

Fusion in a pop can?

by Todd Hanson

Researchers at the Laboratory and the U.S. Air Force Research Laboratory in Albuquerque are investigating a way to create fusion energy in a cylinder roughly the size of a soda can.

Magnetized Target Fusion research shows the potential for producing smaller fusion energy sources at a cost that is far less than current approaches. Lab scientists presented the research at an American Physical Society Division of Plasma Physics meeting in Canada.

"The primary benefit of MTF is that it requires simpler, smaller and considerably less expensive experimental systems than either magnetic or inertial fusion," said Glen Wurden of

Plasma Physics (P-24), who leads one of the MTF teams. "It is a qualitatively different approach to fusion with the potential for truly low-cost development. This means that fusion experiments and testing facilities might conceivably be built that cost in the tens of million dollar range, rather than in the billion-dollar range."

In a process roughly analogous to that of a diesel engine, which compresses fuel to a state where it burns more readily, MTF uses a magnetized fusion fuel in the form of an electrically neutral, high-temperature ionized gas — a plasma — that is pre-heated before being injected into a soda-can-sized aluminum cylinder.



The cylinder and its contents are then quickly compressed by driving a powerful electrical current through the wall of the cylinder. As the fast-moving solid metal wall compresses the fuel, it burns in a few millionths of a second at pressures that are millions of times greater than that of Earth's atmosphere.

Within this mass of super-compressed, high-density plasma, scientists hope to produce tiny amounts of fusion energy — the same kind of energy that fuels the sun.

Fusion is a nuclear reaction combining, or fusing, the nuclei of light

continued on Page 2



Memories of NTS

by John A. Webster

Long workdays, fickle weather, isolation, interminable commutes, trying untested technical "fixes" with your fingers crossed. They all added up to life at the Nevada Test Site. But that life also brought a strong sense of accomplishment, a feeling of performing important work for the country and lasting friendships for Laboratory employees who worked at NTS during its heyday.

"It was a great time," recalls George Yates, an electrical engineer in Neutron Science and Technology (P-23) who designed data acquisition systems at NTS from the mid-1960s to the early 1990s. "We felt like we were doing something of extreme importance to the Free World. I like to say that we had a little bit to do with helping end the Cold War."

NTS was established as the site for the nation's continental nuclear testing program in late 1950, and the first atmospheric test, named "Able," was conducted Jan. 27, 1951. A series of events has been scheduled at NTS to mark its 50th birthday, including a Family Day for former and current employees on Jan. 27.

continued on Page 4

Inside

API task force reports findings	Page 3
Lab's 'Dawn Patrol'	Page 5
Maintaining a community tradition	Page 8
And more ...	

Lab researchers discuss volcanoes, etc.

Volcanoes, the solar wind, the behavior of lightning, the impact of the Cerro Grande Fire, geology on Earth and in space, measuring seismic events. These are some of the subjects Laboratory researchers addressed during the fall meeting of the American Geophysical Union, which was held in San Francisco in December. Here are highlights from two of the presentations by Lab scientists.

• **Reducing the danger posed by volcanoes** will require volcanologists to integrate data from throughout volcanology to build predictive simulations and models, according to Greg Valentine of Geoanalysis (EES-5). By effectively integrating geological, geochemical, geophysical and remote-sensing data through the use of geographic information systems, volcanologists will be able to create

easy-to-understand visualizations of volcanoes, which in turn will advance efforts in reducing volcanic danger, Valentine said at the AGU meeting.

• **The beginning of the Dark Ages** may have been literal, as well as figurative, as the result of a massive volcanic eruption in the 6th century, said Ken Wohletz of Geology and Geochemistry (EES-1). Wohletz said an eruption in the Indonesian archipelago could have produced a 150-meter-thick cloud layer over the entire Earth, triggering a chain of climatic, agricultural, political and social changes that ushered in the Dark Ages. Evidence supporting the catastrophe includes tree-ring and ice-core measurements, indications of a huge underwater caldera, and ash and pumice in the same area.

