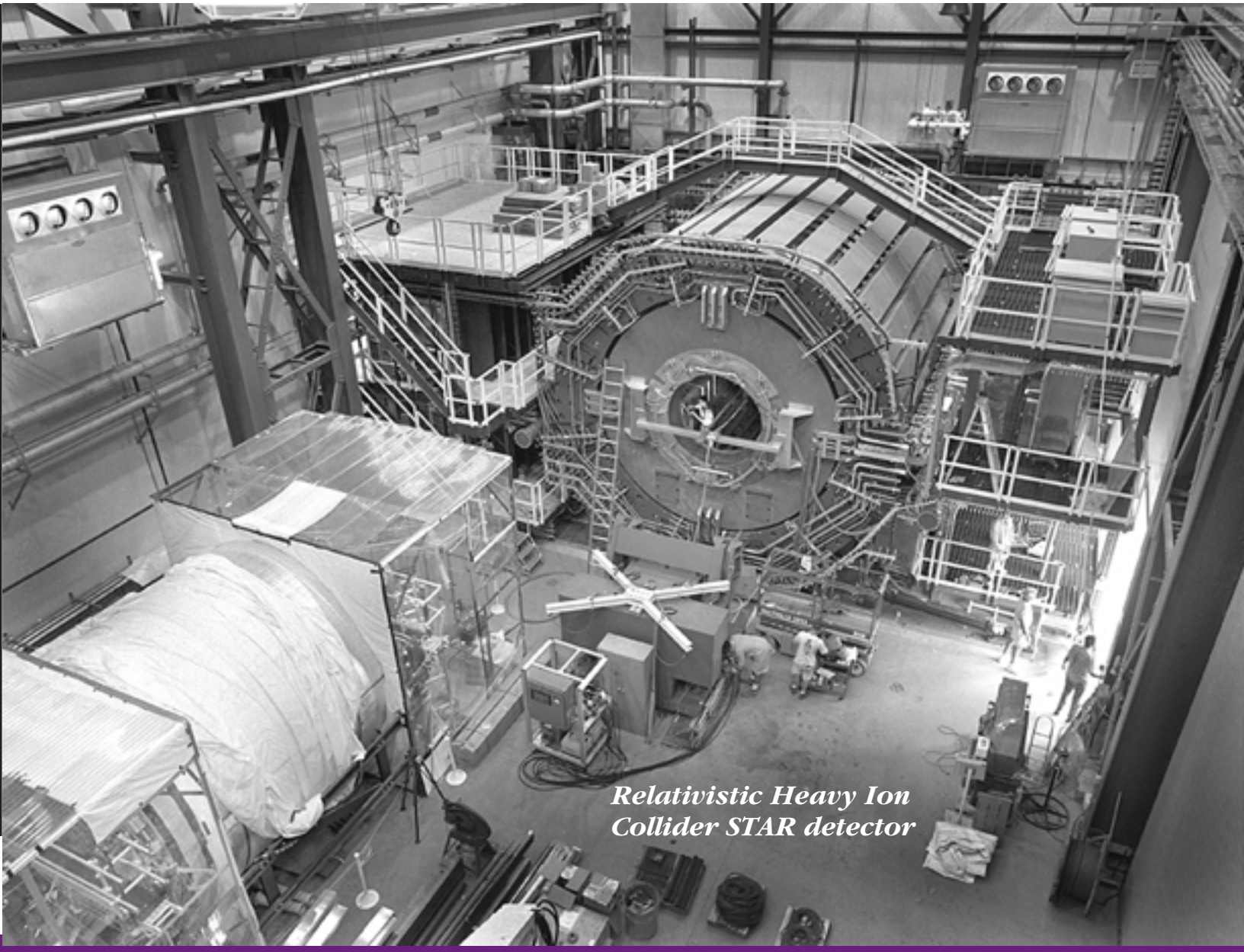
DOE This Month

U.S. DEPARTMENT OF ENERGY

JULY 2000



Relativistic Heavy Ion Collider STAR detector

General Gordon sworn in to head NNSA

Scientists complete human genome working draft

DOE, Navy achieve nuclear training milestone

DOE This Month

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.

Bill Richardson
Secretary of Energy

Natalie Wymer
Director, Office of Public Affairs

Bonnie Winsett
Editor

Visual Media Group
Graphic Design

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-0023-5
Vol. 23, No. 5

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

Inside

4 At the direction of President Bill Clinton, the Department of Energy is establishing a heating oil component of its Strategic Petroleum Reserve in the northeastern United States to protect citizens from possible fuel shortages this winter.

The Naval Nuclear Propulsion Program, a joint Department of Energy/United States Navy program, recently marked a significant milestone—100,000 nuclear trained sailors. **5**

6 From June 27-30, 2000, the largest fire to hit the Department of Energy's Hanford Site in Washington in many years swept through extensive portions of the site. Efforts to aid fire victims were bolstered by an $80,000 donation from four Hanford contractors.

On our cover

On June 12, 2000, scientists at the Department of Energy's Brookhaven National Laboratory detected head-on collisions between gold nuclei in the Relativistic Heavy Ion Collider (RHIC), the world's newest and biggest particle accelerator for studies in nuclear physics. Pictured is the collider's STAR detector which produced the first spectacular image of particles streaming from a collision point.

RHIC aims to recreate the conditions of the early universe to gain insights into the fundamental nature of matter—and extend the boundaries of scientific understanding through the 21st century and beyond.

For more on this scientific achievement, see page 4.

Gordon begins tenure as Under Secretary and NNSA Administrator

On June 28, 2000, Secretary of Energy Bill Richardson swore in General John A. Gordon as the Department of Energy's first Under Secretary for Nuclear Security and Administrator of the National Nuclear Security Administration (NNSA). A public swearing-in ceremony was held July 12.

"I have every confidence that General Gordon will do an outstanding job of bringing a unified focus to our national security programs," Secretary Richardson said. "He has my full support in undertaking this challenging and important assignment." Secretary Richardson has asked General Gordon to conduct a top-to-bottom review at the Department's Lawrence Livermore, Los Alamos, and Sandia National Laboratories.

Prior to assuming his post at the Department, General Gordon served from October 1997 to June 2000 as Deputy Director of Central Intelligence at the Central Intelligence Agency (CIA). He served as Associate Director of Central Intelligence for Military Support at the CIA from September 1996 to October 1997.

In addition to serving as the second ranking official in the government's intelligence community, General Gordon's long and distinguished career in the national security field includes weapons development, long-range planning, stockpile management, and arms control. He also was a physicist and research associate at the Department's Sandia National Laboratories.

General Gordon was one of three people recommended for the NNSA Administrator position by a high-level search committee tasked by Secretary Richardson to find qualified candidates. President Clinton nominated General Gordon on May 3, 2000; and the United States Senate confirmed him on June 14, 2000. ❖

Secretary Richardson administers the oath of office to General Gordon on June 28, 2000, as his wife Marilyn holds the Bible.

