Los Alamos NATIONAL LABORATORY EST.1943

NewsLetter

Week of Sept. 27, 2004 Vol. 5, No. 20

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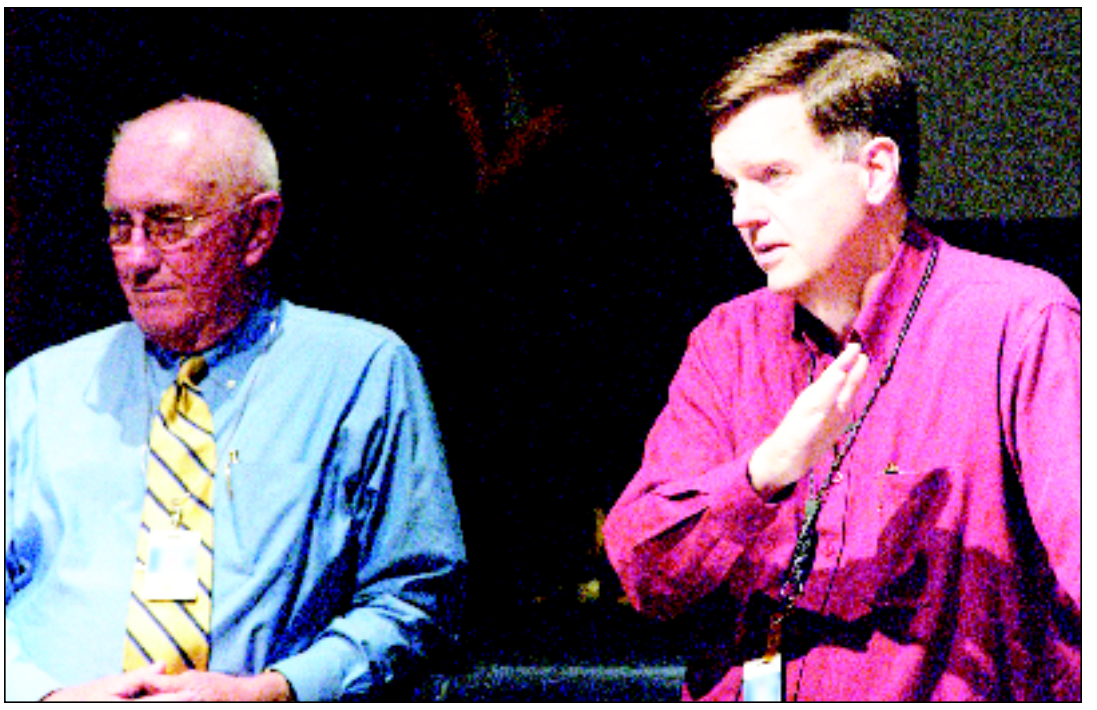

Laboratory Director G. Peter Nanos, right, responds to a question from the audience at a Sept. 17 all-employee meeting in the Administration Building Auditorium at Technical Area 3. Robert Foley, left, University of California vice president for laboratory management, also attended the all-employee meeting. Foley made brief comments and reiterated UC's support of Nanos' decision to suspend operations. Foley also said UC is preparing to compete to retain the operating contract. Photo by LeRoy N. Sanchez

Lab is 'writing a whole new chapter'

Nanos outlines the path forward

by Brooke Kent

"Today we are in a remarkably stronger, more powerful position than ever before," Laboratory Director G. Peter Nanos told the work force at an all-employee meeting in the Administration Building Auditorium at Technical Area 3.

Nanos characterized the decision to suspend Laboratory operations, confront continuing safety and security incidents, and the resulting disciplinary personnel actions as "a winter of the soul," [one of] the toughest jobs he has encountered at Los Alamos.

At the same time, however, these activities enabled the Laboratory to cross a historical watershed and emerge as a different institution than it has been in the past, Nanos told employees in the auditorium and watching on LABNET. "We are not the old Los Alamos anymore," Nanos stressed. "We have a better handle on where we are and what we are doing. We have assessed risks, identified problems and created an evidentiary due-diligence file outlining existing risks and problems.

"We have delineated a short list of near- and present-risk issues to address prior to resumption and created a longer list of post-resumption, long-term safety and security issues to begin negotiating with the Department of Energy."

Nanos thanked all employees for their hard work and dedication. "Under extremely adverse circumstances, you have performed exceptionally well. I am extremely proud of you … Your efforts have had a profound impact on the renewed confidence placed in us by Congress and our customers," Nanos said.

The director acknowledged the active collaboration of representatives from the University of California and the National Nuclear Security Administration's Los Alamos Site Office. "The Laboratory could not have reached this position without the teamwork shown by our DOE and UC colleagues," Nanos said.

UC Vice President for Laboratory Management Robert Foley reiterated that "as of today, UC is preparing to compete for this contract and win it … This laboratory is now a different laboratory. There are great things happening here, and [the public] needs to hear about it," Foley said, adding that he supported Nanos' decision in July to suspend operations and continues to support it today.

Nanos challenged employees to seize this moment in the Laboratory's history. "We are uniquely positioned to build a culture of shared fate. If we sustain this

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2005 United Way campaign

The Laboratory's United Way 2005 giving campaign, "Making One Small Difference After Another," began this week.

"Each year, the Laboratory partners with Northern New Mexico United Way and United Way of Santa Fe County to raise critically needed funds to benefit those in our region who may need special assistance," said Richard Mah, associate director for weapons engineering and manufacturing, chair of this year's giving campaign. "The United Way positively impacts the lives of thousands of New Mexican's by providing funding to more than three dozen service organizations and programs in our region."

Pledge cards were delivered to Lab employee mail stops this week. Employees who don't receive pledge cards by Oct. 8 should contact the Community Relations Office (CRO) at 5-4400. The Lab's United Way campaign continues through Nov. 12.

For more information, see the Sept. 22 Daily Newsbulletin at *www.lanl.gov/newsbulletin* online.

Los Alamos NewsLetter

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Editor:
Jacqueline Paris-Chitanvis, 5-7779

Associate editor:
Steve Sandoval, 5-9206

Production editor:
Denise Bjarke, 7-3565

Graphic designer:
Edwin Vigil, 5-9205

Staff photographer:
LeRoy N. Sanchez, 5-5009

Los Alamos National Laboratory is operated by the University of California for the National Nuclear Security Administration (NNSA) of the U.S. Department of Energy and works in partnership with NNSA's Sandia and Lawrence Livermore national laboratories to support NNSA in its mission.

Los Alamos enhances global security by ensuring safety and confidence in the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction and improving the environmental and nuclear materials legacy of the Cold War. Los Alamos' capabilities assist the nation in addressing energy, environment, infrastructure and biological security problems.

National Nuclear Security Administration

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FROM THE TOP

CREM and laser incidents result in personnel actions

Laboratory Director G. Peter Nanos

When I directed the suspension of operations at the Laboratory on July 16, I did so not just because of the CREM security incident and the laser safety incident, but because a pattern of near misses in safety and security had created in me and others a fundamental lack of confidence in our ability to conduct work without a major mishap (for a synopsis of the second quarter safety statistics at the Laboratory see the current issue of the Los Alamos Mirror at *mirror.lanl.gov/* online).

I cannot think of anything more disheartening than having to personally notify someone that their loved one had been seriously injured or killed while working at the Laboratory, because we had not adequately identified and mitigated risks. I take my personal responsibilities for the safety of the work force seriously. During this suspension, I have asked every staff member to share in a commitment to safeguard the health, welfare and safety of our work force.

I also have stated that I believe the overwhelming majority of Laboratory staff members are hard-working professionals dedicated to our national security mission. The personnel actions announced [Sept. 15] should not reflect poorly on this vast majority of conscientious Laboratory staff members, who are committed to our national security mission and to conducting their work in a safe, secure and complaint manner. But rather, these actions should be viewed as confirmation that this institution is worthy of the public trust and will not tolerate a disregard for the rules and standards to which the University of California and the Laboratory have committed themselves.