More information about this research can be found in stories that appeared in the online Daily Newsbulletin (<http://www.lanl.gov/orgs/pa/News/newsarchive.html>) on Dec. 18 and 20. More information about the AGU can be found at its Web site at <http://www.agu.org>.

News from UC

UC announces new institutes for science and innovation

The University of California is establishing three new centers for science and innovation. The NanoSystems Institute will be located at UCLA, the Institute for Telecommunications and Information Technology will be located at UC San Diego and the Institute for Bioengineering, Biotechnology and Quantitative Biomedicine will be at UC San Francisco.

Three Nobel prizes brings UC's total to 43 since 1939

University of California researchers won three Nobel Prizes in 2000, bringing the university's total to 43 Nobel Prizes since 1939. The latest laureates are Alan Heeger of UC Santa Barbara in chemistry, Herbert Kroemer, also of UCSB, in physics and Daniel McFadden of UC Berkeley in economics.

Ties between academic researchers and private industry need controls

While private industry involvement in academic research continues to grow rapidly, universities struggle to prevent potential conflicts of interest without clear guidelines for defining or managing financial conflicts, according to a new study by a UC San Francisco researcher. The study by Lisa A. Bero, associate professor in the department of clinical pharmacy in the UCSF School of Pharmacy and the UCSF Institute for Health Policy Studies, was published in the Nov. 1 issue of the Journal of the American Medical Association.

Fusion ...

continued from Page 1

elements, such as helium, to form heavier elements. On the galactic scale, the fusion process in stars results in the release of huge amounts of energy. On Earth, fusion energy offers a potentially unlimited source of energy, but scientists so far have been unable to create fusion on a small, controllable basis. The MTF experiments could provide the basis for a technology that eventually could change that.

Much of the science behind MTF was developed at the Lab long before the current project began and some was perfected through recent collaborations on pulsed-power energy between the Los Alamos and Russian scientists. Several components of MTF technology already have been tested at Shiva Star, the Air Force's pulsed-power facility in Albuquerque, but considerable research lies ahead for Laboratory scientists as they develop methods to heat and handle the plasma needed for MTF.

MTF is a collaboration between Los Alamos, the U.S. Air Force Research Laboratory and other laboratories with funding provided by the Department of Energy's Office of Fusion Energy Sciences.

LANL

LANL, the Laboratory bi-weekly publication for employees and retirees, is published by the Public Affairs Office in the Communications and External Relations (CER) Division. The staff is located at TA-3, Building 100, and can be reached by e-mail at newsbulletin@lanl.gov, by telephone at 7-6103, by fax at 5-5552 or by regular Lab mail at Mail Stop C177. The individual telephone numbers are listed below.

Editor:

Kathy DeLucas, 7-1455

Managing editor:

Denise Bjarke, 7-6103

Graphic designer:

Edwin Vigil, 5-9205

Contributing photographers:

Michael Carlson, 5-4610

LeRoy N. Sanchez, 5-5009

Contributing writers:

Todd Hanson, 5-2085

Liz Padilla, 5-9201

Jacqueline Paris-Chitanvis, 5-7779

James E. Rickman, 5-9203

John A. Webster, 7-5543

Editorial coordinator:

John A. Webster, 7-5543

Los Alamos National Laboratory is an Affirmative Action/Equal Opportunity employer. It is operated by the University of California for the U.S. Department of Energy.



Please recycle

API task force reports findings

For the Laboratory to maintain a world leadership position in science and technology, it must proactively embrace a diverse set of viewpoints and backgrounds in its workplace.

by Jacqueline Paris-Chitanvis

A recent study by the Laboratory's Asian/Pacific Islander Career Enhancement Task Force yielded a number of options for addressing Asian/Pacific Islander employee concerns. The task force's findings also convey an important message: For the Laboratory to maintain a world leadership position in science and technology, it must proactively embrace a diverse set of viewpoints and backgrounds in its workplace. In short, the Laboratory must make achieving diversity a very high priority.