Working draft of human genome completed

On June 26, 2000, President Bill Clinton and British Prime Minister Tony Blair announced that the international Human Genome Project and Celera Genomics Corporation both had completed a "working draft" of 95 percent of the human genetic structure. President Clinton congratulated the scientists working in both the public and private sectors on this landmark achievement.

"Today's announcement is an extraordinary accomplishment involving the creative efforts of thousands of scientists from all over the world over a period of 14 years," said Secretary of Energy Bill Richardson. "I am extremely proud of the Department of Energy's role in the publicly funded human genome effort, from initiating the human genome program in the 1980's to completing the draft sequence of three chromosomes last April.

"Today's milestone is just the beginning and will open many new doors of discovery in the life sciences. From the ability to better diagnose, prevent and treat disease, to developing improved biomass-based energy sources, to helping clean up toxic waste, genomics research will transform society in the years ahead."

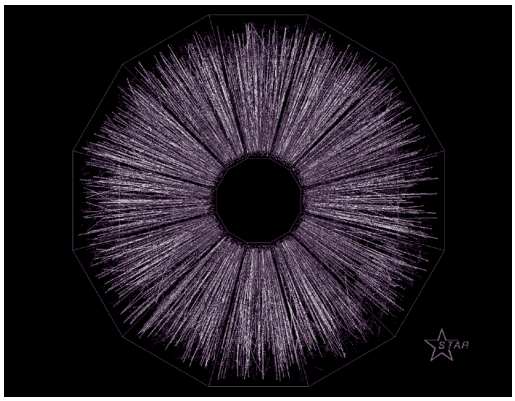
The Human Genome Project was begun in 1986 by Department of Energy (DOE) scientists to explore newly developing DNA analytical technologies. The National Institutes of Health (NIH) joined the project in 1988 and a joint effort was formally announced in 1990. In addition to DOE and NIH, the international project includes scientists at 16 institutions in France, Germany, Japan, China, Great Britain, and the United States.

The aim of the publicly funded international Human Genome Project is to decode the entire sequence of a reference three billion DNA bases—called the genome—to understand what it all means and to apply the knowledge to improve medicine, health care, and biological science. The Human Genome Project, which completed its version of the working draft two years ahead of schedule and under budget, will continue its longstanding practice of making all of its sequencing data available to publicly and privately funded researchers worldwide at no cost. The draft version of the human genome is available from the National Center for Biotechnology Information, **http://www.ncbi.nlm.nih.gov/genome/seq/HsHome.shtml**.

Additional information on the Department's human genome program is available at **http://www.sc.doe.gov/geno_res/index.htm**. ❖

Brookhaven collider begins smashing atoms

Scientists at the Department of Energy's Brookhaven National Laboratory have begun detecting head-on collisions between gold nuclei in the Relativistic Heavy Ion Collider (RHIC), the world's newest and biggest particle accelerator for studies in nuclear physics. The first spectacular images of particles streaming from a collision point were produced by the STAR detector on June 12, 2000. Collisions were recorded by other RHIC detectors a few days later.



The collision image produced by the STAR detector.

"We are crossing into a new frontier of scientific inquiry," said Secretary of Energy Bill Richardson upon hearing of the first collision. "Scientists from around the world will use this facility to answer some of the most basic questions about the properties of matter and the evolution of our universe."

The collider aims to recreate the conditions of the early universe to gain insights into the fundamental nature of matter—and extend the boundaries of scientific understanding through the 21st century and beyond. Scientists will use data collected during the collisions to explore the particles known as quarks and gluons that make up protons and neutrons. The high temperatures and densities achieved in the collisions should, for a fleeting moment, allow the quarks and gluons to exist "freely" in a soup-like plasma, a state of matter that is believed to have last existed millionths of a second after the Big Bang, when the universe first formed.

RHIC's unique capabilities stem from its size and dual-ring design. Inside the underground accelerator tunnel are actually two separate accelerator rings, each 2.4 miles in circumference and composed of some 1,740 superconducting magnets. These magnets guide ions of gold atoms—gold nuclei that have been stripped of their electrons—around each of the circular rings in opposite directions at nearly the speed of light. The ions are then stored circulating in the rings at near light speed and allowed to collide at points where the two rings cross.

Thousands of particles are emitted following each head-on collision. Sophisticated detectors have been constructed at four of six collision points around the ring to gather and decipher the enormous volumes of data that are recorded regarding the properties of these emitted particles. Two large detectors—STAR and PHENIX—are several stories tall. The other detectors—BRAHMS and PHOBOS—are smaller and more specialized.

RHIC scientists will be analyzing data collected by these detectors during continuous runs of the heavy gold ions in the collider throughout the summer. The scientists anticipate releasing the first results from those analyses sometime at the beginning of next year.

Additional information is available at **http://www.rhic.bnl.gov/**. ❖

DOE to set up home heating oil reserve

On July 10, President Bill Clinton directed Secretary of Energy Bill Richardson to establish a heating oil component of the Department of Energy's Strategic Petroleum Reserve (SPR) in the northeastern United States. The regional reserve is intended to help protect Americans from possible fuel shortages this winter.

"A home heating oil reserve in the Northeast will serve as a much needed insurance policy so that consumers won't be left literally out in the cold this winter," Secretary of Energy Richardson said.

Under existing legal authority, the Department will exchange crude oil from the SPR with companies willing to provide up to 2,000,000 barrels of emergency heating oil stocks and the necessary interim storage facilities in the Northeast in time for this winter's heating season. Agreements will be awarded to those companies offering the best exchange value for the crude oil, which will come from the Reserve's West Hackberry site in Louisiana.

On July 19, the Defense Energy Support Center, acting as DOE's contracting agent, issued a solicitation for companies to submit offers. DOE expects to have the heating oil stocks in place in October or as soon thereafter as possible.

Also at the President's direction, the Department on July 10 sent to Congress an amendment to the Strategic Petroleum Reserve Plan that would authorize the permanent establishment of a 2,000,000 barrel home heating oil reserve in the Northeast. Secretary Richardson currently has the legal authority to obtain both crude oil and refined product for the SPR and to store these products in interim storage facilities as he deems appropriate. Once the SPR plan amendment becomes effective, after a 60-day Congressional review period, the Department will be authorized to store home heating oil in the Northeast on a permanent basis. The SPR plan amendment is available at **http://www.fe.doe.gov/spr/planamendment6.html**. ❖

INNOVA-Link connects research community

On May 1, 2000, at a "ribbon-cutting" ceremony at the Pittsburgh Supercomputing Center, Under Secretary of Energy Ernest J. Moniz connected two fiber optic cables and transmitted the first official message over a new high-speed fiber optic network. The network is designed to provide scientists in western Pennsylvania and West Virginia with a state-of-the-art tool for energy and environmental research.

The INNOVA-Link network will support data, video, and voice communications/links among the Department of Energy's National Energy Technology Laboratory (NETL), Carnegie Mellon University, West Virginia University, and the high-speed computing resources at the Pittsburgh Supercomputing Center (PSC). Establishing the network achieves a major milestone of the Super Computing Science Consortium (SC)^2, a partnership formed Aug. 31, 1999, under the sponsorship of DOE.