As UC President Robert Dynes and I have repeatedly stated in the past, accountability is a key component of the Laboratory's success in the future and must be a fundamental value in the Laboratory's work. [The] personnel actions are consistent with UC and the Laboratory's values. The actions follow completion of the Laboratory's internal investigation into circumstances related to the CREM security incident and the laser safety incident, and include review by [a] Laboratory case review board and a review panel from the University of California Office of the President. While additional investigations by outside agencies are continuing, the Laboratory has enough factual information to administer appropriate personnel actions with respect to 21 of the 23 workers who had been placed on investigatory leave. In determining appropriate personnel actions, the Laboratory sought to ensure that all disciplinary actions were reasonable, fair, equitable and based solely on the results of the investigations and review process. Personnel actions were taken at all levels of responsibility

Of the 23 individuals placed on investigatory leave:

- Four were terminated
- One is pending resignation in lieu of termination
- Seven received either written reprimands, demotions, salary reductions or suspensions without pay or some combination of these actions
- One remains on investigatory leave pending outcome of investigations
- Ten will return to work without any findings of wrongdoing

These personnel actions provide necessary closure to the most recent issues related to safety and security. The suspension and subsequent resumption of Laboratory activities, though not entirely complete, has provided a basis for renewed trust and confidence in Los Alamos National Laboratory. As we move forward, Laboratory staff members and the nation can take heart in the knowledge that we hold ourselves to the highest standards and that we are committed to operating this Laboratory in a safe, secure and compliant manner.

I realize and acknowledge that the suspension of activities and these disciplinary actions were extremely difficult decisions. The decisions, however, were necessary in order to exercise

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UNM President Caldera visits Los Alamos

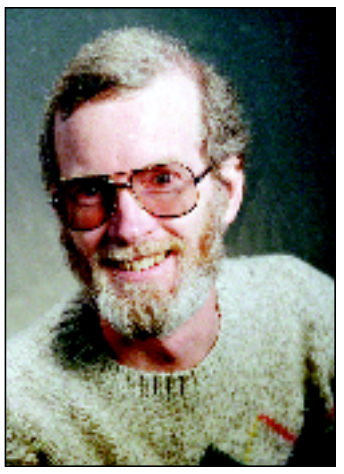
University of New Mexico President Louis Caldera, seated right, talks with Laboratory Director G. Peter Nanos during a recent visit to the Laboratory. Caldera was making his first visit to the Laboratory since becoming UNM president on Aug. 1, 2003. Caldera was accompanied by several of his senior staff members. In addition to meeting with Nanos, Caldera received a briefing on the Laboratory's homeland security program. The Laboratory and UNM signed a memorandum of understanding in October 2003 focusing on collaborative research in a number of disciplines. The meeting was coordinated by the Government Relations Office (GRO). *Photo by LeRoy N. Sanchez*

Three Laboratory staff receive Lawrence awards

by Todd Hanson

Bette Korber

Fred Mortensen



Greg Swift

Laboratory scientists Bette Korber, Fred Mortensen and Greg Swift are recipients of the E.O. Lawrence Award.

"We are all enriched by the contributions these researchers have made, ranging from engines with no moving parts to better ways to see the stars," Department of Energy Secretary Spencer Abraham said.

Bette Korber is a technical staff member in Theoretical Biology and Biophysics (T-10). She received the Lawrence Award in the Life Sciences category for her pioneering studies of the genetic characteristics of the HIV virus after its transmission from mother to child, during the progression of the disease and within different tissues in the host; as well as for her development of the Los Alamos HIV database, which forms a foundation for HIV research for the global scientific community. Korber earned her doctoral degree in chemistry in the field of immunology from the California Institute of Technology in 1988. She came to the Laboratory in 1990 as a postdoctoral fellow and became a staff member in 1993. Concurrently, she also is part of the external faculty at the Santa Fe Institute.

Fred Mortensen is a technical staff member in Thermonuclear Applications (X-2). He received the Lawrence Award in the National Security category for his technical contributions in nuclear weapons design and his leadership and expert judgment that have enabled the continued certification of the safety and reliability of nuclear weapons in an era without nuclear testing. He received his doctoral degree in numerical fluid mechanics from the University of New Mexico and came to the Laboratory directly out of college in 1972. He has worked as a staff member in Thermonuclear Applications since that time. During his career, Mortensen has received two Laboratory Distinguished Performance Awards, an R&D 100 Team Award and seven Nuclear Weapons Technology Recognition of Excellence Awards.

Greg Swift is a technical staff member in Condensed Matter and Thermal Physics (MST-10). Swift received the Lawrence Award in the Environmental Science and Technology category for his record of experiments leading to a better understanding of the superfluid state and for the development of thermoacoustic engines. He has been at Los Alamos since 1981, when he arrived as a postdoctoral fellow. Swift earned his doctoral degree in physics from the University of California, Berkeley in 1980. In 1998, he was elected as a Fellow of the American Physical Society. Swift won a Laboratory Distinguished Performance Award in 1997. He is a Fellow of the Acoustical Society of America and was the recipient of that organization's Silver Medal in Physical Acoustics in 2000.

The three award winners had all been previously appointed by the director to the rank of Laboratory Fellow in recognition of their sustained outstanding contributions and exceptional promise for continued professional achievement.

The Los Alamos winners join three other University of California winners: Claire Max from the University of California, Santa Cruz and Lawrence Livermore National Laboratory; Richard Saykally from University of California, Berkeley and Lawrence Berkeley National Laboratory; and Ivan Schuller from the University of California, San Diego. Winners will officially receive their awards on Nov. 8.

The Ernest Orlando Lawrence Award was established in November 1959 by the Department of Energy. The award honors exceptional contributions to the development, use, or control of nuclear energy (broadly defined to include the science and technology of nuclear, atomic, molecular, and particle interactions and effects). Each award recipient receives $50,000, a gold medal and a citation signed by the DOE secretary.

Personnel actions ...

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our own control over our own destiny. It is time now to begin conscientiously moving forward in a safe, secure and compliant manner. The period of the last several months marks a new beginning for this institution.

We are making significant progress in resumption of Laboratory activities. Through the dedicated efforts of the Laboratory's work force, we are rebuilding a laboratory committed to operations in accordance with established safety, security and compliance policies. We have resumed 100 percent of our low risk activities, 42 percent of our medium risk activities, and will soon be processing the first of our highest-risk activities for restart in accordance with the Department of Energy CREM security guidance. We have received nearly all scoping documents, and one-third of all Management Self-Assessment documents have been submitted to the resumption review board. We anticipate a majority of our organizational activities will be restarted by the end of this month.

The bottom line is the suspension is not about achieving perfection at Los Alamos National Laboratory. Everyone can appreciate that honest mistakes will undoubtedly occur in a highly complex technical environment, even when Laboratory workers act responsibly, in good faith and in adherence to established policies and procedures. But, we can take all necessary actions to control risk. We can identify and control vulnerabilities. We can affirm our control over personal decisions about compliance. In doing so, we can be confident that Los Alamos National Laboratory will continue to fulfill its obligation to provide the world's greatest science protecting America.

Fellows Prize winners named

by Brooke Kent

Two Laboratory staff members are recipients of the 2004 Fellows' Prize for Research and one staff member is the 2004 Fellows' Prize for Leadership recipient.

Laboratory Director G. Peter Nanos will present the Fellows' Prizes for Research to Roger Johnston of Advanced Diagnostics and Instrumentation (C-ADI) and John Sarrao of Condensed Matter and Thermal Physics (MST-10). A colloquium will be held at a later date for Johnston and Sarrao to present their research.

The Fellows Prize for Research honors individuals for outstanding research performed at the Lab, published within the past 10 years and exerting a significant disciplinary or programmatic impact. The Fellows prize is open to all full-time staff members; however, fellows and postdoctoral researchers are ineligible for consideration.

The 2004 Fellows' Prize for Leadership recipient is Nancy Sauer of Structural Inorganic Chemistry (C-SIC). In its second year, this award commends individuals exhibiting outstanding scientific and engineering leadership. The prize is open to any currently employed Lab technician, technical staff member or manager, with the exception of fellows.

Roger Johnston

John Sarrao

Nancy Sauer

COMPASS project navigates through rough and calm times

by Kathy DeLucas

Set the course — stay the course. The Culture and Operations Model, Plan and Surety System was established shortly before the suspension of work July 16. But since the suspension, the project's mission has become two-fold. The near-term goal is resumption — setting the course, and the long-term goal is to continue process improvements — staying the course.

"COMPASS is a journey," COMPASS Project Leader John Bretzke said recently when he described the project. "We won't come out of resumption completely perfect, but we will have set the course."

The resumption process managed by COMPASS will feed into a long-range institutional plan for managing Labwide operational efficiency, including the establishment of a contract assurance and issues management system. COMPASS includes the use of navigational tools — formal project management and communications tools — to ensure that the resumption, security and culture consciousness portions of the journey are integrated and well communicated.

The overarching goal of COMPASS is to measure the effectiveness of operations: to identify performance drivers; assess performance; measure the impact of business innovations and information technologies on that performance; calculate the effects of human resource management policies and regulations on efficiency; and manage the balance between risk management and overall operational efficiency.

