



NNSA Recovers Unique Radiological Devices

Secures Material Useful For "Dirty Bombs"

A two-month effort by the Off-Site Source Recovery Project (OSRP) at Los Alamos National Laboratory has resulted in the recovery of 13 small irradiators from 10 states. This project reflects NNSA's commitment to remove and secure materials that pose not only a safety hazard, but also a security risk.

"These recoveries are part of a nationwide effort to reduce risks associated with accessible and unwanted radioactive material," said NNSA Administrator Linton F. Brooks. "NNSA is aggressively removing radioactive materials that could be useful to terrorists attempting to make a dirty bomb."

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THEY CAME BY THE BUSLOAD: Evacuees from Hurricane Katrina enter Fort Chaffee in Arkansas. NNSA staff members at the Office of Secure Transportation training facility at Fort Chaffee volunteered almost 700 hours over the Labor Day weekend to help the evacuees with medical, food and temporary housing needs. See pages 4 and 5 for a summary of NNSA responses to the technical and human challenges of hurricanes Katrina and Rita.

HEU Recovered From Czech Technical University

Fourteen kilograms of highly enriched uranium (HEU) have been safely and securely returned to the Russian Federation from the Czech Republic under NNSA's Global Threat Reduction Initiative (GTRI) program.

The Czech Technical University secret operation in Prague was a joint effort

between the United States, the Czech Republic, the Russian Federation, and the International

This is the eighth successful shipment of uranium returned to Russia under NNSA's GTRI program.

Atomic Energy Agency (IAEA). The shipment was part of the prioritized, accelerated schedule implementing a key element of the Bush-Putin

Bratislava Joint Statement on Nuclear Security Cooperation.

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HEU Recovered From Czech Technical University

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“The return of this highly enriched uranium is an important milestone in the administration’s Global Threat Reduction Initiative campaign to reduce stockpiles of this high-risk, vulnerable material worldwide,” said NNSA Administrator Linton F. Brooks. “Due in large part to the strong cooperation of the Czech Republic, Russia and IAEA, we were able to successfully complete this critical international nonproliferation project. In particular, I would like to congratulate the Czech Technical

This is the second shipment of fresh HEU fuel from the Czech Republic this fiscal year, and highlights the aggressive efforts of the GTRI program.

University for its assistance regarding this shipment.”

The HEU was airlifted under guard from an airport near Prague, Czech Republic, to a secure facility in Dimitrovgrad, Russia, where the material will be down-blended to low enriched uranium (LEU). The United States has provided security upgrades at the facility in Russia under NNSA’s U.S.-Russian Material, Protection, Control and Accounting Program.

During the first day of the two-day operation, approximately 14 kilograms of weapon-grade HEU were loaded into three specialized Russian transportation containers. IAEA safeguards inspectors and U.S. technical experts were present at the university to monitor the process of loading the fuel into the canisters. A Russian airplane transported the HEU fuel back to

Russia.

The HEU, originally supplied to the Czech Republic by the Soviet Union, was used as fuel for the Department of Nuclear Reactors of the Czech Technical University in its VR-1 Sparrow research reactor.

The repatriation of the HEU fuel from the VR-1 research reactor was part of the joint effort between the NNSA, the Russian Federation and the IAEA to convert the VR-1 reactor to operate on LEU fuel, and to supply new LEU fuel to the university. The VR-1 research reactor is the first Soviet/Russian-supplied research reactor to convert to LEU fuel. At the end of July, the HEU fuel was discharged

from the reactor in preparation for return to Russia. U.S. and Czech technical specialists conducted all necessary calculations to assure safe and efficient operation of the VR-1 research reactor using LEU fuel.