"INNOVA-Link will provide us with tomorrow's tools to enhance the nation's energy security and the clean and efficient use of natural gas, oil, and coal," Under Secretary Moniz said.

At 155 million bits per second, INNOVA-Link's fiber optic cable will give researchers throughout southwestern Pennsylvania and northern West Virginia real-time access to PSC's Cray T3E, the 20th fastest supercomputer in the world. Researchers at NETL will use computer modeling to address climate change issues associated with energy use and model next-generation power systems like Vision21 plants that will offer highly efficient power with near-zero hazardous emissions.

Under Secretary Moniz makes the final ceremonial connection completing the INNOVA-Link network. Joining him (l-r) are Lynn Layman, Facilities Manager, Pittsburgh Supercomputing Center (PSC); Ralph Roskies, PSC Scientific Director; and NETL Director Rita Bajura.

With this direct link, West Virginia University will be able to increase its wide-ranging simulation and modeling efforts in an academic environment. Carnegie Mellon University faculty and students will benefit from enhanced research and development opportunities regarding energy and the environment. ❖

DOE, Navy achieve training milestone

On June 1-2, 2000, the Naval Nuclear Propulsion Program, a joint Department of Energy/United States Navy program, marked a significant milestone—100,000 nuclear-trained sailors. Ceremonies were held at the program's two Nuclear Power Training Units (NPTU).

The NPTU, Ballston Spa is located on the Kenneth A. Kesselring Site in West Milton, N.Y. The Department's Knolls Atomic Power Laboratory oversees operation of the site's two prototype nuclear reactors, training about 800 sailors annually. Sailors are also trained on two Moored Training Ships—former Fleet ballistic missile submarines converted for training use—at NPTU, Charleston under the oversight of the Department's Bettis Atomic Power Laboratory.

Admiral Frank L. "Skip" Bowman, Deputy Administrator for Naval Reactors, National Nuclear Security Administration, and Director, Naval Nuclear Propulsion, presided over the ceremonies. Admiral Bowman called nuclear propulsion training the toughest and most selective academic training available in the military. Certification as a reactor operator is the culmination of about 18 months of fast-paced, detailed technical studies; hands-on reactor plant operations; and rigorous examinations.

The newly qualified reactor operators now join the Fleet to serve aboard the nation's nuclear-powered aircraft carriers and submarines. As President Clinton noted in a letter of congratulations for the occasion, these sailors "have earned a place among an elite group with a long, distinguished history of providing invaluable service to our nation." ❖

Admiral Bowman congratulates some of the Plant Manager's Award winners at the New York ceremony. Left to right: ET3 Eric A. Spagnola, MM3 William Z. Ingersoll, and MM3 Jared S. O'Barr.

Fire sweeps through Hanford Site

The largest fire to hit the Department of Energy's Hanford Site in Washington in many years swept through extensive portions of the site June 27-30, 2000. The fire began as a result of a traffic accident on State Route 240 as it runs through the Hanford Reservation.

By late evening June 28, the Hanford fire had burned 150,000 acres. Hundreds of Federal, State, local, Hanford, and volunteer firefighters battled the blaze, along with heavy firefighting helicopters and air tankers carrying large loads of fire retardants. On June 29, the massive firefighting effort turned the corner; and on June 30, Secretary of Energy Bill Richardson announced from the Federal Building in Richland that the fire was nearly contained.

Among the fire losses were 11 homes in Benton City, more than 50 other outbuildings near Benton City and West Richland, and 192,000 acres of desert vegetation, including the entire Fitzner-Eberhardt Arid Lands Ecology (ALE) Reserve. The fire burned rare native grasses, sagebrush, and other plants on the 120-square-mile reserve; scattered the elk, sage grouse, and other animals that make their homes in the protected area; and destroyed much of their habitat. For the ecology of the site and the ALE reserve, recovery will be a long, slow process.

Some Hanford employees were among those driven from their homes by the fire. American Red Cross efforts to aid fire victims were bolstered by an $80,000 combined donation from four Hanford contractors. The contribution, organized by the Department's Richland Operations Office, came from contractors Battelle, Bechtel Hanford, CH2M HILL Hanford Group, and the Fluor Corporation. DOE also has offered heavy equipment and personnel from Fluor Hanford and DynCorp Tri-Cities Services to assist the cleanup effort.

Presenting an $80,000 donation to Buddy Davis, American Red Cross (far right) are (l-r) Peggy Williams, Pacific Northwest National Laboratory; John Umbarger, Fluor Hanford; and Tom Logan, Bechtel Hanford Inc. Not pictured, but also present, was Ace Etheridge, CH2M HILL Hanford Group.

A fund has been set up for people who lost homes or property in the Hanford fire. Contributions will be given to the Benton-Franklin chapter of the American Red Cross. If you wish to make a donation, checks should be made out to "Hanford Fire Relief Fund" and mailed to U.S. Bank, Hanford Fire Relief Fund, P.O. Box 368, Benton City, WA 99320. ❖

DOE, ORNL, TVA sign energy agreements

The Department of Energy's Oak Ridge Operations Office and Oak Ridge National Laboratory (ORNL), and the Tennessee Valley Authority (TVA) recently signed two Memorandums of Understanding (MOU) to work together in collaborative efforts to develop and deploy sustainable energy technologies.

The first MOU was for TVA's Green Power Switch Program, which offers power produced using sunlight, wind, and landfill gas as the renewable energy sources. Under the agreement, ORNL becomes the first directly served industrial participant in this program. "The signing of this agreement marks a historic moment that will further the use of green power by our nation's utilities," said Dan Reicher, Assistant Secretary for Energy Efficiency and Renewable Energy.

Oak Ridge Operations' purchase of non-hydro renewable energy supports Secretary of Energy Bill Richardson's directive for the Department to utilize more power from "green" technologies. "I am very pleased to sign this agreement that again places both TVA and DOE into a partnership that emphasizes our commitment to clean air and protecting the environment," said Leah Dever, Oak Ridge Operations Manager.

The second agreement is between ORNL and TVA's Public Power Institute to develop, demonstrate, and utilize technologies for efficient and environmentally beneficial renewable energy production and use. ❖

Marilyn Brown, Oak Ridge National Laboratory, addresses the audience at the DOE/ORNL/TVA "green power"signing event. Seated (l-r) are Kate Jackson, TVA Executive Vice President; Dan Reicher, Assistant Secretary for Energy Efficiency and Renewable Energy; Bill Madia, Director, ORNL; and Ed Cumesty, Assistant Manager for Laboratories, Oak Ridge Operations.

Department wins Closing the Circle Awards

On June 6, 2000, the White House Office of the Federal Environmental Executive presented its annual Closing the Circle Awards at the Old Executive Office Building in Washington, D.C. The award recognizes Federal efforts that have resulted in a significant contribution to, or have made a significant impact on, the environment in specific categories under Executive Orders 13101 and 12856. These orders require Federal agencies to reduce environmental emissions and waste generation, adopt recycling programs, and purchase environmentally friendly products.