"We need to refine our processes," said Bretzke. "For every unclear procedure, there are 12,000 interpretations of how a job can be done. COMPASS allows us to look at the risks today and ask if people have the right tools, resources and policies to get the job done safely and securely."

The COMPASS project, which actually began just a few days prior to the suspension of work, was modeled after the Business Process Improvement Project. The absorption of the resumption activities into the original scope was a natural fit.

"The suspension of work was not a result of one or two incidents," Bretzke said. "It was the result of a trend line that wasn't looking positive."

Simply stated, the resumption process is a risk assessment. "It's time to set the sharp tools down and take a look at what we do and why we do it," said Bretzke.

Shortly after the suspension, senior Laboratory leaders developed risk categories for which all Lab activities were binned. Level 1 activities, actions that present little risk to safety and security, were 100 percent resumed as of Aug. 18. Level 2 and 3 activities, ones that present a moderate- to high-level of risk to safety or security, are being stood up through a rigorous process of reviews, called management self-assessments and Laboratory readiness reviews.

The assessment process for organizations that use hazardous materials or classified information, but not accountable classified removable electronic media, involves a responsible line manager who creates a detailed Startup Notification Report to identify the scope of the work to be reviewed. The Resumption Review Board, made up of senior-level managers and subject-matter experts, reviews the Startup Notification Report to concur that the scope meets Laboratory requirements.

Once the report is approved, MSA teams conduct the review, identifying risks and ensuring that proper protective actions are in place. Once the MSA review is complete, the responsible line manager reports back to the Resumption Review Board, which then makes a recommendation to the Laboratory director as to the readiness of the organization to resume activities. Resumption of Level 3 activities, the category of activities that pose high risk to safety and security, includes a further step of conducting an independent

John Bretzke, COMPASS Project Leader

Laboratory readiness reviews in accordance with LIR 300-00-08. These teams are led by a staff member from Performance Surety (PS) Division and, as in the MSA, include an observer member from the Department of Energy.

Organizations that use accountable CREM follow a separate but concurrently conducted resumption process that includes explicit approval from DOE via direction from Deputy Secretary Kyle McSlarrow.

Bretzke said he feels confident that the COMPASS journey will make the Laboratory stronger.

"This is an investment in our future," Bretzke said. "All in all, if we didn't suspend work and had to continually stop work, restart work and then stop it again, science suffers.

"However, by taking a careful, measured approach to resumption and by understanding and mitigating the risks, we can build a consistency of operations. A consistency of operations ensures that work can be done safely and securely, [and] we all win."

Lab is 'writing ...

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momentum, we can move the Laboratory in the right direction through the right choices."

The key challenge now, the director said, is institutionalizing change in a reasonable, not overly burdensome way. "[The resumption process] has been a precious investment in our process," he said, adding that the Laboratory must maximize this investment by simplifying and streamlining its safety and security processes while retaining their value and accountability.

In conclusion, Nanos said he bore a simple message to every corner of the institution: "This is a great place. You have made a personal investment in the resumption process and paid the price for it. I am extremely proud of everyone of you ...With your help, Los Alamos will remain the country's foremost nuclear laboratory."

National Fire Prevention Week

Oct. 3 through 9 is National Fire Prevention Week: "Test Your Smoke Alarms."

A safety mindset in the workplace begins at home. This is especially true of fire safety, yet roughly 70 percent of home-fire deaths result from fires in homes with no smoke alarms or no working smoke alarms, according to the National Fire Prevention Association. As the association notes, alarms are the great safety success story of the 20th century, but only when they are working properly.

The following tips on smoke alarm safety were excerpted from the NFPA Web site. For additional information, go to *www.firepreventionweek.org*.

Install smoke alarms correctly and test them regularly

Because fire can grow and spread quickly, having working smoke alarms in the home can mean the difference between life and death. But these life-saving devices are only effective when they're working properly. Smoke alarms with batteries that are dead, disconnected or missing can't alert people to the dangers of smoke and fire. Follow these tips to ensure that smoke alarms are installed correctly and tested regularly.

Once the alarm sounds, occupants may have as few as two minutes to escape. Learning how to effectively use the smoke alarm's early warning to get out safely will reduce the risk of dying in a home fire.

Install smoke alarms correctly

Install smoke alarms on every level of a home, including the basement, making sure that there is an alarm outside every separate sleeping area. New homes are required to have a smoke alarm in every sleeping room and all smoke alarms must be interconnected.

Hard-wired smoke alarms operate on household electrical current. They can be interconnected so that every alarm sounds regardless of the fire's location. This is an advantage in early warning, because it gives occupants extra time to escape if they are in one part of the home and a fire breaks out in another part. Alarms that are hard-wired should have battery backups in case of a power outage and should be installed by a qualified electrician.

If occupants sleep with bedroom doors closed, a qualified electrician should install interconnected smoke alarms in each room so that when one alarm sounds, they all

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Laboratory recognizes its distinguished performers

The Laboratory has selected its 2003 Distinguished Performance Award winners. The annual award, which recognizes individuals and small and large teams for job performance above and beyond what is normally expected, includes five individuals, six small teams and 12 large teams.

Individuals or small teams who receive Distinguished Performance awards must have made an outstanding and unique contribution that had a positive impact on the Laboratory's programmatic efforts or status in the scientific community, required unusual creativity or dedication of the individual or team and resulted from a level of performance substantially beyond what normally would be expected.

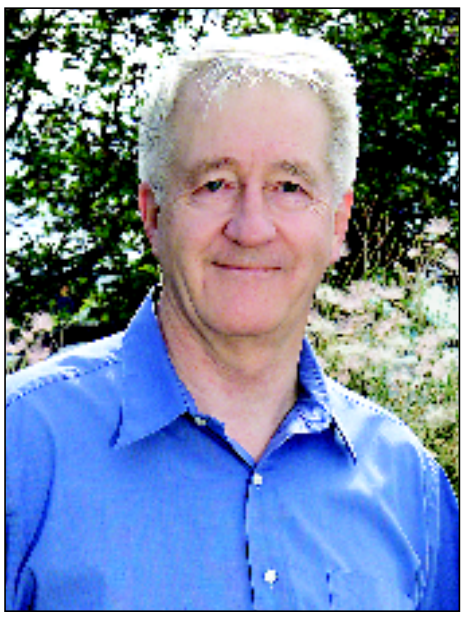
Large teams must have performed scientific, engineering, technical, administrative and/or management activities at a level far above normal job assignments; completed a project that brought distinction to the Laboratory by resolving a problem that has broad impact and/or resulted in the Lab becoming the recognized expert in the field; worked on a project that involved original and innovative thinking, approaches and results; and exhibited (by each member of the team) an exemplary level of skill, teamwork and dedication well beyond normal expectations that resulted in the successful completion of the project.

Each recipient of the Distinguished Performance Award receives a plaque and a pin. In addition, each winner of an individual award receives $1,000, and each member of a winning small team receives $500.

Photos by Presely Salaz and Richard Robinson, Information Records and Media Services (IM-9)

Text by Eileen Patterson, Octavio Ramos Jr., and Denise Sessions, Communication Arts and Services (IM-1)

Individual awards



George Eccleston, N-4

As a technical expert on nuclear proliferation, George Eccleston of Safeguards Systems (N-4) has earned the respect of the National Nuclear Security Administration and the Department of State.

Eccleston spent most of 2003 in Washington, D.C., at NNSA's Office of International Safeguards. He headed a multilaboratory investigation into the technical means of nuclear noncompliance verification, a subject on which he often briefed the National Security Council and members of Congress. In September 2003, he was the only Department of Energy representative in the U.S. delegation to the Six-Party Talks on North Korean Issues.

Back in Los Alamos, Eccleston was called upon in December 2003 to help with efforts to remove uranium enrichment equipment from Libya. He continues to be called to Washington to brief at very high levels and is expected to further serve the Six-Party Talks.

Eccleston's technical expertise, sound judgment, diplomatic sensitivity and political savvy have brought honor to the Laboratory.

Pamela French, P-DO

As chairperson of the Physics (P) Division's Facility Strategic Planning Committee, Pamela French spearheaded completion of the division's Facility Strategic Plan. The plan maps P Division's future course toward operational efficiency, retention of scientific leadership, programmatic achievement and creative scientific collaboration.

French worked with a diverse group of 30 physicists and administrators, each with strong points of view and specific needs. Using a unique combination of administrative vision, managerial leadership and interpersonal skill, she led them to common ground and melded the division's needs with larger institutional goals. She emphasized reducing the division physical footprint and operational costs while maximizing efficiencies and, for the greatest benefit to the Lab and the nation, also stressed a close facility coupling between divisions (Physics and Applied Physics, for example).

