the laboratory
connection

volume 2 number 2

your community's link
to information, opportunities, and people
at Los Alamos National Laboratory

february 2001

a word from the Community Relations Office

Bioscience Key to Lab's Future

New capabilities for biothreat reduction are among the Lab's most valuable assets, and their development is being supported both by immediate neighbors of the Lab and in Washington D.C.. The Community Relations Office encourages our neighbors to become more familiar and informed about this crucial component of the Lab and our nation's future.

As part of Bioscience Division (B), Division Director Jill Trewhella's review of the past year's accomplishments and to outline plans for the division's second year, she has begun an outreach campaign aimed at educating community leaders about "what we do, why we do it, and how we do it." She has already met with leaders from several nearby pueblos and with local government officials in Los Alamos, Española, and Santa Fe. "The response has been extremely positive," Trewhella said. "One pueblo leader said he was glad to see the Lab turn from weapons to healing."

BIOSCIENCE

The Lab is engaged in research in a number of areas to reduce the threat from biological organisms. This research is aimed at protecting humans against naturally occurring infectious diseases, as well as detecting and protecting them against biological agents introduced into the environment either accidentally or maliciously. The division continues to make contribu-

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Laura Jones, left, holding four-month-old daughter Miryam Ginsparg, and Wendee Brunish, right, were two of several Lab employees who attended a Fall 2000 League of Women Voters meeting in which childcare initiatives at the Lab were discussed by Human Resources Division Director Helga Christopherson.

Lab Childcare Center Proposed

The Laboratory is proposing to establish a childcare center for its workforce to be operated by a not-for-profit corporation. The center could eventually be expanded to provide other employee related services, and current planning is to augment, not supplant existing childcare services now available in the region. The proposal will move forward only after approval by the Department of Energy (DOE).

The Human Resources (HR) Division and the Diversity Office will implement the Lab's decision. Among other things, this will include locating space and setting up a new administrative infrastructure to provide childcare services. "This is the right thing to do. It's a statement to our employees that we care about this issue," Lab Director John Browne said, adding, "it is important to the institution that we establish a childcare center for Lab workers."

Lab officials have briefed a delegation of Los Alamos community and business leaders, as well as a group of Los Alamos childcare providers on the Lab's proposal. Childcare providers welcomed the opportunity to work with Lab officials to alleviate their growing waiting lists for

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Bioscience
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tions to the underlying science and technology that advances these goals.

Researchers also have developed technologies to identify the origins of biological organisms from DNA extracted from samples. The technology has been used to distinguish between different strains of B. anthracis, the organism that causes anthrax. Tests conducted at LANL provided the definitive evidence that victims of the 1979 anthrax outbreak in the Soviet Union weren't infected by contaminated meat as the Soviet government claimed. It was later revealed that the deaths had been caused by the accidental release of B. anthracis spores from a Soviet military biological research facility.

Trewhella also noted that the Lab continues to evaluate the possibility of adding a Biosafety Level 3, capability, which is beyond its current BSL-2 capabilities. A necessary part of that evaluation would be an environmental review conducted by DOE which allows for a number of avenues to receive community input. Lab Director John Browne and the DOE would make a final decision for going forward with the lab.

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**Lab Childcare
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unfulfilled childcare needs, and also welcomed potential technical assistance in addressing teacher-certification needs for their existing operations.

Helga Christopherson, HR director, said the decision to pursue a childcare facility to be operated for the Lab sends a strong message about the Lab's commitment to the welfare of its current and future employees. She also noted that the Lab is aware of concerns about how a childcare facility operated for Lab employees could impact existing childcare providers and will work to address them.

The Lab's immediate task is to establish the corporate infrastructure for operation of the childcare center and possibly eventually broaden its charter to provide other employee services. This corporation would be legally separate from the Lab, and employees would work for the corporation, not the Lab. "As an example, we will be looking at infant care and other types of care that are extremely expensive for existing providers to offer. The costs have to be offset by other types of care that is less expensive, so what employees will eventually see is a mix of different types of care," Christopherson said. The Lab also will work closely with DOE to ensure approval of the Lab's childcare plan and allowable costs. The Lab can pay only for space, utilities and maintenance; otherwise the center must be self-supporting.

The Lab for years has been considering the best way to address childcare needs. Initial efforts by Lab workers advocating some form of childcare services for Lab personnel date to the 1970s. Several surveys of Lab employees have indicated a strong desire for Lab-sponsored childcare services.