The awards are presented in eight categories: Affirmative Procurement, Education and Outreach, Environmental Preferability, Executive Order 12856 Individual Challenge, Model Facility Demonstration, Recycling, Sowing the Seeds for Change, and Waste Prevention. Over 210 nominations from 16 Federal agencies were received for this year's competition. The Department of Energy received six awards; the winners are:

- **Idaho National Engineering and Environmental Laboratory**, Team/Group Award, Affirmative Procurement category, for increased use of recycled products and an active affirmative procurement program that makes buying recycled a normal purchasing practice at the laboratory.
- **Argonne National Laboratory**, Team/Group Award, Affirmative Procurement, for affirmative procurement program activities that include raising employee awareness of buying recycled products and maintaining a database to identify and purchase such products.
- **Dr. Karen Hooker, Savannah River Site**, Individual Award, Executive Order 12856 Individual Challenge, for her efforts in implementing the executive order as a program manager in the site's pollution prevention program.
- **Los Alamos National Laboratory**, Team/Group Award, Recycling, for the Mail Stop A1000 Junk Mail Recycling Program that results in the recycling of about 20 metric tons of waste each month.
- **Oak Ridge Operations Office**, **Ohio Field Office**, and **Fernald Environmental Management Project**, Team/Group Award, Recycling, for a collaborative project to recycle approximately 1,340 tons of contaminated copper wire and windings from cleanup operations.

The copper remediation task at the Fernald site was completed six months ahead of schedule.

- **Office of Environment, Safety and Health (EH)** and **Office of Science (SC)**, Team/Group Award, Sowing the Seeds for Change, for a collaborative effort to make up-to-date pollution prevention information from SC's Pollution Prevention Information Clearinghouse, **http://epic.er.doe.gov/epic**, available on the Internet through EH's Information Portal and "My ES&H Page," **http://tis.eh.doe.gov**. ❖

Awards recognize diversity efforts

On May 10-12, 2000, the Department of Energy held its annual Diversity Conference in Atlanta, Ga. The conference was hosted by the Department's Savannah River Operations Office.

During the conference, the Department's annual 2000 EEO Diversity Awards were presented. The awards recognize the efforts of DOE organizations that have achieved an inclusive and effective workplace and contributed to the Department's missions through effective equal employment opportunity (EEO) practices and diversity programs.

The **Nevada Operations Office** received an award for its efforts to increase workforce representation of women in management positions; seek employee opinions; and sponsor diversity programs in the areas of employee concerns, EEO, alternative dispute resolution, and career development. An award went to the **National Renewable Energy Laboratory** for its aggressive EEO/diversity program, manager accountability for employee training attendance, educational partnerships and programs, and minority and women employee programs.

A Special Recognition Award was presented to the **Idaho National Engineering and Environmental Laboratory**. Diversity efforts recognized included the Hispanic Youth Symposium and PATH/PASO Program, outreach with Historically Black Colleges and Universities, on-line availability of monthly workforce statistics, and the Company Craft Apprentice Program. ❖

Stanford Lab honored for community service

The Department of Energy's Stanford Linear Accelerator Center (SLAC) has received the Golden Acorn Award for community service for the year 2000 from the Menlo Park, Calif., Chamber of Commerce. In the photo, at the awards ceremony, are l-r, Larry Horton, Director of Community and Government Affairs, Stanford University; Mary Jo Borak, Mayor of Menlo Park; and SLAC Director Jonathan Dorfun.

SLAC was recognized for its efforts in education, charity, and the environment. More than 3,000 students tour SLAC each year; the facility donates surplus equipment to local schools; and scientists and engineers volunteer as guest speakers at the schools. The food and toy drive each holiday season nets close to 1,000 pounds of food and several boxes of toys for the needy.

"SLAC does important work in basic research that will make a difference in the future," said Dorfun. "But we also want to make a difference in the present. We're delighted that our activities are appreciated." ❖

Harp named Facility Representative of the Year

Benton J. Harp, a Facility Representative at the Department of Energy's Office of River Protection in Richland, Wash., recently was named the 1999 DOE Facility Representative of the Year. Harp received the award at the Annual Facility Representatives Workshop in Las Vegas, Nev. He was recognized for outstanding execution of his duties, including responding to a failure of a waste transfer line, leading a team to assess contractor readiness to start waste transfer operations, and evaluating data on failure rates of safety class equipment associated with Hanford's tank farms.

In the photo, l-r, are nominees Joseph Desormeau, Fernald Environmental Management Project; Brian Jones, Amarillo Area Office; J.J. Hynes, Savannah River Operations Office; award winner Ben Harp; Fred Holbrook, Mound Environmental Management Project; Charles Eberle, Jr., Oak Ridge Operations Office; Bob Seal, Idaho Operations Office; and Ed Westbrook, Rocky Flats Field Office. Not pictured are nominees Albert MacDougall, Kirtland Area Office; Kerry Schierman, Richland Operations Office; and William Bell, Los Alamos Area Office. ❖

Oak Ridge dedicates African-American burial ground

Over 150 years ago, the Tennessee land that ultimately became the Department of Energy's Oak Ridge Reservation was dotted with large and small cemeteries for the farming communities of Roane and Anderson Counties. One of the oldest cemeteries was reserved for African-American slaves. It lies on a bend of the East Fork Poplar Creek near the Department's East Tennessee Technology Park.

On June 2, 2000, officials of the Department's Oak Ridge Operations Office (ORO), local dignitaries, and historians dedicated a memorial monument and renamed the old cemetery the Wheat Community African Burial Ground. In the photo, Reverend Darris Waters, Associate Minister, Mount Zion Baptist Church, says a prayer at the monument. Joining him (l-r) are Rufus Smith, ORO Diversity Programs and Employee Concerns Manager; Will Minter, UT-Battelle; and local historian David Neigig.

Today, the Department maintains 31 cemeteries at its Oak Ridge site and makes these areas accessible to descendants of those buried.❖

Lawrence Berkeley research helps build better cooler

An inexpensive, advanced insulating material developed by researchers at the Department of Energy's Lawrence Berkeley National Laboratory (LBNL) has been licensed by Cargo Technology Inc., San Diego, Calif., for use as thermal packaging to ship perishable cargo.

The Cargo Technology product, AirLiner, is an inflatable, insulating bag that converts an ordinary corrugated box into a cooler. AirLiner is produced from plastic films with internal baffles that create a construction that inhibits heat transfer. The insulating bag can be inflated with ordinary air or, to further prolong its thermal performance, with inert gases. AirLiner can save warehouse space and delivery expenses for shippers who currently use polystyrene foam containers.

LBNL researchers developed the gas-filled panels used in AirLiner in the 1980's as a spin-off of research on superwindows. Superwindows are double- or triple-paned energy-efficient windows with low emissivity coatings and inert gases filling spaces between panels for extra insulation capacity. ❖

Caring Western employees make a difference

Blind since birth, Irene McAlister recently purchased an older home in Denver, Colo. But the home needed a lot of "fixing up"—more than McAlister and her adopted four-year-old daughter Ronnie could handle.