The completed plan quickly gained Labwide acceptance and has earned a strong endorsement from the Physics Division Review Committee, a group of nationally recognized physicists outside of the Laboratory.

James Johnson, CFO-DO

In 2003, the Laboratory faced the need to upgrade its financial-management credibility. James (Jay) Johnson, Laboratory controller and acting Chief Financial Officer (CFO) Division leader, was charged with heading the Business Process Improvement project and creating an internal controls system for the Laboratory's business and financial operations.

Johnson assembled the most competent, committed, and knowledgeable people at his disposal and led the development and implementation of an integrated corrective action plan comprising almost 700 separate corrective actions within 23 significant programmatic business issues and areas of focus. Johnson and his team met a challenging milestone — 90 percent of needed improvements completed before January 2004 — while simultaneously maintaining the Laboratory's ongoing daily business operations.

The strong financial controls and best business practices Johnson put in place will significantly strengthen and support the Laboratory's scientific mission and will ensure that business practices at Los Alamos meet the high level of accountability the public expects.

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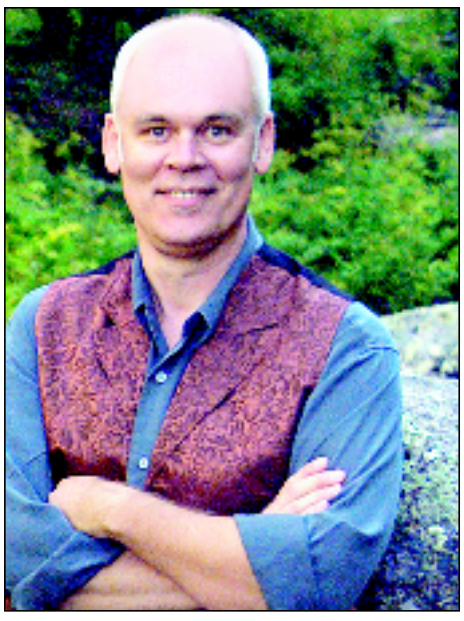
Brian Scott, C-SIC

Brian Scott of Actinide, Catalysis and Separations (C-SIC) has enabled the development of an exemplary X-ray crystallography facility that serves a wide range of Laboratory programs.

Through Scott's efforts, the Lab obtained a start-of-the-art crystal diffractometer — the third ever installed in the world — which allows researchers to determine structures from extremely small crystals and to examine problematic materials containing elements such as beryllium. He also built a computational chemistry capability that includes quantum- and classical-based molecular modeling and the docking of ligands to proteins. With those modeling tools, Scott explored the mechanism of chronic beryllium disease and established the foundation for future research.

Scott also is an exceptional collaborator and mentor. A high school student he mentored developed X-ray data extraction software with potential market value. In external collaborations, Scott worked to develop an international database of single X-ray crystal structures and to identify a new structural polymorph of an important anti-cancer drug.



Jay Tracy, IM-1

Jay Tracy, a graphic designer in Communication Arts and Services (IM-1), translates scientific achievements into creative communication pieces.

For the Bradbury Science Museum's "Mission: Stockpile Stewardship" exhibit, Tracy designed the introductory displays, static and interactive, that set the global and historical context for the Lab's nuclear stockpile stewardship role. For a symposium celebrating by-invitation-only runs on the Q-computer, he designed and produced full-color brochures, posters, and display panels in only 15 working days. The work required his bringing demanding 3-D visualization data sets out of the High-Performance Storage System into rendering tools appropriate for traditional 2-D printing.

Tracy also designed murals for the Al McKnight conference room, a brochure for the J. Robert Oppenheimer Study Center, a poster now hanging at the Department of Energy headquarters, and a special coin for the 2003 Plutonium Futures conference.

In 2003, Tracy won eight Society for Technical Communication awards, both regional and international. He brings award-winning leadership, innovative vision and exceptional creativity to every Laboratory project he serves.

Small team awards

Orchid Plasma Team

Orchid Plasma Team

In 2003 members of the Orchid Plasma team participated in field demonstrations of remote-detection technology that could aid in protecting the United States from hostile threats. During the summer, they took part in a quick-response exercise that proved the technology's usefulness in a coastal environment. While adapting to increasing demands in a decreasing time frame, the team collected the prime data set to characterize a simulated threat and successfully operated its equipment from four different platforms, including helicopters and boats.

Another fast-response exercise extended the team's work into Thanksgiving week, this time to prove the technology's utility for military personnel. Once again the demonstration was successfully completed under demanding conditions and scrutiny.

The Orchid Team has brought honor to the Laboratory and shown a Los Alamos technology to be of valued applicability to the real and present needs of national security.

Team members are David Chamberlin, C. Jerald Buchenauer and William Spurgeon of Applied Electromagnetics (ISR-5); Harold Doglianai of the International Technology Program (ISR-IT); Rodney Biddle of International Research, Analysis and Development (N-3); and David Holtkamp of Hydrodynamic and X-ray Physics (P-22).

Pit Manufacturing Software Quality Assurance Team

Pit Manufacturing Software Quality Assurance (SQA) Team

In April 2003, the Laboratory's Pit Manufacturing project achieved its Qual-1 milestone by producing a plutonium pit qualified for the nuclear stockpile. The SQA team made significant contributions to that success by qualifying all pit manufacturing software.

Software is key to virtually all pit manufacturing processes. It drives machine tools and inspection equipment, regulates the casting furnaces, analyzes test results and ensures worker safety and machine reliability. Often working with pit manufacturing personnel, team members defined software user requirements and software design; developed test cases; and integrated requirements, test plans and test cases into a product-specification document. They established acceptance procedures on production machines to collect hardware, software, backup and access information. The work kept them on call for months.

In the end, they created, defined and implemented procedures to ensure that 228 pieces of software in more than 50 critical manufacturing processes met all Department of Energy requirements for nuclear weapons work.

Team members are Kathryn Burris, Barbara Addessio, James Gross, Cecilia Sanchez and Christina Scovel of Scientific Software Engineering (CCN-12).

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Purchase Card Transition Team

Purchase Card Transition Team

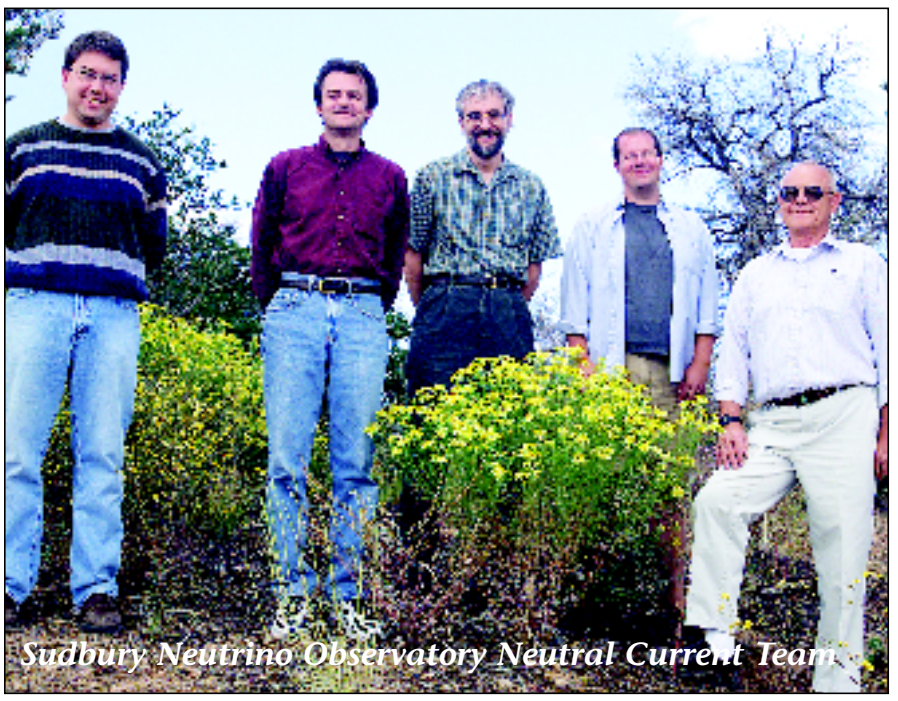
When the Laboratory's business practices came under scrutiny, this team set out to restore the credibility of the purchase card program as a mechanism for supporting work at the Laboratory.

In response to an external audit, team members researched and assessed hundreds of thousands of purchase card transactions made over 42 months and totaling $120 million. The team's results, validated by a University of California auditor, included revised procedures and a re-engineered purchasing process with internal controls to guard against the risk of misconduct or mismanagement. The validated results formed the basis of Laboratory management's response to the external audit.