This is the eighth successful shipment of uranium returned to Russia under NNSA’s GTRI program. To date, approximately 122 kilograms of fresh HEU have been repatriated to Russia from Serbia, Romania, Bulgaria, Libya, Uzbekistan, the Czech Republic, and Latvia. This is the second shipment of fresh HEU fuel from the Czech Republic this fiscal year, and highlights the aggressive efforts of the GTRI program. With the successful completion of this mission, all Russian-origin fresh HEU fuel designated for repatriation has been removed from the Czech Republic.

The mission of the GTRI is to identify, secure, recover and/or facilitate the final disposition of high-risk vulnerable nuclear and radiological materials around the world as quickly as possible.

Curtis R. Stevens Named NNSA Executive Staff Director

U.S. Navy Capt. Curtis Stevens has been named NNSA executive staff director for Administrator Linton F. Brooks. He replaces Capt. Douglas Fremont, who retired from the Navy.

Prior to his NNSA assignment, Stevens had at-sea assignments including USS Henry L. Stimson, USS La Jolla and USS Drum. He served as executive officer on USS Hartford, and was the last commanding officer on USS William H. Bates. Stevens has made seven strategic deterrent patrols, five extended deployments to the Western and Northern Pacific and one extended deployment to the North Atlantic.

Significant shore duty assignments include Squadron Engineer at Submarine Squadron 16 and Deputy Commander for Readiness at Submarine Squadron 7. Stevens also served two consecutive tours on the staff of the Chief of Naval Operations as a branch head in the Current Operations Division and as assistant deputy director of Sea Shield/Antisubmarine Warfare.

Stevens graduated with high distinction from Pennsylvania State University in 1982 with a Bachelor of Science in Nuclear Engineering, and received his commission through the Navy ROTC program. His graduate education includes a Master of Political Science Auburn University and a Master of Engineering Management from Old Dominion University.



'Every Day Hero' Is Campaign Theme For CFC

This year's Combined Federal Campaign (CFC), under the theme "be an everyday hero," started early in September with a special appeal for donations to help victims of hurricanes Katrina and Rita. The

Samuel Bodman. "As many of you know, I am very passionate in my support of CFC," he said in a message to federal employees. "In previous years, I have been quite proud of NNSA

"Two important hallmarks of the American people are that we are generous and we refuse to accept the term *impossible*," Brooks said. "Many in our community have grave needs; for example, the homeless, the hungry, the battered, the terminally ill, and the despondent. Our generosity can make the 'impossible' for these neighbors of ours 'possible.' I urge every NNSA federal employee to not only support the CFC, but to be more generous than before. I urge every contractor employee to do the same. It can be as simple as writing a check or signing up for payroll deduction to perform a miracle for someone in our community."

"Two important hallmarks of the American people are that we are generous and we refuse to accept the term *impossible*."

Administrator Linton F. Brooks

support for CFC, and I earnestly ask that each NNSA federal employee be as generous as possible."

He said he is

campaign concludes in mid-December.

Administrator Linton F. Brooks is leading the fund drive for NNSA and DOE in Washington, D.C. at the request of Secretary of Energy

equally proud of the significant donations made to local United Way charities by contractor employees who work at the labs and plants throughout the NNSA complex.

NNSA Recovers Unique Radiological Devices *(continued from page 1)*

The 13 irradiators, known as Gammators, originally contained 400-curie Cesium-137 sealed sources. The devices posed little risk of radiation exposure owing to heavy shielding. However, increased security requirements heightened awareness of the need for removal of these sources to a safe and secure location. The irradiators were originally supplied to high schools and colleges across the United States in the 1960s and 1970s through the U.S.

government's "Atoms For Peace" program.

The OSRP recovers and

storage at NNSA sites. The project has recovered more than 11,000 sources containing plutonium, americium, cesium, cobalt and



RADIOACTIVE SOURCE RECOVERY: OSRP contractors hoist a Cesium-137 irradiator into a Type B shipping container at an Illinois high school.

strontium from medical, agricultural, research, and industrial locations throughout the nation.