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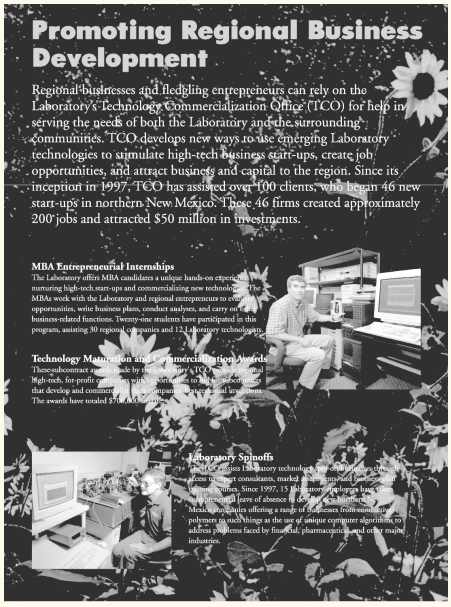
Economic Development Showcased at Capitol

Officials with Los Alamos and Sandia National Laboratories in late January showcased the Lab's economic development efforts with a poster display at the New Mexico State Capitol Building. Also, Senator Richard Martinez, D-Rio Arriba, Los Alamos, presented a joint memorial recognizing Los Alamos and Sandia National Laboratories' economic development contributions in NM.

A recent report showed that the Lab alone has an approximate $4.9 billion annual economic impact statewide. About $3.8 billion of that goes to the Rio Arriba, Santa Fe, and Los Alamos counties region. In addition, the Lab accounts for about 30 percent of the employment in the tri-county region and 4 percent statewide. Lab procurements in northern New Mexico last year accounted for the purchase of $346 million in goods and services; the Lab's statewide procurement contribution was about $460 million.

LANL encourages the formation of high-tech businesses and companies and has helped facilitate the successful start up of 46 New Mexico businesses since 1997. Those businesses accounted for about 200 new jobs in the state.



One of six display panels from the Lab's new economic development exhibit.

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FBI Concludes Investigation of Hard Drives: No Evidence of Espionage

The Federal Bureau of Investigation (FBI) notified the Energy Department that its investigation of the missing hard drives at the Lab has been concluded and that the Bureau will be taking no further action at this time. The investigation, which began on June 5, 2000, focused on individuals with access to the information contained on the hard drives. On June 5, 2000, computer hard drives belonging to the Nuclear Emergency Search Team (NEST) were reported to the FBI as missing. The missing hard drives were discovered 11 days later on June 16, 2000, behind a copy machine in an X-Division area at the Lab.

"The FBI investigation found no evidence of outside involvement in the disappearance of the hard drives at Los Alamos," said then-Energy Secretary Bill Richardson. "With the closure of the FBI investigation, we are referring the matter to the department's Albuquerque Operations Office and the University of California (UC) for any appropriate personnel action." UC is responsible for the review and possible personnel actions involving staff. Richardson asked UC to aggressively pursue the matter and ensure that appropriate personnel action is promptly taken.

The FBI investigation was unable to determine responsibility for the disappearance of the hard drives. Furthermore, the FBI found no evidence that the classified information contained on the hard drives had been compromised. Conclusion of the FBI investigation enables the Lab to fully focus on its vitally important national security mission, said Under Secretary and Administrator of the National Nuclear Security Administration John Gordon.

Contributions of African Americans

February is National African American History month, during which we bear witness to the progress, richness, and diversity of African American achievement.

African Americans have been major contributors to engineering, science, and technology as far back as 2750 B.C., according to Aprille Joy Ericsson-Jackson of NASA's Goddard Space Flight Center (shown at left). People like Benjamin Banneker, Dr. George Washington Carver, Bessie Coleman, and Shirley Ann Jackson were all African Americans who made lasting contributions in the fields of science, technology, and engineering. Ericsson-Jackson used the historical references to talk about the "Contributions of Africans and African Americans to Technology" during a talk in late January at the Lab. An aerospace engineer at the Goddard Space Flight Center, Ericsson-Jackson said minorities have much to gain from participating in the science and technology arena. Issues such as environmental and health conditions or equal opportunity are the same, but technology will affect how they are addressed, she asserted. As recently as the middle-to-late 1990s, African Americans made up 12 percent of the U. S. workforce. But only four percent were doctors and five percent were in engineering and computer science.