McAlister got some badly needed help from a team of 33 volunteers from the Department of Energy's Western Area Power Administration in Lakewood, Colo., and other local businesses. The volunteer work was part of the nationwide volunteer program "Christmas in April." "I was proud to be a volunteer and put in a hard day's work for such a worthwhile cause," said Western security specialist and project coordinator Pam Moody.

The swarm of workers descended on the house, replacing all the windows; landscaping the front and back yards; cleaning; painting; replacing doors; and repairing electrical wiring, appliances, and gutters. At right, Western safety and occupational health specialist Doris Martinez paints trim before it is installed at McAlister's home. ❖

Princeton Lab Open House draws crowd

Science, fun, and a chance to tour the nation's newest fusion machine—the National Spherical Torus Experiment (NSTX)—attracted about 2,400 people, ranging from tots to seniors, to the recent Open House at the Department of Energy's Princeton Plasma Physics Laboratory (PPPL) in New Jersey. Visitors talked to PPPL researchers about fusion and the laboratory's progress while taking self-guided tours of NSTX, the Tokamak Fusion Test Reactor, and smaller experimental areas. Other activities included tabletop demonstrations about electromagnetism, thermodynamics, cryogenics, and common plasma, and hands-on safety activities.

At right, during a cryogenics demonstration, PPPL engineer Ray Camp shows visitors how ordinary objects behave when cooled to the temperature of liquid nitrogen (-320 degrees Fahrenheit). Here, youngsters dip flowers in liquid nitrogen and watch them become brittle like glass. ❖

Research DIGEST

Researchers at the Department of Energy's **Pacific Northwest National Laboratory** (PNNL) have developed a new technology called the Glow Discharge Plasma to treat a number of wastes not addressed by today's water decontamination technologies. The technology originally was developed to address recalcitrant organic contaminants from processes at DOE sites. In its most likely application, the plasma technology could serve as a wastewater pretreatment method. Used in conjunction with conventional systems, researchers say this method could remove the worst of the resistant contaminants, such as trichloroethylene and chloroform from wastewater before it is released. It also could be used to treat groundwater contaminants including carbon tetrachloride and solvents at industrial and government sites. (Greg Koller, 509-372-4864)

American Superconductor Corp., Westborough, Mass., has signed a non-exclusive patent license agreement with the Department of Energy's **Oak Ridge National Laboratory** for the laboratory's patented R&D 100 Award-winning RABiTs high-temperature superconducting wire technology. RABiTS (rolling-assisted, biaxially textured substrates) are special templates that enable superconducting materials to carry unprecedented amounts of electric current compared to conventional copper or aluminum wires. The technology allows for the more efficient transmission of electric power. American Superconductor is the sixth U.S. company to license the technology and is the world's leading producer of high-temperature superconducting wires for electric power applications. (Frank Juan, 865-576-0885)

The international BOOMERANG consortium led by the California Institute of Technology and the Universitá de Roma recently announced results of the most detailed measurement yet made of the cosmic microwave background. Findings of BOOMERANG, which stands for "balloon observations of millimetric extragalactic radiation and geophysics," strongly indicate that the curvature of the universe is not positive or negative but flat. Much of the data analysis was performed at the Department of Energy's National Energy Research Scientific Computing Center (NERSC) at **Lawrence Berkeley National Laboratory**. Analysis of the data has produced an impressive degree of certainty about some of the most fundamental cosmic parameters. (Jeffery Kahn, 510-486-4019) ❖

DOE sites share plutonium packaging technology

The Department of Energy's Savannah River Technology Center (SRTC), the applied research and development laboratory at the Savannah River Site, has built and delivered one Bagless Transfer System plutonium packaging unit for the Hanford Site's Plutonium Finishing Plant. A second unit is being built and auxiliary equipment Hanford needs to go along with the units is under development.

Hanford engineers were at SRTC in May to complete acceptance testing of the first unit. Bill Holstein, W-460 project manager at the Plutonium Finishing Plant, was pleased that the unit was completed ahead of schedule and under budget. "We selected Bagless Transfer because of the past performance of the system at Savannah River," Holstein said. "We're also procuring an outer can welder to be developed by SRTC."

The Bagless Transfer System was developed by and first deployed at the Savannah River Site to package plutonium metal inside a welded stainless steel can, suitable for long-term storage. Previously, plutonium metal was placed in a plastic bag and sealed in a tin can. This packaging was only suitable for five or 10 years' storage, and the plastic bags carried the possibility of a chemical reaction as the plastic broke down over time.

Many refinements have been made to the Bagless Transfer System design since the first unit was installed in Savannah River's FB-Line in 1997. Additional cameras were added to ensure 360-degree inspection of welding on the cans, and a vacuum/pressure gauge was added to ensure proper operation of the helium back-filling process. The automatic leak detection system was changed to a system similar to the one developed by SRTC for use in the Tritium Facility at Savannah River. ❖

The Bagless Transfer System developed by the Savannah River Site.

INEEL waste facility placed in standby

On June 1, 2000, the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL) placed its New Waste Calcining Facility in standby status. This action is in compliance with the June 1 deadline to cease calcining as agreed to by the Department and the Idaho Division of Environmental Quality in April 1999 in a modified consent order.

Calcining was developed at INEEL (then the National Reactor Testing Station) in the 1950's to safely manage the high-level radioactive liquid waste that resulted from spent nuclear fuel reprocessing to recover highly enriched uranium. Calcine is a dry material that is smaller in volume, less corrosive, less chemically reactive, less mobile under most conditions, easier to monitor, and more protective of human health and the environment.

Since 1963, INEEL has calcined almost 8 million gallons of liquid mixed waste and liquid high-level waste, converting it to about 1.1 million gallons of dry calcine. The original Waste Calcining Facility operated successfully until 1981. Beginning operations in 1982, the New Waste Calcining Facility converted about 3.7 million gallons of mixed liquid radioactive and hazardous waste to the solid product calcine before being placed in standby status.

The calciner operated under an interim status Part A permit from the Idaho Division of Environmental Quality because operations began in 1982 before Resource Conservation and Recovery Act regulations became effective in 1989. To receive a full Part B permit, calciner offgas emissions must be sampled for pollutants regulated by the Environmental Protection Agency (EPA). The offgas was so corrosive it damaged existing EPA instruments.

The New Waste Calcining Facility at the Idaho National Engineering and Environmental Laboratory.

More than a year ago, INEEL engineers devised sampling instruments and methods that could withstand the corrosive calciner offgas and meet EPA requirements. Samples have shown the offgas constituent levels are within levels the state feels do not pose undue risk to the public or environment. However, EPA has established new air emission regulations. To restart operations, INEEL would need to upgrade the calciner and go through another phase of offgas sampling.