The project is part of the U.S. Radiological Threat Reduction program led by NNSA and is overseen by the Global Threat Reduction Initiative, NA-21. The Los Alamos Nuclear Nonproliferation Division conducts the work.

disposes excess and orphan radioactive sealed sources for

NNSA Facilities Mobilize People, Technology For Gulf Coast Hurricane Response

In a wide-ranging response to the human and technical needs of the Gulf Coast region in the aftermath of hurricanes Katrina and Rita, NNSA's labs, plants and federal offices have provided significant assistance to help fellow Americans in need.

Prior to Katrina's landfall, the National Infrastructure Simulation and Analysis Center (NISAC), operated jointly by Los Alamos National Laboratory (LANL) and Sandia National Laboratories



MOBILE COMMUNICATIONS FOR RECOVERY EFFORTS: Joe Hassen, Hans Devouassoux, and Chris Engebretsen from NNSA's Remote Sensing Lab in Las Vegas, Nev., prepare satellite equipment for deployment to the Gulf Region. The lab provided state-of-the-art mobile communications packages and personnel in support of Katrina recovery efforts.

(SNL), both in New Mexico, was activated by the Department of Homeland Security to provide impact predictions for the hurricane. NISAC teams from the two labs generated detailed computer models of vulnerable power lines and stations, and the effects of flooding on power systems. They also developed economic impact assessments. Ongoing analysis by NISAC has been provided during the recovery from the two powerful cyclones.

Equipment developed by LANL was used on an Environmental Protection Agency (EPA) aircraft as part of NNSA's hurricane response effort. The plane was deployed to scan the disaster area for toxic chemicals in the air as a result of chemical tank damage. The aircraft was also used to locate missing chemical containers, perform a radiological survey of the New Orleans area, and to assess damage to rail lines in the Gulf Coast region.

As the hurricane emergency began, another national crisis asset at Lawrence Livermore National Laboratory (LLNL) in California, the Interagency Modeling and Atmospheric Assessment Center (IMAAC), was placed on alert by the Homeland Security Operations Center to provide airborne hazard predictions for potential fires and toxic chemical releases. The

IMAAC serves as a single federal source of plume model predictions during incidents of national significance.

A team of LLNL employees was also deployed to the New Orleans area with detection, communication and night vision technologies for use in search and recovery operations coordinated by the Department of Defense (DoD). The team's technologies included radar known as "Urban Eyes" that can detect motion such as respiration or hand waving up to 25 feet away and through thick walls.

NNSA's Remote Sensing Laboratory (RSL) in Las Vegas, Nev., also has a long history of providing support to national and international emergencies. The



RSL was requested to provide communications for the Strategic Petroleum Reserve (SPR).

Associate Administrator for Emergency Operations Joe Krol said a portable version of the Department's emergency communications network gave SPR the ability to communicate locally and

Arkansas where OST maintains a training facility. Staff members at the facility volunteered hundreds of hours to assist the hurricane victims.

Because generators were needed to help provide sources of power for victims and responders, numerous NNSA facilities worked

Television Images Compelled Albuquerque Volunteer To Go To New Orleans

The devastation wreaked on New Orleans by Hurricane Katrina and the television images of victims clinging to rooftops and scavenging for food were just too much to be ignored by Dave Bourne, an environmental management staff member located at the NNSA Service Center in Albuquerque, N.M..

A former Peace Corps volunteer, Bourne took a one-month leave of absence from his job and joined a Peace Corps team working in New Orleans with the Federal Emergency Management Agency. He took up residence in tents and other temporary housing with 12 other volunteers and began working in animal shelters, food banks and supply centers. He and his fellow volunteers passed out food, took care of lost animals and did a variety of other tasks in an effort to serve the basic needs of the people they came to help.

"Visualizing this is a lot different than seeing it on television," Bourne said. "Seeing the images, I just thought that there was something I could do to help out, and I wanted to experience it for myself."