Abraham Confirmed as DOE Secretary

Former United States Senator Spencer Abraham of Michigan was confirmed and sworn in as the 10th secretary of the Department of Energy at a hearing in late January. He replaces former New Mexico congressman Bill Richardson as DOE secretary.

In a message to DOE employees, Abraham said, "I welcome the opportunity to tackle the difficult and challenging job facing us. As I have learned more about the Department, I have also come to appreciate the dedicated and talented employees that serve our nation in meeting this important mission. I look forward to working together."

New Secretary of Energy Spencer Abraham.

Bridge to Employment Visit

On January 24, Lou Gallegos (shown above right), who is the chief of staff for Gov. Gary Johnson, listens as Anthony Garcia, Mail Services and Distribution team leader, discusses how the mailroom has been a key component to the Lab's highly successful Bridge to Employment program. The program helps provide job training and employment skills to former welfare recipients. The Bridge to Employment program has had a 97 percent success rate in helping northern NM welfare recipients become viable, productive workers. With few exceptions, participants in the Lab's program have become full-time workers in jobs that pay an average of $10 an hour and offer critical benefits like health-care insurance and retirement plans. Bridge to Employment participants begin their work in the Lab's mailroom but soon move to other positions both inside and outside of the Lab.

Gallegos visited the Lab to learn about key components of the Bridge program and discussed how it might be a good model for Welfare-to-Work initiatives in New Mexico and elsewhere. During his visit, Gallegos spoke to several Bridge program participants, received an overview of the program's methodology, and learned how positive partnerships with outside companies are crucial to the success of the program. Lab staff presented testimony about the program to legislative officials on Jan. 25 at the State Capitol Building.

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Tracking System Flags WIPP Trucks

A smart computer system developed at the Lab can now provide an almost instant alarm signal when nuclear waste transport drivers waver off course.

For waste-carrying trucks bound for the Waste Isolation Pilot Plant in southeastern New Mexico, this is a timely addition to their on-board shipment-tracking systems. Ever since a WIPP truck took a wrong turn in Santa Fe last fall, the drivers have been under closer scrutiny. The existing system tracks their progress toward the site, but does not provide alarms for course deviations or stopped shipments. Operators in the WIPP Central Monitoring Room (CMR) had to observe the shipment's path on screen, recognize if a deviation had occurred, and then respond, resulting in several miles of inadvertent travel on the wrong road, in one case.

The Guardian system, developed by the Advanced Surveillance Technology team at the Lab, had already been developed to "reason," learning to track anomalies from an established transport route or a set pattern of behavior for personnel and material in nuclear material facilities. Adapting it to alert WIPP's monitoring staff was inexpensive and quickly achieved. Guardian now links with the TRANSCOM satellite tracking system, and as soon as it recognizes a stop, communication failure, or route deviation, it sounds alarms and posts message windows on the computer screens for the monitoring room operators. The new system was modified for WIPP within weeks of the initial off-course truck incident.

Should a truck display "anomalous" behavior, such as stopping or turning in an unplanned location, the system sets off an alarm that requires the WIPP site Control Monitoring Room operator to respond. If the driver's stop is for an extended period of time, the system can be told the length of that period, and it will refrain from additional alerts until that time is up, or when the shipment begins moving again. An example of an extended, unplanned stoppage would be poor road conditions or bad visibility due to rough weather.

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Lab Earns Three Quality NM Awards

Three Lab divisions and a Lab contractor will be among 51 organizations honored for performance excellence at two separate Quality New Mexico ceremonies. The State Legislature recognized participants during Quality New Mexico Day in Santa Fe on Jan. 31. Quality New Mexico also will host an awards banquet at Albuquerque's Crowne Plaza Hotel on March 2 and 3.

QUALITY New Mexico
"Our Quest for Excellence"

The Research Library earned a Roadrunner Recognition Award for significant progress in building sound and notable processes. The Advanced Recovery and Integrated Extraction System Project (ARIES) and the Environmental Stewardship Office earned Piñon Recognition Awards for making a serious commitment

to using quality principles. Protection Technology Los Alamos, which provides protective force services for the Lab, also received a Piñon Recognition Award for making a serious commitment to using quality principles.