In addition, after completing a substantial number of corrective actions against an aggressive milestone schedule, the team reduced questionable costs from an original $4.9 million to a verified $180,000.

This team improved the purchase card program and minimized financial risk to the Laboratory.

Members are Sue Sebring of Internal Controls and Compliance (CFO-4); James Johnson of the Chief Financial Officer (CFO-DO) Division; and Pamela Garcia and Melanie McDuffie of Procurement (SUP-1).


Sudbury Neutrino Observatory Neutral Current Team

Sudbury Neutrino Observatory Neutral Current Team

Neutrinos come in three "flavors" — electron, muon and tau. The sun produces electron neutrinos. Researchers can calculate how many neutrinos the sun should produce, but detectors such as Ontario's Sudbury Neutrino Observatory record fewer than expected, a deficit called the "solar neutrino problem."

Working at SNO, members of this team were principal players in measuring a reaction called the neutral current to determine if the deficit means that neutrinos change flavor — oscillate — during their sun-to-Earth trip. Detectors "see" only electron neutrinos and would miss those that changed flavor.

Team members deployed Los Alamos neutral current detectors at SNO and developed new approaches to neutral-current data analysis. As a result, they have produced unambiguous evidence of the suspected oscillation, demonstrating that neutrinos have mass and that the Standard Model of particles and fields is incomplete. As a direct result of their work, textbooks are, quite literally, being rewritten.

Team members are Andrew Hime, Mark Boulay, Steven Elliott and Jaret Heise of Neutron Science and Technology (P-23); Joseph Banar of Tritium Science Engineering (ESA-TSE); and Jan Wouters of Advanced Information and Business Application Development (IM-8).


Ultracold Neutron Source Design Team

Ultracold Neutron Source Design Team

Neutrons used for research usually move at a fraction of the speed of light, zipping right through container walls. Ultracold neutrons have lost most of their energy and can be trapped in physical or magnetic bottles. Scientists study them to learn about the fundamental constants of nature, to search for new particles and to gain insights into how matter began.

This team contributed significantly to the completion and testing of a new ultracold neutron source at the Los Alamos Neutron Science Center (LANSCE) accelerator. Team members designed the new source, from concept to completion; performed many of the calculations ensuring the source's safe, successful operation; and shepherded the designed parts through fabrication, installation and testing.

Completion of the initial testing phase is an important milestone in the Laboratory's effort to create a national ultracold neutron user facility, a major Department of Energy nuclear physics program project at Los Alamos.

Team members are Jan Boissevain, Deborah Clark and Walter Sondheim of Subatomic Physics (P-25); and Russell Mortensen and William Teasdale P-23.


Unified Data Model and Application Integration Team

Unified Data Model and Application Integration Team

The Advanced Simulation and Computing (ASC) program is developing simulation capabilities to analyze, predict, and certify the performance, safety and reliability of nuclear weapons. This team provided scalable parallel input/output for ASC code projects. Its UDM

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software provides a common database for weapon performance codes and for the visualization and diagnostic tools used by the three collaborating ASC labs—Los Alamos, Sandia and Lawrence Livermore.

Team members fostered cooperative ties with all three laboratories and worked closely with the Los Alamos user community. Their work has already aided the Laboratory's programmatic efforts. For example, the team helped the Direct Numerical Simulation Turbulence Working Group reduce the time for writing a 192-gigabit restart file from almost 4 hours to 2 minutes and allowed the group to immediately visualize all subsections of a computation. The team also helped High Performance Computing Environments (CCN-8), Code Development (X-3), Diagnostics Applications (X-5) and Computational Science Methods (X-8) complete an important National Nuclear Security Administration milestone on schedule.

Team members are William Dai, Michael Gaeta and Ronald Pfaff of CCN-8; Christopher Rousculp of X-3; E.C. Selcow-Stein of X-5; and Brian Jean of X-8.

Large team awards

60th Anniversary Extended Task Force members: Virgil Sanders, ADO; Dennis Erickson, John Hopkins, Cecilia Olivas and Hans Ruppel, ADWP; David French, ARAMARK; Min Park, B-2; Dave Hobart, C-AAC; Steve Sylvia, CCN-18; Renee Valerio, CCN-2; Andy White, CCS-DO; Evelyn Maes, Arleen Roybal, Shirley Roybal, Kathy Salgado and Rick Ulibarri, CER-1; Josephine Arellano, Jim Danneskiold and John Rhoades, CER-20; Rene Bailon, Tom Cordova, Mike Kolb, Johnnie Martinez and Debbie Wersonick, CER-30; Jim Bergauer and Julia Crespin, CFO-2; Debby Thompson, D-DO; Jared Dreicer, George Hansrote, Ping Lee, Lucy Maestas and Carol Oldenborg, DIR; Betty Romero, DOE-LASO; Debbi Pirkl, EES-DO; Dave Montoya, ESA-ESA; John Sisneros, FWO-MSE; John Bartlit, HSR-DO; Randy Parks, IFC; Roger Meade, IM-9; Andrea Multari, Anthony Rendon amd Kit Ruminer, IM-1; Tony Fox and Susan Herrera, LANL Foundation; Maurice Katz, LANSCE-DO; Karl Staudhammer, NMT-DO; Pete Miller, NTA-PO; Russ Olson, P-22; Brent Park, P-23; Kristen Honig, PM-1; Margaret Campos, PM-4; Terry Hogan and Ruth Larkin, PTLA; R. Berylene Rogers, DV; Tom Hirons, RRES-EA; John Isaacson, RRES-ECO; David Maes and Marcene Roybal, S-2; Gerard Kendall, SSS-BUHR; Ileana Buican and Nikki Cooper, STB-DTSBP; Jim Louck, T-7; Chuck Pacheco, UC-NNM; and Joyce Guzik, X-2.

60th Anniversary Extended Task Force

A diverse team of individuals, the 60th Anniversary Task Force was chartered to make the Laboratory's 2003 60th anniversary a positive experience for employees, customers, stakeholders and the Northern New Mexico community.

Task force members selected and scheduled the year's activities, arranged for sponsorships and production, and coordinated the events, all while collaborating with numerous organizations.

Adopting a "rule of sixes" representative of the Lab's six-decade history, the task force organized six months of events, April through September 2003, starting out with six weeks of kickoff activities that coincided with the Lab's spring 1943 establishment. Events honored the Lab's past, present and future. They included Anniversary Recognition Day, Science Day, the Strategic Studies Conference, Laboratory Family Festival, Heritage Lectures and issues-based forums for both public and Laboratory audiences.

The task force far exceeded the expectations of its charter and made the 60th anniversary into a true celebration that boosted morale and pride at the Laboratory.

Highly Enriched Uranium Transparency Implementation Program Team members: Patrick Moss, DOE-LA-AO; Julie Bremser, DX-1; Margaret Burgess, IM-1; Manuel Baca, Christopher Blessinger, Donald Close, Lawrence Garcia, Gary Gardner, Joetta Goda, William Johnson Jr., Thomas Langston, Edalia Lucero, Benjamin Montoya, Calvin Moss and Christopher Romero, N-2; Thomas Marks Jr. and Dana Sandoval, N-4.

Highly Enriched Uranium Transparency Implementation Program Team

In 1993 the United States committed to buying 500 metric tons of highly enriched uranium from Russian nuclear warheads. Through a process known as "down blending," Russia will dilute the material into low-enriched uranium for use in commercial nuclear power plants.

The HEU Transparency Implementation program ensures that the HEU is indeed from dismantled weapons and that the LEU is made from it. Under this program, the United States installs and accesses monitoring systems in the Russian down-blending facilities.

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Iraq Inspection Team members: Jonathan Longmire, B-1; Christian Hassell, C-ACS; Scott Kinkead, DX-2; Scott Watson, DX-3; Eric Gerdes, ESA-ESA; Jeffrey Bedell and Kent Musgrave, N-3; Cyndi Wells, N-4; and R. Alan Patterson, MST-6.

This team already had supplied two enrichment monitoring systems, an important part of blend-down monitoring, but was asked in 2003 to design, develop and fabricate a next-generation EM system for 2004 and integrate it with equipment developed at Oak Ridge. Team members applied creative scientific and engineering expertise, multiple innovative approaches and many hours of hard work to deliver a superior system on schedule and within budget.

The team brought distinction to the Laboratory and made itself an international leader in enrichment monitoring.

Iraq Inspection Team

Members of this team voluntarily placed themselves in harm's way in Iraq after the overthrow of Saddam Hussein, providing on-the-ground technical expertise about weapons of mass destruction. As part of the Iraq Survey Group, they supported the intelligence community and served mainly in three areas: on-site inspections, interviews of scientists and engineers and exploitation of captured documents.