Future operations depend on the upcoming Department decision, expected in 2001, in the Final Idaho High-Level Waste and Facilities Disposition Environmental Impact Statement and Record of Decision. ❖

NEW Publications

Office of Inspector General reports: ***Follow-up Audit of Health Benefit Costs at the Department's Management and Operating Contractors*** (DOE/IG-0470); ***Summary Report on Inspection of Allegations Relating to the Albuquerque Operations Office Security Survey Process and the Security Operations' Self-Assessments at Los Alamos National Laboratory*** (DOE/IG-0471); ***Inspection of Surplus Computer Equipment Management at the Savannah River Site*** (DOE/IG-0472); ***Campaigning Activities by Political Appointees*** (DOE/IG-0473); ***Central Shops at Brookhaven National Laboratory*** (ER-B-00-01). Available from the U.S. Department of Energy, IG Reports Request Line, 202-586-2744; or at **http://www.ig.doe.gov/**.

Energy Use of Home Audio Products in the U.S. (LBNL-43468), a study conducted by the Department of Energy's Lawrence Berkeley National Laboratory for the Department's Office of Energy Efficiency and Renewable Energy. According to the study, home audio products consume 223 trillion Btu of electricity annually, equal to the amount of electricity used by all the households in the State of Maryland. The study found that energy savings of up to 50 percent will be achieved by reducing standby and idle power mode requirements in low-power audio products and designing more efficient amplifier technology into high-power audio products. Available on the Internet at **http://www.eren.doe.gov/buildings/documents/**.

Waste Management's LNG Truck Fleet Start-up Experience (NREL/BR-540-26617), issued by the Department of Energy's National Renewable Energy Laboratory (NREL), is one of a series of NREL documents from the Department's alternative fuel truck evaluation project. The publication focuses on a Waste Management landfill operation in Washington, Pa., that since 1997 has housed a liquefied natural gas (LNG) fueling facility and several LNG powered refuse haulers. The document tracks the Waste Management LNG program from concept to start-up to present-day operation. Available at the DOE Alternative Fuel Data Center Internet site at **http://www.afdc.doe.gov** or through the National Alternative Fuels Hotline at 800-423-1363. ❖

New policy directs human subjects research

Human subjects research allows experiments to be performed that provide medical and scientific benefits to mankind. However, in today's world of rapidly advancing medical technology, revolutionary genetics research, and ever-increasing threats to personal privacy, the protection of the rights of human subjects is paramount.

Recognizing the ever-changing environment for human subjects research, the Department of Energy's Office of Science in early 1998 began a comprehensive review of the existing DOE order that covered such research. This review led to the approval on May 12, 2000, by Under Secretary of Energy Ernest Moniz of new policy and implementation documents for Department research involving human subjects. The issuance of the new policy provides a timely, strong response to Executive Order 12975, which requires Federal agencies to review their existing policies and procedures to assure the protection of the rights and welfare of human research subjects.

The Department's overall position is that all human subjects research conducted at Department facilities, supported with Department funds, or performed by Department employees must comply with Federal regulations and DOE policy and orders to protect the human subjects. The approved policy and order, published as DOE P 443.1 and DOE O 443.1, "Protection of Human Subjects," are available at **http://www.science.doe.gov/ober/humsubj/regulation.html**.

The DOE Human Subjects Working Group meets annually to share experiences and information.

Dr. Susan L. Rose, Program Manager, DOE Human Subjects Research Program, Office of Science, is responsible for developing, communicating, and implementing this policy across the Department. The Human Subjects Research Program currently has fewer than 300 human subjects research projects in progress. Oversight, mentoring, and education are used to keep the human subjects protection issue at the forefront of the DOE community.

The DOE Human Subjects Research website, **http://www.er.doe.gov/production/ober/humsubj/index.html,** provides comprehensive information and educational resources on the protection of human subjects and links to other related areas of interest. Several resource documents are available at the site, including the "Human Subjects Research Handbook" and the human subjects newsletter. A new publication, "An Ethical Framework for Studies Involving the Worker Community," addresses the ethical aspects of studies involving present or former Department workers as subjects of research.

Two other important components of the Human Subjects Research Program are the Human Subjects Working Group and the Human Subjects Research Database. The working group, started in 1986 by Dr. Rose, holds periodic conference calls and meets annually to share concerns and successes and to learn about new trends and changing policies in bioethics. The database, **http://www.eml.doe.gov/hsrd**, is updated annually and contains information on all Department research projects involving human subjects. ❖

KAPL, Inc. wins Knolls management contract

The Department of Energy has awarded a $1.3 billion, five-year contract to KAPL, Inc. for the management of the Department's Knolls Atomic Power Laboratory. KAPL, Inc. holds the current contract and has been the site's management contractor since 1993. The new contract takes effect Oct. 1, 2000.

Four proposals were submitted for consideration and review to the Department's solicitation for competitive bids. Key features of the competition include a five-year base period of performance with an option for an additional five years and a requirement to retain the current workforce at comparable pay and benefits.

"The heart of the Naval Reactors Program is not just our impressive technology, but the dedicated men and women who work hard to develop, maintain, and improve it," said Admiral F. L. Bowman, Deputy Administrator for Naval Reactors, National Nuclear Security Administration. "Their work has been instrumental in ensuring U.S. superiority at sea."

Knolls Atomic Power Laboratory employs about 2,600 people at its Niskayuna and West Milton, N.Y. locations. The single-focus laboratory supports the design, construction, operation, servicing, and decommissioning of naval nuclear propulsion plants for the Navy's nuclear-powered submarines and aircraft carriers. ❖

The 'face' of security begins changing

The Department of Energy is committed to advancing the status of women and helping women achieve their professional goals. "By tapping the talents of women and America's diverse communities, we will build a stronger foundation for DOE and the nation," says Secretary of Energy Bill Richardson.

One success story is Barb Stone, Director of Safeguards and Security for the Office of Independent Oversight and Performance Assurance (OA). "Things have changed in the security area since I started with the Department of Energy as a security specialist in 1990," says Stone. "Today, my colleagues in other security offices accept me as one of them."

Barbara Stone meets with Office of Independent Oversight and Performance Assurance staff.

It was difficult to "break in" to the traditionally male-dominated security area. Even with her technical background—a Bachelor of Science in chemistry and a Master of Science in computer science, with an emphasis on security—Stone found it tough overcoming security's resistance to cultural change. Heavy emphasis was placed on the physical aspects of security—the so-called "guns, guards, and gates"—versus Stone's background in computer security.

Stone worked hard to breach those barriers. Glenn Podonsky, OA Director, credits Stone's technical abilities and patience with others for her success.

Many of the safeguards and security oversight activities managed by Stone occurred when safety and environmental issues were center stage at the Department. Today, security also is a key issue. In 1999, Secretary Richardson created the Office of Independent Oversight and Performance Assurance to provide oversight on safeguards and security, cyber security, and emergency management. The office reports directly to the Secretary and is independent from offices with line management, program management, and policy development responsibilities. This independence allows the office to perform oversight appraisals without a "vested interest" in the functions being evaluated.