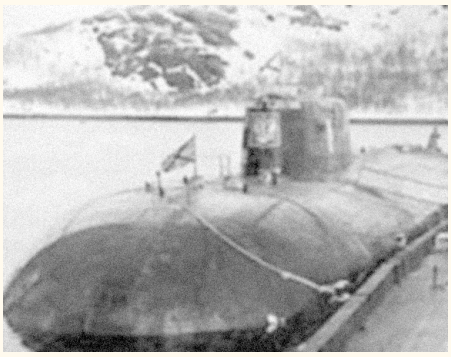
Quality New Mexico is a non-profit membership organization that motivates, trains and recognizes New Mexico organizations for achievement in performance excellence. The program uses the Malcolm Baldridge National Qualtiy Award criteria and is broken into three award levels: Zia Award, the highest honor bestowed to an organization that clearly demonstrates performances excellence; Piñon and Roadrunner awards recognize commitment and progress. For more information go to Quality New Mexico's web site at www.qualitynewmexico.org online.

Museum on the Road

Bradbury Science Museum educator Bettie Bedell explains the finer points of large cockroaches to a group in late January at Chamisa Elementary School in White Rock. The museum was invited to take part in the school's Science Fair/Science Fun Night and joined with Lab and community volunteers to provide demonstrations and science activities for Chamisa students and their families.

Bettie Bedell explains the finer points of large cockroaches to a group at Chamisa Elementary School.

Clues to Kursk Disaster



The Kursk: 118 sailors died on board.

The explosions that sank the Russian submarine Kursk on Aug. 12, 2000, triggered shock waves that were recorded by a network of seismic stations in the Baltic region and beyond. Now, Lab forensic seismologists have used these data to reconstruct the disaster. Writing in the Jan. 23 issue of Eos, the weekly newspaper of the American Geophysical Union, Lab Geophysics Group staff Steven R. Taylor and Hans E. Hartse, report that, based on their analysis of seismograms – explosions, not impact – caused the Kursk to sink with the loss of all crew members. For more information, see the AGU news release at http://www.agu.org/sci_soc/prrl/prrl0105.html.

Regional Health Care Facts

The following are extrapolated from a recent Decision Applications Division study of health care availability and costs for Lab employees. The study also revealed interesting and relevant facts that relate to northern New Mexico health care as a whole.

- Los Alamos ranks third in New Mexico in the number of physicians per capita, behind Bernalillo and Santa Fe counties. Los Alamos enjoys a high number of doctors per capita for a town of its size and ranks at about the national average. Long-term trends show that the number of physicians in Los Alamos County on a per capita basis has maintained the same relative level of service as is found nationally.

- In general, communities with small populations can support only a few doctors. Reasonably full coverage by a spectrum of specialists requires a population base of between 300,000 and 500,000. Los Alamos is uncommonly well served by physicians for a community of its size.

- In Northern New Mexico as a whole, the number of doctors is almost exactly the median number of doctors expected based on the total population. Most of those doctors are concentrated in Los Alamos, which has about four times the median number of physicians expected given its population, and Santa Fe, which has about 60 percent more physicians than expected. It is important to look at medical services on a regional basis because there is much sharing across community lines when outside of a large metropolitan community.

Energy Department and UC Extend Contracts

The Department of Energy, the National Nuclear Security Administration and the University of California have agreed on new management and operations contracts for two of the Energy Department's defense labs, Lawrence Livermore and Los Alamos. The move expands and strengthens the contracts' requirements, and extends them for a three-year period.

John Gordon, administrator of the NNSA, led the effort to renegotiate the contracts. "We restructured the contracts to enable UC to provide its unparalleled scientific reputation to ensure the scientific vitality of the laboratories and bring that same expertise to strengthen the management of security and facility operations," Administrator Gordon said. "The contracts also provide the workforce with stability so that important national security programs, including stockpile stewardship, can move forward."

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

The commitments for regional involvement contained in Appendices J, M and N of the contract will virtually continue unabated.

Among improvements, the new contracts strengthen management accountability, provide for enhanced security safeguards and management, and improve safety measures already in place at the labs.

The contract restructuring will require UC to implement urgently needed management improvements and bring about the changes needed to avoid the types of problems such as safety, security, and project management lapses that have been encountered in the past. The additional contract extension of three years to Sept. 30, 2005, is provided to stabilize the essential scientific and technical workforce and allow sufficient time to demonstrate successful implementation of these major improvements.

Inside

The Laboratory Connection,
a monthly publication for northern New Mexico,
is published by the Information Management Division
and the Community Relations Office.
The staff can be reached by e-mail at community@lanl.gov,
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Editor: Christina Armijo
Contributing writers and photographers: Public Affairs Office staff contributed to this publication.

LALP-00-130

Los Alamos
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A U.S. Department of Energy Laboratory