Team members learned intelligence methods and tools of the trade and received a weeklong expedited form of military training, in which they learned rules of engagement, receiving weapons training and acquiring other critical skills. In Iraq, their work kept them busy through exceedingly long hours, seven days a week. They lived in difficult and dangerous conditions, often being subjected to hostile fire while in camp, and faced a looming threat whenever they deployed to conduct an inspection.

Their efforts, courage and unselfish professionalism brought credit to the Laboratory, Department of Energy, the National Nuclear Security Administration and the University of California.

Nuclear Power Plant Vulnerability Analysis Team

After Sept. 11, 2001, the Nuclear Regulatory Commission asked a Los Alamos-Sandia team to analyze a postulated terrorist attack on a U.S. commercial nuclear power plant and to recommend effective mitigation strategies. The team considered attacks with private and commercial aircraft. This was the first-ever analysis of an attack scenario.

An intentional attack on a nuclear power plant would produce an extremely complex sequence of events, with many variables and uncertainties. Team scientists and engineers performed large-scale modeling on parallel processors, conducted large-scale experiments to discover phenomenology and confirm model predictions, and produced structured systems analyses of plant safety systems. Their technical conclusions and insights resulted in unprecedented on-the-spot NRC directives for corrective actions.

Nuclear Power Plant Vulnerability Analysis Team members: Matthew Dahl and Andrew Koehler, D-1; Rene Leclaire Jr. and Kevin Saeger, D-4; Luke Bartlein, Terrence Bott, Nancy Butner, R. Jack Dallman, Sunil Donald, Steve Eisenhawer, Stewart Fischer, Russell Johns, Mark Leonard, James Madrid, Patrick McClure, Raymond Nause, Pratap Sadasivan, M. Kent Sasser, Frank Sciacca, Donald Siebe and Willard Thomas, D-5; Scott Ashbaugh and Venkateswara Dasari, D-DO; and Michael Salmon, FWO-DECS.

The team's deliverables — extraordinarily detailed structural and fire analyses, state-of-the-art event-progression analyses, carefully considered conclusions and innovatively simple but effective mitigation solutions — prompted the chairman of the NRC's Advisory Committee on Reactor Safeguards to ask, "Where do you find these people who do such amazing things?"

Port Authority of New York and New Jersey Project Team

In 2002, the executive director of the Port Authority of New York and New Jersey asked the Department of Energy for assistance in minimizing possible future terrorist attacks against major commercial and transportation facilities. Under both DOE and Department of Homeland Security sponsorship, Los Alamos took lead responsibility for developing and deploying advanced radiation and radioactive-material detection technologies at a number of land locations in New York and New Jersey.

The team developed concepts of operations, trained more than 400 Port Authority police officers in the use of specialized equipment and helped the Port Authority integrate these new technologies and methodologies into its daily operations.

Air, sea and land commerce through the Port Authority's roadways, seaports and airports is among the heaviest in the world, and metropolitan New York historically has been a prime terrorism target. This project has established a foundation for urban radiological and nuclear threat monitoring for the United States and perhaps even the world.

R&D 100 Awards Production Team

R&D Magazine's R&D 100 Awards annually recognize the world's top 100 scientific and technological advances that show the most significant commercial potential. Since 1978, the Laboratory has received more than 90 of these annual awards.

Working behind the scenes on these winning entries, this Information Management (IM) Division team, a group of dedicated and creative individuals, helped make 2003 a banner year — eight Los Alamos R&D 100 Awards in all. It was the most for the Lab in a single year and more than any other Department of Energy laboratory.

Writer-editors, illustrators, designers, animators and electronic publication specialists joined forces with photographers,

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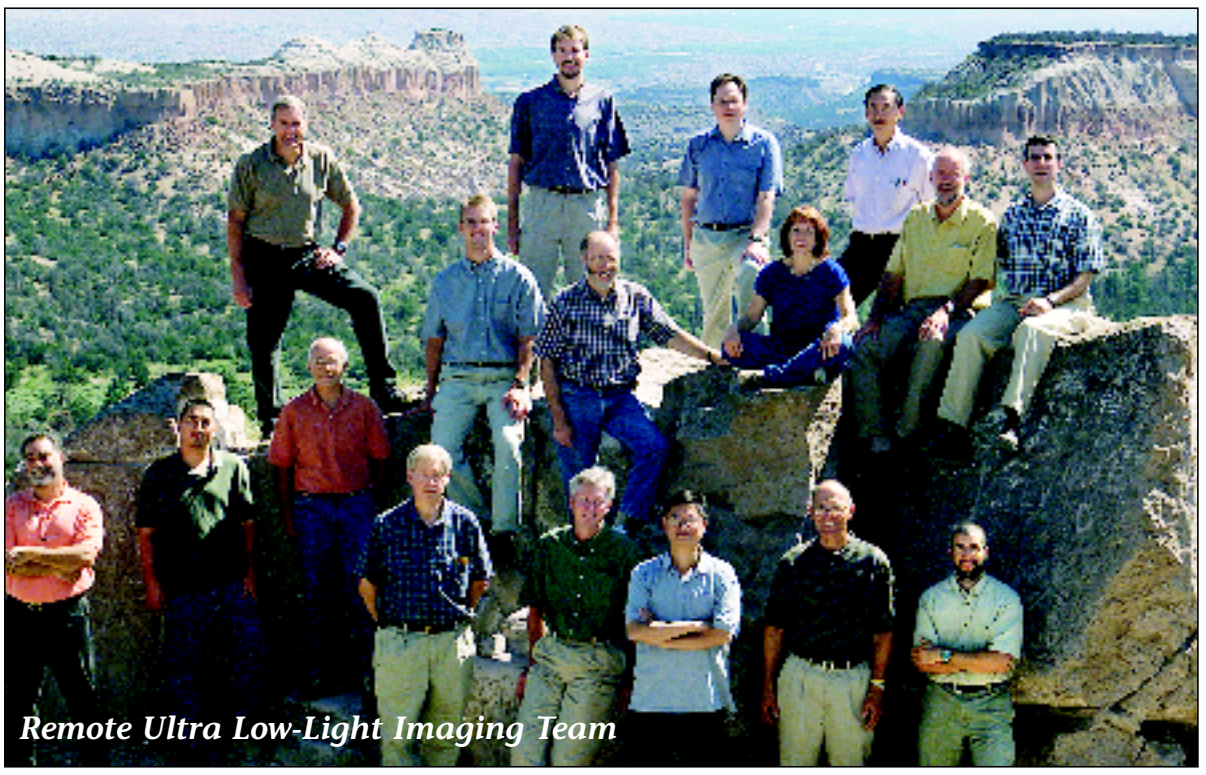
Port Authority of New York and New Jersey Project Team members: Stephanie Cisneros, CFO-2; Mark Abhold, CHS; Jane Enter, C-INC; Thomas Wehner, D-3; Subrata Nath, DX-6; Robert Metcalf, Murray Moore and John Rodgers, HSR-4; Alan Shapiro, LANSCE-1; Michael Browne, Earl Horley, Sin-Tao Hsue, David Mercer, David Pelowitz, Gregory Sheppard and Craig Stinson, N-1; John Blackadar, John Bounds, William Casson, Timothy Dugan, Paul Fehlau, Richard Hammer, Birchard Hayes, Gabriel Herrera, Renee Idar, M. William Johnson, Thomas Langston, Terry Martinez, Charlene McHale, Sheila Melton, David Miko, Benjamin Montoya, Richard Morgado, Richard Paternoster, Mohini Rawool-Sullivan, Benjamin Sapp, Larry Sprouse, Randal Stringfield, Clair Sullivan and Robbie York, N-2; Joshua Joseph, Robert Landry and Rebecca Stevens, N-4; and Stanley Simmonds, S-10.

2003 R&D 100 Awards Production Team members: Jeanne Bowles, Bob Brewer, Wendy Burditt, Lillie Doerr, Gail Flower, Vicente Garcia, Anne Garnett, Faith Harp, Todd Heinrichs, Betty Katz, Sue King, Rich Leishman, Vin Lopresti, Judy Machen, Darlene McElroy, Louise Mendius, Sheila Molony, Donald Montoya, Andrea Multari, Kelly Parker, Eileen Patterson, Octavio Ramos, Pete Sandford, Gloria Sharp, Caroline Spaeth, Shirley Veenis, IM-1; Lupe Archuleta, Fred Baker, John Flower, Mike Kuchinsky, Sandra Lopez, Larry Lucero, Richard Robinson, Vicky Romero, Jimmy Roybal, Presley Salaz, Leo Torres, Warren Young, IM-9; Annmarie Cutler, IM-EP; and Marjorie Mascheroni and Kathi Parker, TT.