In October 1999, Stone was promoted by Secretary Richardson to the Senior Executive Service (SES). She joins 88 other women in the Department, including several area and operations office managers and laboratory directors, as an executive in DOE's roughly 400 member SES. ❖

NEW ON THE *Internet*

Model Energy Code tools

The Department of Energy's Pacific Northwest National Laboratory, under the direction of the DOE Building Standards and Guidelines Program, has created two sets of tools to make the Model Energy Code—now referred to as the International Energy Conservation Code—easy for builders, inspectors, and other users to follow. MEC*check* addresses residential construction and COM*check-EZ*, commercial construction. Included are software, workbooks with explanations of the code, a list of precalculated combinations of materials that meet code, user's guides, videos, training materials, and a support hotline. The software and user's guides for both MEC*check* and COM*check-EZ* can be downloaded at no cost from the Internet at **http://www.energycodes.org**.

IAEA vacancy notices

The International Atomic Energy Agency (IAEA), headquartered in Vienna, Austria, has employment opportunities available for Department of Energy employees. Nominations for the positions will be selected for consideration along with applicants from other IAEA member nations. Assignments are usually for three years and are deemed to be exempt from national income tax. Current listings are available on the Internet at **http://www.iaea.org/worldatom/Jobs/current.shtml**. For questions, contact Margaret Manning, International Safeguards Division (NN-44), 202-586-5491, or margaret.manning@hq.doe.gov. ❖

People IN ENERGY

David Lewis was recently appointed Director of the Chemical Technology Division at the Department of Energy's Argonne National Laboratory. Most recently, Lewis was head of his own management consulting and technology implementation company. From 1984 to 1994, he was Manager of Amoco's Physical Technology Division. Lewis planned and initiated the company's corporate physical sciences research which led to the formation of the Amoco Technology Company.

Charles Alcock, head of the Institute for Geophysics and Planetary Physics at the Department of Energy's Lawrence Livermore National Laboratory, is the recipient of the Beatrice Tinsley Prize from the American Astronomical Society for his research into the nature of dark matter in the universe. The award is named for Beatrice Tinsley, a New Zealand-born astronomer whose work in cosmology spanned the 1960's.

Clifford Hsieh is the new Asian Pacific Program Manager at the Department of Energy's Oak Ridge Operations Office. His responsibilities include developing and implementing initiatives for the employment and advancement of people of Asian American/Pacific Islander Heritage within Oak Ridge Operations. A native of Chungking, China, Hsieh received a bachelor of science degree in electrical engineering and a master of science degree in environmental engineering from the University of Illinois.

The Department of Energy's Brookhaven National Laboratory recently recognized five employees for their distinguished contributions in engineering and computing. Receiving the FY 2000 Engineering Award were **David Alexoff**, Chemistry Department; **James Cullen**, Collider-Accelerator Department; **Robert Lee**, Environmental Services Division; **Joseph Mead**, Instrumentation Division; and **Robert Scheetz**, Physics Department.

Terri Aldridge, a health physicist in the Office of the Assistant Manager for Science and Technology at the Department of Energy's Richland Operations Office, was selected as a National Health Physics Society delegate to the 10th International Congress of the International Radiation Protection Association, held in Hiroshima, Japan, in May 2000. Aldridge participated in sessions on a wide range of radiation-related issues, including worker protection, the use of isotopes in cancer treatment, and the 1999 Japanese nuclear criticality accident.

Scientist **Jack Gosling** of the Space and Atmospheric Sciences Group at the Department of Energy's Los Alamos National Laboratory, has been awarded the John Adam Fleming Medal for 2000 by the American Geophysical Union. Gosling was honored for his major contributions to the present understanding of the physics of the solar wind and its interaction with the geomagnetic field.

David Milan, management systems integration manager at the Department of Energy's Oak Ridge National Laboratory (ORNL), received the Five-Year Milestone Award from the National Urban League at its annual conference in Atlanta in June. Milan was recognized for his efforts on behalf of the educational advancement of college students who have participated in the League's Black Executive Exchange program.

Nancy Daugherty, a certified health physicist and life scientist at the Department of Energy's Oak Ridge Institute for Science and Education, has been elected to serve a three-year term as secretary of the National Health Physics Society. Daugherty has more than 20 years experience in health physics at DOE and Nuclear Regulatory Commission-licensed sites. She earned a master's degree in radiation health from Colorado State University in 1975 and a master's degree in business administration from the University of Phoenix in 1985.

James Lake, Director of Strategic Nuclear Business Development at the Department of Energy's Idaho National Engineering and Environmental Laboratory (INEEL), has been installed as president of the 11,000-member American Nuclear Society (ANS). Lake has worked in various nuclear energy research and development management positions at INEEL since 1984. He has been an ANS member since 1967 and has held various positions in the Society, including chair of the Reactor Physics Division. Lake's one-year term continues through June 2001.

Shelly Havlovick, an industrial hygienist at the Department of Energy's Argonne National Laboratory-West in Idaho, has received the Woman of the Year Award from the Department's Idaho National Engineering and Environmental Laboratory (INEEL). The award honors a woman who works for an organization on the INEEL site and who has made significant contributions in her career field and the community. At Argonne-West, Havlovick has the lead role in the Beryllium Hazards Program and the Chemical Management System Implementation project. She is active in Women in Science and Technology, the Daughters of the American Revolution, the American Cancer Society, and United Way. ❖

Milestones

YEARS OF SERVICE

July 2000

Headquarters

Chief Financial Officer - Cynthia L. Brown (25 years). **Congressional & Intergovernmental** - Nicholas A. Chumbris (30). **EIA** - Georgia A. Collier (35), Howard L. Magnas (30), Scott B. Sitzer (30), Barry N. Kapilow-Cohen (25), John W. Makens (25), Mary E. Northup (25). **Energy Efficiency** - Barbara J. Huyck (30), Linda J. Graves (25). **Envir. Management** - Thomas P. Wright (30), Mary L. Bisesi (25), Katherine A. Sylvester (25).

Envir., Safety & Health - Deloris A. Johnson (30), Dennis L. Vernon (25), Terresa J. Williams (25). **FERC** - Heidemarie A. Sanford (40), Teresa E. Moore (35), Herman K. Der (30), Thomas E. Dewitt (30), Antonio D. Javonillo (30), Robert F. Christin (25), Theresa P. Humphries (25), Donald J. Zero (25), Dorothy J. Zimmerman (25). **Hearings & Appeals** - Toni A. Brown (35).

Inspector General - Michael J. Waters (30). **Intelligence** - Wynne James III (50), Reinhard G. Olesch (35). **International Affairs** - Henry P. Santiago (40). **Management & Administration** - June V. Robinson (30), Claudia A. Cross (25), Patrick A. Thornton (25), James D. Tower (25). **NNSA** - David M. Barr (35), John W. Newton (35), Patricia A. Rhoderick (35), Ronald E. Collins (25), Storm R. Kauffman (25).

Nuclear Energy - Philip A. Garon (25), Frank J. Goldner (25). **Science** - Kathleen R. Cumberledge (35), David C. Bellis (25), Ted W. Griffin (25), Gene R. Nardella (25). **Security & Emergency Operations** - Dorothy R. Turner (30), Joseph T. Hatfield (25), Thomas E. Tuccinardi, Jr. (25), Rosalee B. Williams (25).