He received training in Florida before being sent to Baton Rouge, then had to wait out Hurricane Rita before arriving at a high school in the New Orleans neighborhood of Algiers.

"The scope of what happened is just so widespread," he said. "It is something you have to see to believe. You can't grasp it from watching television."



IN-PROCESSING FOR KATRINA

EVACUEES: Fort Chaffee, Ark., was one of many sites in the U.S. where victims of Hurricane Katrina were sent for housing and other assistance. NNSA's Office of Secure Transportation (OST) has training facilities there and staff members spent their Labor Day weekend tending to the needs of evacuees.

with the Federal Emergency Management Agency (FEMA) and other agencies to transfer excess and available machines for use at emergency medical sites and other response locations. The Kansas City Plant in Missouri, the Y-12 National Security Complex in Tennessee and the three national labs all contributed generators. The Pantex Plant in Texas sent a mobile command vehicle to Lake Charles, La., in response to a request from the Office of Fossil Energy.

Individual NNSA staff members throughout the complex participated in food drives and fund raising efforts to help victims of the hurricanes. NNSA and the

Department of Energy have encouraged employees to become volunteers for 30-day field assignments to work with FEMA. Employee volunteers will continue in regular duty and pay status as DOE employees. DOE and FEMA will pay travel costs for volunteers.

across the complex, despite the lack of power and cell phone support in the immediate area of the storm.

The NNSA Office of Secure Transportation (OST) provided valuable air transportation support during the crisis, which included transporting 126 Navy Seabee personnel and their gear from

KATRINA VOLUNTEER: Ivan Herrera, a contractor employee at the NNSA Service Center in Albuquerque and a member of the New Mexico Air National Guard, stands in front of a mobile command post in New Orleans. Herrera was called to temporary active duty after Katrina hit Louisiana. A First Sergeant in the 150th Security Forces Squadron, he helped New Orleans police patrol the city, assisted in the recovery of bodies of storm victims, and helped to evacuate persons who had chosen not to leave.

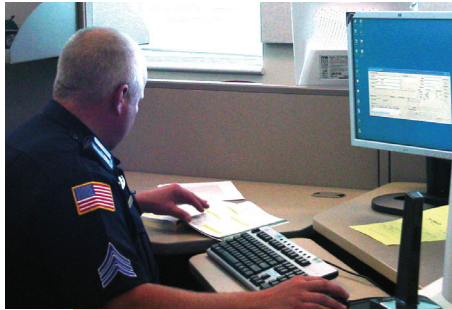
California to the impact areas soon after Katrina landed. OST also flew the Secretary of Veterans Affairs to affected areas. Additionally, thousands of evacuees were temporarily housed at Fort Chaffee in



Los Alamos Joint Dispatch Center Is Operational

A new joint dispatch system located at the Los Alamos National Laboratory (LANL) Emergency Operations Center has been created to bring all emergency management systems in the Los Alamos, N.M., community under one roof.

Created with funds from the Cerro Grande Fire recovery appropriation, the new center combined the resources of the Los Alamos County police and fire departments, County offices, and the LANL fire alarm system, which includes alarm testing and maintenance. It is a major milestone for all of the agencies involved.



“Basically, it is a win-win situation,” Los Alamos Police Captain Wayne Byers said. “This new system will provide an automated records management system. In addition, it will provide intelligent technology to dispatch

COMMUNITY COORDINATION: A Los Alamos County, N.M., police officer works in the new Joint Dispatch Center at the LANL Emergency Operations Center.

emergency resources, share important information with responders, file reports from the field, and manage incident records and materials.”

The key players who worked aggressively to open the joint center are Robert Gall, NNSA Site Office emergency manager; Beverly

Ramsey, LANL Emergency Operations Office; and Wayne Torpy, Los Alamos police chief.