Remote Ultra Low-Light Imaging Team members: Dennis Remelius and David Thompson, C-ADI; Steven Buck, CCN-12; Joe Tiee, C-PCS; Frank Ameduri and David Palmer, ISR-1; Jeff Bloch, Cheng Ho, Michael Rabin and Robert Shirey, ISR-2; Rose Des Georges and Miles Hindman, ISR-3; Nicholas Dallmann, Paul Montano, Richard Ortiz, Steve Salazar, Martin Sweet and Robert Whitaker, ISR-4; William Priedhorsky, ISR-DO; Kevin Albright, David Beck, Jeffrey Bradley, Percy Martinez, Eric Raby, W. Robert Scarlett and S. Kerry Wilson, P-21.

Spallation Neutron Source Drift Tube Linac Recovery Team members: Will Fox, ADWEM; Nancy Vaughn, CFO-3; Dan Custer, Norm Gillespie, Walter Tuzel and Robert Valdiviez, DX-5; Steve Hopkins, Larry Rowton, Rudy Valdez and Glenn Zimmermann, DX-6; Dan Jones, DX-DO; Gerald Bustos, Walter Chaves, Kirk Christensen, Martin Crow, Bob Gentzlinger, Jeff Hill, Mike Hood, Tom Ilg, Richard Lujan, Sonja Manzanares, Ross Meyer Sr., Debbie Montoya, Al Naranjo, Ernie Newman, Dan Richards, Harry Salazar, Dave Sattler, Jim Sims and John Turon, ESA-WDS; Tony Pasquariello, Orlando Smith and Peter Smith, ESA-WMM; Stephen Ellis, ESA-WSE; Jennifer Lopez, HR-D-DIR; John Bernardin, ISR-1; Dave Barlow, Brad Bergmann, Bill Clark, John Ledford, Felix Martinez, Vince Melton, Norm Patterson, Armando Rendon, Ray Roybal, Dale Schrage, Floyd Sigler, Rick Wood and Tony Wright, LANSCE-1; Justo Cordova, Jim O'Hara, Brandon Roller and Victor Vigil, LANSCE-2; Scotty Jones, N-DO; John Tapia, P-DO; Mark Gardner, PS-1; Seth Hinshaw, Dennis Mack, Beverly Martinez, Rebecca Ortiz and Dolores Trujillo, SUP-1; and Debra Graves, SUP-3.

videographers and printing specialists to create 18 appealing and technically accurate entries within two and one-half months to meet the competition deadline. The team's major challenge was to recast highly-scientific material to address the competition criteria and to spark the interest of the judges, who are not necessarily experts in the specific technologies.

The R&D 100 Awards serve as a benchmark for the Laboratory's scientific excellence, and they reflect the expertise brought to bear by this outstanding team.

Remote Ultra Low-Light Imaging Team

This team shepherded its unique laser-based technology — RULLI — into the real world in 2003, not once but three times.

RULLI, remote ultra-low-light imaging, is an enabling sensor technology for single-photon imaging and timing, an innovative synthesis of nuclear-detection technology and high-speed electronic circuits. By combining disparate technologies with the core sensor system, the RULLI team has been able to develop a number of customer-oriented applications.

In 2003 team members worked on all aspects of the technology and its national security applications and conducted three major flight campaigns in California, Florida and the western Pacific. The last two campaigns came only two months apart. Conducted for the U.S. Navy, these campaigns were carried out under adverse conditions and at night, demanding extreme technical agility. All three were successful. In addition, another remote-sensing technique is emerging from the team's efforts, with groundbreaking potential for addressing previously insoluble national security problems.

The RULLI team has ensured the Laboratory's leadership in low-light imaging and enhanced the nation's ability to perform challenging remote-sensing tasks.

Spallation Neutron Source Drift Tube Linac Recovery Team

Formed in December 2002, the Spallation Neutron Source (SNS) Drift Tube Linac (DTL) Recovery team corrected design and manufacturing flaws in the Laboratory's supplied DTL accelerating structure for the SNS, a national project currently under construction at Oak Ridge National Laboratory. The stakes were very high. If the DTL failed to meet design, budget and schedule parameters, the overall SNS project would be delayed, thus negatively affecting the Laboratory's international reputation.

Team members faced the daunting task of compressing into six to 12 months an effort that should have required two to three years. Tasks included repairing, rebuilding and in some cases redesigning several hundred accelerator components. Tight project costs and schedules meant that the team had to perform in a "zero-error" environment.

The DTL is now installed and operational at Oak Ridge. The successful completion of this project, in spite of demanding schedule and budget constraints, has solidified the Laboratory's international reputation as a unique institution dedicated to solving complex problems of national importance.

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Unconventional Nuclear Warfare Defense Team

Sept. 11, 2001, reaffirmed that the United States faces a new level of threats, in particular the possibility of the unconventional delivery of weapons of mass destruction. To minimize such a threat, a Los Alamos team, in collaboration with the Defense Threat Reduction Agency, quickly deployed and integrated advanced radiation-detection equipment into security systems at strategic military installations throughout the nation.

The team developed and integrated systems that ranged from vehicle-portal monitors to water-based sensor arrays. In many instances, team members did not know about site parameters until they arrived on a location and, as a result, were required to demonstrate on-the-spot problem solving. Based on the success of this project, the Department of Defense established the Guardian program, a billion-dollar effort to outfit multiple military installations with detection systems for countering chemical, biological, radiological and nuclear threats.

Team members' tireless efforts demonstrated that the Laboratory has exceptionally trained and dedicated professionals who can solve problems of homeland security and national defense.

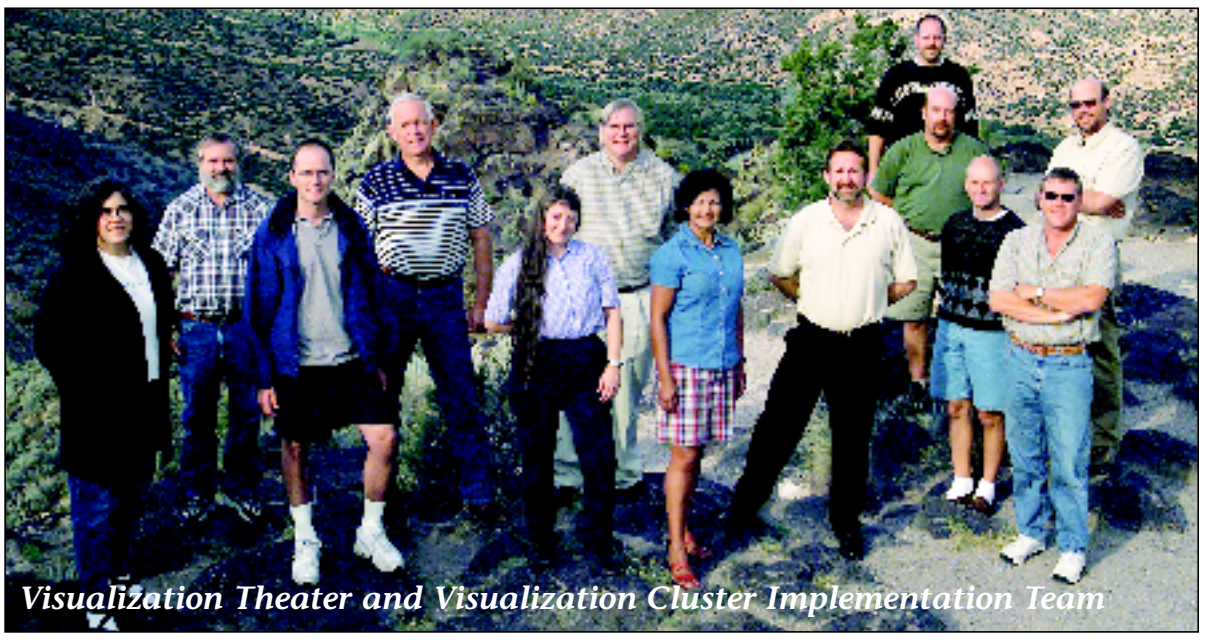
Unconventional Nuclear Warfare Defense Team members: Pat Nickel and Doug Weiss, D-3; Rick Rasmussen, HSR-1; Garth Tietjen, IM-1; Jim Cruz, IM-DO; Ken Baird, Steve Betts, Mike Browne, Lou Carrillo, Desiree Coriz, Ted Dye, Dave Garcia, Phil Hypes, Cliff Keller, Ken Kroncke, Peggy Moore, George Ortiz, Bob Parker, Martin Parrales, Dave Pelowitz, Pam Reass, Greg Sheppard and James West, N-1; Rick Bolton, Jody Martinez, Brian Rees and Leonard Trujillo, N-2; Barbara Canavan, Jeffrey Fillmore, Paula Knepper and Rebecca Settle, N-3; Michael Pankratz, S-7; Sue Watkins, SUP-1.