Field

Albuquerque - Clinton C. Smythe (25). **Albuquerque/NNSA** - Leotis Dixon (25), Stephanie M. S. Gonzalez (25), Sam C. Moss (25). **Chicago** - Robert I. Elder (35), Robert C. Selby (35), Joseph J. Caroli (25), Robert L. Kladiva (25), Alma V. Stiffin (25), June M. Wiinikka (25). **Idaho** - William S. Somers (25).

NETL - Perry D. Bergman (35), Charles R. Carter (30), Karl Waldner (30), William J. Staymates (30), Deborah J. Boggs (25), Gilbert V. McGurl (25), Lawrence R. Sullivan (25). **Nevada/NNSA** - Peter G. Mueller (25). **Oak Ridge** - Preston K. Maples (30), Jenise G. Mullins (25), T. Diane Patterson (25). **Oakland** - Shirley G. Cox (35), James Marcisz (30), Edward J. Knuckles (25).

Ohio - Michael A. Reker (25), Victor M. Taylor (25). **Pittsburgh Naval Reactors/NNSA** - John P. Bannon (25), Stanley R. Burinski (25). **Richland** - Craig A. Groendyke (30), June E. Ollero (25), Peter E. Rasmussen (25), Joanne R. Shadel (25). **Rocky Flats** - Dotti J. Whitt (25). **Savannah River** - Donna K. Roberts (25). **Schenectady Naval Reactors/NNSA** - Christian H. Conover (30). **Strategic Pet. Reserve** - William L. Vierling, Jr. (25).

Bonneville Power - Richard I. Dixon (35), Robert A. Anderson (30), Jon P. Cipolla (30), James S. Dow (30), William T. Ferderer (30), Richard C. Field (30), Ora L. Griffiths (30), Dennis E. McNulty (30), Roger A. Sarkinen (30), Roger P. Schiewe (30), Anthony J. Segvich (30), Michael R. Sparks (30), Donald F. Atkinson (25), Marla J. Flynn (25), Clarence G. Hatt (25), Janet A. Lubach (25), Kathleen M. Mauer (25), Wayne B. Noonan (25), Alan E. Schlosser (25), John E. Stevenson (25), E. Marie Torrillo (25), Fazlollah Vakili (25), Karen L. Wood (25).

Southeastern Power - Charles A. Borchardt (30). **Southwestern Power** - George C. Grisaffe (35), Jackie L. Cude (25). **Western Area Power** - Walter F. Engelhardt, Jr. (30), Gary M. Himmelberg (30), Jerry D. Weigum (30), Tommy L. Borkowski (25), Lindalu Miller (25), Lloyd V. Timperley (25).

RETIREMENTS

June 2000

Headquarters

EIA - Rae B. Carlile (26 years), Samuel Cohen (27), Leola Withrow (37). **Energy Efficiency** - Mattie K. Hill (37). **FERC** - Essie M. Gillard (16). **Fossil Energy** - Gary L. Hundley (33). **Management & Administration** - Frank DiCostanzo (37), Robert B. Sympson (35). **Radioactive Waste** - Mary A. Ferguson (35). **Security & Emergency Operations** - Thomas P. Dercola (33), Anton A. Sinisgalli (27).

Field

Albuquerque/NNSA - Kenneth W. Honeycutt (27), Rush O. Inlow (30). **Savannah River** - William L. Noll III (30). **Southwestern Power** - Grady E. Martin (34), Warren D. Pratt (13). **Western Area Power** - Edward F. Craig, Jr. (30), Darrel G. Crocker (20), Steven D. Foster (31), William H. Howell, Jr. (30), Thomas R. Rietman (31), Mannie Veal (21), Roy E. Watson (37), Donald R. Zgaynor (26). ❖

COMING Events

August

21-23 Energy 2000, Energy Efficiency Workshop and Exposition, Pittsburgh, Pa. Cosponsored by the Department of Energy's Federal Energy Management Program, the Department of Defense, and the General Services Administration. This third annual national conference for government and private-sector energy management professionals offers in-depth presentations, interactive sessions, exhibits by energy suppliers, and the latest information in several areas, including facility operations and energy markets, project financing, "green" building, whole building design, new technologies, managing energy information, and project and program integration. More details and registration information are available at **http://www.energy2000.ee.doe.gov** or from JoAnn Stirling, Florida Solar Energy Center, 800-395-8574 or 321-638-1014. ❖

July 2000

AROUND DOE

Study addresses nuclear materials management

On July13, the Department of Energy released a comprehensive study that provides the first consolidated account to Congress and the public of the Department's unclassified inventory of nuclear materials and describes how and where these materials are managed. The report, *A Strategic Approach to Integrating the Long-Term Management of Nuclear Materials*, also offers a 25-point, multiyear action plan for increasing integration, coordination, and efficiency in managing the nuclear materials across Department programs.

"Currently, more than half of the Department's nuclear materials management facilities are over 40 years old," said Secretary of Energy Bill Richardson. "This plan lays the groundwork for how we can address not only an aged infrastructure, but also the complex set of responsibilities related to management and disposition of a sizable and diverse nuclear materials inventory."

The nuclear materials covered in the study include fissile materials, such as uranium and plutonium; spent nuclear fuel, and non-fissile materials special isotopes. Also addressed are national security, non-national security, excess, and surplus materials. The report is available at **http://www.doe.gov/news/releases00/julpr/inmm.pdf**.

Southeast national parks go energy-efficient green

On June 29, 2000, Jim Powell, Director of the Department of Energy's Atlanta Regional Office, and Jerry Belson, Director, National Park Service Southeast Region, signed an agreement to incorporate energy efficiency and renewable energy technologies and practices and introduce alternative transportation systems at park facilities in the southeastern United States. The regional agreement is part of the national Green Energy Parks Initiative.

The Atlanta Regional Office already has assisted the Cumberland Island National Seashore, off the southeast Georgia coast, to complete a solar hot water system design and to use energy-efficient technologies to lessen the effects of natural disasters. Assistance also has been provided to Mammoth Cave in Kentucky to maximize energy use at a new high-performance visitor center.

PNNL declassifying 50,000 historical Hanford photos

The Department of Energy's Pacific Northwest National Laboratory (PNNL) is declassifying 50,000 photographic negatives taken at and around the Department's Hanford Site in Washington, beginning in 1943. The photographs, which are dated up to 1967, chronicle the building of the Hanford Engineer Works as part of the Manhattan Project and provide historical insight into the early communities of Hanford, White Bluffs, Pasco, and Richland.

"Much has been said about the incredible technical feats of the Manhattan Project, but these pictures show the human side of the story," said Kim Engle, manager of PNNL's National Security Analysis Team at Hanford. "The thousands of day-to-day scenes of common people working and playing are a unique and fascinating record of a time 50 years ago."

The declassification project began in January 2000. The team is able to review nearly 200 photographs per day, and all 50,000 negatives are expected to be declassified and ready for release by December.

Once declassified, the negatives are scanned and transferred to compact disks. The option of putting some or all of the photographs on the Internet is being explored. ❖

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

Official Business