In December an enhanced 911 system will become operational at the joint center. It will provide a street address, room number and name of the caller to the emergency operator. Los Alamos Fire Department vehicles are equipped with Global Positioning System technology that will show their location on the Computer Aided Dispatch system in the center. This will help managers know where their assets are during a fire or other emergency.

Currently, LANL is assigning street addresses to all lab roads and numbers to each lab building. When this is accomplished, the enhanced 911 system will receive the necessary location information for emergency calls.

Kansas City Plant Senior Leaders Take Up Tools For Habitat For Humanity

Kansas City Plant volunteers were recently tapped to finish work on a Habitat For Humanity project that was nearing completion.

Honeywell associates at the Kansas City Plant have a long history of supporting Habitat for Humanity, having collaborated over the years to build eight houses and rehab a ninth. “We have a solid core of volunteers who are out there every weekend and even during the week after work, to help build these houses,” said senior engineer Bill Spurny, one of the Kansas City Plant’s perpetual volunteers.

On a steamy summer day, Honeywell FM&T President Carol Bibb and more than ten members of her senior leadership staff joined other volunteers to move the house nearer to completion, painting and installing doors on the two-story concrete house. “It is coming along nicely and should be ready for its new family to move in before fall,” said Spurny. A few of the other senior leaders on hand to help out included Reed Childers, human resources and internal communications director; Sharon Robinson, external communications manager; Chris Gentile,

vice president national security programs; Jane Fitzpatrick, Six Sigma and business excellence director; Gary Fitzpatrick, NWC integration director; and Jim Jeffries, facility management services director.

Habitat for

HABITAT HOUSE COMPLETED: Carol Bibb touched up trim paint at the Habitat for Humanity house being completed by fellow Kansas City Plant volunteers.

Humanity builds and rehabilitates simple, decent houses through volunteer labor and donations of money and materials, and with “sweat equity” help from homeowner families. Habitat houses are sold to partner families at no profit, and financed with affordable, no-interest loans.



Disposition Program Reaches Another Milestone

Site preparation activities for a Mixed Oxide (MOX) Fuel Fabrication Facility at the Savannah River Site in South Carolina have begun.

In September 2000, the United States and Russia signed the Plutonium Management and Disposition Agreement, committing each country to dispose of 34 metric tons of surplus weapon-grade plutonium. To eliminate the plutonium, both nations agreed to fabricate it into MOX fuel for use in existing nuclear reactors.

At a ceremony initiating the clearing, grading and excavating phase for the Savannah River facility, NNSA Administrator Linton F. Brooks said, "The real reason that we are all here today is because starting these activities has a deeper meaning than clearing trees and moving dirt. It signifies that the United States is committed to proceeding with the plutonium disposition program. It signifies the site's important new role in the nonproliferation field. It signifies the Department of Energy's commitment to providing a pathway out of South Carolina for plutonium brought here for disposition."

Brooks said even though the U.S. has been ready to begin construction of a MOX facility since 2003, lack of adequate liability protections for U.S. work performed in Russia prevented the start of the program.

"I am pleased to report that the United States and Russia successfully completed negotiation of a liability protection protocol for the plutonium disposition program in July," he said. "We expect that both countries will sign the protocol in the near future, once routine internal reviews are completed."

The design of the U.S. MOX facility will also be adapted for use in Russia as a way of saving time

and money. The Russian facility will be built at the Siberian Chemical Combine in Seversk.

Other successfully completed milestones in the project include construction authorization for the MOX facility from the U.S. Nuclear

begin work next fiscal year on a training module to ensure that this first-of-a-kind facility will be able to provide plutonium oxide feedstock to the MOX facility on schedule."

South Carolina U.S. Senator



MOX MATTERS: A lineup of VIPs shovel the first dirt to prepare the site for a proposed MOX fabrication facility at the Savannah River Site. Pictured from left to right are: Jeff Allison, DOE Savannah River Operations Office manager; Rep. Charlie Norwood, R-GA; Sen. Lindsey Graham, R-SC; Rep. Gresham Barrett, R-SC; NNSA Administrator Linton F. Brooks; Sen. Jim DeMint, R-SC; and Sterling Franks, Fissile Materials Disposition Site Office director.