Visualization Theater and Visualization Cluster Implementation Team

The ability to validate and verify applications and to analyze simulation results about the performance of nuclear weapons is critical to America's weapons program. Yet the weapons community's success at quickly analyzing and comparing results has been limited by the scalability and expense of specialized graphics systems.

To address this problem, the Visualization Theater and Visualization Cluster Implementation team created a unique system for analyzing and visualizing scientific data. The first component of this approach is the Visualization Theater, which consists of a large-scale power wall that can provide 31 million pixels of resolution in either mono or stereo. The second component is the Visualization Cluster, which uses an array of personal computers to break apart data, individually render sub-images, and combine these sub-images into a single high-resolution graphic.

Nuclear weapons scientists and engineers are now using this world-class system to explore and understand the results of extremely large computer simulations. This team has ushered in a new era of high-end visualization. It is a major advance for the nuclear weapons community.



Visualization Theater and Visualization Cluster Implementation Team members: Charles Grimes and John Waterbury, CCN-DO; Gerald Antos, Charles Wilder and Thomas Wyant, CCN-5; Jerry Delapp, Daryl Grunau, David Neal, Georgia Pedicini and Johannes Peterson, CCN-7; Robert Greene, David Modl and Laura Monroe, CCN-8; Marsha Boggs, CCN-12; Ira Agins, CCN-18; James Ahrens, Curtis Canada, Allen McPherson and John Patchett, CCS-1; Gloria Cornely, CIO-PO; Steven Stringer, CCS-1; and Robert Kares, X-8.

Weapons Phenomenology Team

The U.S. Nuclear Detonation Detection System is a satellite-based global monitoring network. When signals are recorded on USNDS, national security decision makers depend on the technical analyses of the Los Alamos Weapons Phenomenology Team (WPT) to interpret and understand them. The WPT calculates the expected optical and electromagnetic pulse signals reaching satellite-borne sensors from any atmospheric nuclear detonation.

Although the WPT has been in existence since the earliest days of weapons

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Weapons Phenomenology Team members: Jonah Colman, Zhen Huang, Robert Roussel-Dupre, Heidi Tierney, Bryan Travis and Laurie Triplett, EES-2; and E.M.D. Symbalisty, ISR-RD.

Wall-to-Wall Property Inventory Team members: Alan Kirby, PM-4; Marylou Apodaca, Leonard Archuleta, Rebecca Atencio, Joseph Baca, Margaret Baca, Michael Bailey, Maxine Bustos, Leeann Casados, Ronald Chavez, Kerry Coffelt, Albert Crespin, Tessa Dowell, Stephen Dunagan, Angela Duran, Richard Ebelacker, John Eklund, Alyce Elliott, Francisco Galvez, Melissa Garcia, Jeanne Gomez, Kathleen Gomez, Yvonne Gonzales, Antonio Griego, Angelina Gutierrez, Joe Gutierrez, Brian Herrera, Judith Ireland, Olinda Jaramillo, Jennifer Lara, Jerry Leyba, Robert Leyba, Joseph Lopez, Abelino Lovato, Anthony Maestas III, Gary Maestas, Bernadette Martinez, Bianca Martinez, Dennis Martinez, Elizabeth Martinez, Jeff Martinez, Nicole Mattson, Sarah-Jane Maynard, David Montaño, Perita Montaño, Yvonne Montoya, Frank Naranjo, Lori Naranjo, Diane Ortiz, Leroy Padilla, Paula Padilla, Brett Ray, Steve Remde, Damian Romero, Ricardo Romero, Franklin Salazar, Mark Salazar, Olivia Salazar, Victor Salazar, Barbara Sanchez, Shirley Sanders, Julian Sandoval, Delfido Serrano, Lorraine Silva, Patrick Sullivan, Gerald Tafoya, John Tapia, Linda Trujillo, Ralph Trujillo, Vincent Valdez, Richard Valerio, Tony Valerio, Jesse Vigil, Allen Wallace and Michael Ytuarte, SUP-2.

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development and testing, the team established an important benchmark in 2003 — the standard EMP scaling law. The USNDS community uses the EMP scaling law to evaluate the potential performance of the monitoring system against a variety of weapons in a range of data-collection scenarios. Using truly innovative theoretical work, the team contributed to the discovery of a new unifying theory on a fundamental relativistic discharge process called "Runaway Breakdown." This theory greatly enhances the Laboratory's ability to recognize and characterize certain lightning emissions and thus improve the ability to distinguish them from nuclear detonations.

The WPT represents a unique national capability in atmospheric nuclear weapons phenomenology modeling.

Wall-to-Wall Property Inventory Team

In mid-2002, the Laboratory self-disclosed several questionable purchase-card irregularities. What followed was a barrage of media attention, much of it alleging rampant, widespread property theft at the Lab. To address this complex and potentially damaging issue, the Laboratory initiated a wall-to-wall property inventory.

The team assembled for this task used stringent project management and devised and implemented a new architecture that aligned existing property practices with proven best practices. When it came to locating property, the team left no stone unturned — labs, office space, storage areas, closets, desks and bookcases were all searched for bar-coded property.

Not only did the team complete this project within a dictated timeframe, it also located and inventoried 99.7 percent of the Lab's property, thus exceeding the industry standard of 98 percent. The above-average outcome drew praise from the National Nuclear Security Administration for surpassing its mandated 1-percent threshold during the validation process.

This team restored the Laboratory's credibility, validated its institutional accountability and established a new architecture that emphasizes systematic property excellence.

National Fire Prevention Week ...

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sound. If someone in a home is deaf or hard of hearing, consider installing an alarm that combines flashing lights, vibration and/or sound.

Mount smoke alarms high on walls or ceilings (remember, smoke rises). Ceiling mounted alarms should be installed at least four inches away from the nearest wall; wall-mounted alarms should be installed four to 12 inches away from the ceiling. If the ceilings are pitched, install the alarm near the ceiling's highest point.

Don't install smoke alarms near windows, doors or ducts where drafts might interfere with their operation.

Never paint smoke alarms. Paint, stickers or other decorations could keep the alarms from working.

Check smoke alarms regularly

Test smoke alarms once a month, following the manufacturer's instructions. Replace the batteries in smoke alarms once a year, or as soon as the alarm "chirps" warning that the battery is low. Hint: schedule battery replacements for the same day clocks are changed from daylight savings time to standard time in the fall.

Never "borrow" a battery from a smoke alarm. Smoke alarms can't warn of fire if their batteries are missing or have been disconnected. Don't disable smoke alarms even temporarily. If a smoke alarm is sounding nuisance alarms, try relocating it farther from kitchens or bathrooms, where cooking fumes and steam can cause the alarm to sound.

Regularly vacuum or dust smoke alarms, following the manufacturer's instructions, to help keep them working properly.

Replace smoke alarms every 10 years and consider installing smoke alarms with "long-life" (10-year) batteries.

Plan regular fire drills to ensure that everyone knows exactly what to do when a smoke alarm sounds. Hold a drill at night to make sure that sleeping family members awaken at the sound of the alarm. Some studies have shown that some children may not awaken to the sound of the smoke alarm. Know what children in the home will do before a fire occurs.

If building a new home or remodeling, consider installing an automatic home-fire sprinkler system. Sprinklers and smoke alarms together cut the risk of dying in a home fire 82 percent, relative to having neither — a savings of thousands of lives a year.

National Nuclear Security Administration

NNSA has employee concerns number

The National Nuclear Security Administration has a toll free telephone number for NNSA and Laboratory employees who have concerns they want to express about work related issues.

The telephone number is 1-800-699-5713 and is available to NNSA, Laboratory and all subcontract personnel who work for NNSA, said Linton Brooks, NNSA administrator.

"I continue to worry that some individuals are afraid to speak up about problems they see within NNSA or at our contractors," Brooks said in a message to NNSA personnel. He said NNSA personnel should never have to be worried about the perils of doing their jobs honestly, safely and correctly. "People should not be afraid to bring problems to the attention of management, or be worried about facing retribution rather than receptiveness," said Brooks.

For more information, contact Bernie Pleau of NNSA's Los Alamos Site Office at 7-6691.