Regulatory Commission (NRC); approval by the NRC of a license amendment for the Catawba Nuclear Station in South Carolina, to irradiate four MOX fuel lead assemblies made from weapon-grade plutonium; signing of a technology transfer agreement allowing the U.S. use of French MOX technology at the planned Savannah River facility; and completion of about 70 percent of the design of the facility by the contractor, Duke Cogema Stone & Webster. Because the design is based on Cogema facilities already operating in France, NNSA can take advantage of Cogema's operating experience to perfect the design of the U.S. facility.

Brooks said, "We have also made progress on the design of the Pit Disassembly and Conversion Facility to be constructed at Savannah River, and we expect to

Lindsey Graham, an outspoken proponent of the nonproliferation program, was also a speaker at the site preparation ceremony.

"The congressional delegation and the Bush administration are committed to ensuring the MOX program becomes a reality," Graham said. "Today is another important step in the right direction. The MOX program is vital to our national security and we will continue to work together to ensure it is adequately funded. The citizens of South Carolina, along with the Savannah River Site workforce, should be proud of the role we are playing in making the world a safer place."

U.S. Senator Jim DeMint, U.S. Representative Gresham Barrett and U.S. Representative Charlie Norwood also attended the ceremony and delivered remarks.

GO FIGURE! Mines Exceptional Talent

Nine students with high scores in the annual NNSA Office of Research, Development and Simulation Go Figure! Mathematical Challenge have been hired as interns at NNSA's national laboratories as a result of their achievement.

The group included a Lucent Global Science Scholar and Intel Science Talent Search scholarship recipient, National MESA team competitor, 2005 Scripps National Spelling Bee finalists, a freshman at Harvard, a U.S. Chemistry Olympiad semifinalist and former U.S. Physics Team member.

The competition is designed to identify students who have the ability to learn, retain, and apply mathematical concepts. It measures the ability of students to think mathematically, independent of their mastery of mathematics in school. Complex problems are broken into small steps. Students must find and use clues to solve the problems, which are designed to test their ingenuity and ability to apply a newly acquired understanding in yet a different kind of problem.

Go Figure! is hosted by Sandia National Laboratories and Los Alamos National Laboratory at eight sites throughout California and New Mexico. The problems are devised by Cynthia Phillips, Ph.D., Distinguished Member of Technical Staff at Sandia. Visit www.sandia.gov/gofigure for further information.

Student programs at Sandia, Los Alamos and Livermore serve as models for national laboratory technical workforce development, securing a pipeline of employable technicians, technologist, engineers, researchers, and scientists who will be capable of ensuring the nation's Stockpile Stewardship security mission. These programs work with universities and other technical institutions in an effort to mitigate existing workforce shortages. Students benefit by gaining exposure to state-of-the-art technologies and enjoying challenging technical career opportunities from pre-college to post-doctoral levels.



CROSS COUNTRY RIDE: Two Lawrence Livermore National Laboratory employees and a friend dipped their bicycle wheels into the Atlantic Ocean at Virginia Beach, Va. on September 28, concluding their 60-day, 3,815-mile bicycle ride across the country. Through pledges, the trio raised several thousand dollars for the Tri-Valley Hope Hospice. Pictured from left to right are: Rose O'Brien and Celeste Matarazzo and retired Livermore teacher Janis Turner.



FRONTIERS OF PHYSICS: High school students gaze into the 30-foot-diameter target chamber of the National Ignition Facility at Lawrence Livermore National Laboratory during "Frontiers of Physics" day at the lab. The special day in September brought more than 400 high school science students and their teachers to the lab for tours, presentations and discussions around the topic of physics. The event was part of the lab's year-long celebration of the International World Year of Physics.

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