Chartered by Laboratory Director John Browne, the task force was charged with providing the director and his Senior Executive Team with options for increasing the number of Asians and Pacific Islanders in management positions at the Lab. The 12-member task force led by Michael Trujillo of the Office of Equal Opportunity and Jasmine Pan of Business Information Systems (IM-6) included Shao-Ping Chen of Condensed Matter and Statistical Physics (T-11), Manvendra Dubey of Atmospheric and Climate Sciences (EES-8), Eugene Farnum of Structure/Property Relations (MST-8), Chang Kim of B Division (B-N2), Gary Hirokawa of Compensation and Benefits (HR-1), Kin Lam of Engineering Analysis (ESA-EA), Ning Li of Condensed Matter and Thermal Physics (MST-10), Karen Pao of Modeling, Algorithms and Informatics (CCS-3), Amy Sahota of Defense (BUS-2) and Amy Wong of Power Source Technology (NMT-9).

The task force, which began its work in June, spent about six months collecting and analyzing data and talking with API employees and managers at the Lab and its sister labs. One method used by the task force to collect data was a survey that was sent to the Lab's Asian/Pacific Islander community, approximately 289 individuals. The survey focused on career-development issues and provided some informative data, said Pan. For instance, 38 percent of the respondents perceived that their chances of entering Lab management were minimal, and some noted that they were considering leaving the Lab. However, about half of the respondents said they are satisfied with the intellectual rewards of working at the Lab, and a significant number of them are interested in going into management.

In November, the task force presented its final report to the director, including options the Lab can take to increase the number of APIs in management positions. Many of the proposed options are pilot considerations that can be applied to the Lab's total population. The options, which include short- and long-term strategic improvements, focused on three key areas: attract/recruit, retain and develop. "The task force believes the Lab needs to focus on all three areas to be successful in increasing the number of Asian Pacific Islanders in management positions," said Pan.

Among the proposed options are the following:

Attract/Recruit

- Select a senior-level "champion" for API employees, who will attract and actively help hire API employees.
- Allow the Lab's API community to share the task of recruiting new API employees with Laboratory organizations responsible for recruitment.
- Implement aggressive institution recruiting of APIs by both Human Resources and API personnel through participation in and recruitment at professional meetings, including meetings of API-specific organizations and at universities with significant API populations.

Retain

- Foster formal and informal mentoring relationships. Managers need to support and encourage minority members, including APIs and women, to participate in management training programs.
- Maintain basic research and healthy civilian programs; such programs will provide career enhancement for all API employees.
- Reexamine a "dual-career path" (management and nonmanagement career ladders) to recognize employees for their technical achievements and to lessen the pressure on employees to go into management positions for career advancement.

Develop

- Give high priority to placing more APIs in supervisory positions, including team-leader and project-leader positions. This will build a "pipeline" of future API managers.
- Aggressively encourage minorities, including APIs and women, to enroll in the Laboratory's leadership and management training programs, and career development workshops (effort led by SET and division-level managers).
- Develop and implement a formal succession planning

The task force also suggested approaches for meeting their proposed options. Some of these approaches are as follows:

continued on Page 7

Benefits Buzz

Did you know...

Since 1994, health-care costs for Laboratory employees have increased by an average of 3.5 percent annually, compared with a nationwide average of 5.8 percent a year, according to a new study by the Technology and Safety Assessment (TSA) Division. For more information about your health-care benefits, call Compensation and Benefits (HR-1) at 7-1806.





It wasn't all work all the time for Lab employees at the Nevada Test Site. In this file photo from the 1980s, Marty Van Dyke, Dick Tatro, Knut Buset and Bob Stone, the first four in line, and others enjoy a Christmas party feast at the Control Point. File photo

Memories ...

continued from Page 1

Hundreds of Lab employees worked at the site in support of the testing program, which shifted from atmospheric to underground with the signing of the 1963 Limited Test Ban Treaty. Tests were conducted to evaluate the performance of the weapons and the blast effect on various components.

A typical test, which took months of preparation, involved the drilling of a hole up to 2,200 feet deep and as large as 10 feet across. The nuclear explosive was lowered downhole with the timing, control, arming and firing system and appropriate diagnostics.

When the device detonated, data were sent nearly instantaneously to nearby recording stations by coaxial cables and to a control point several miles away by microwave.

Johnnie Martinez, who traveled regularly to NTS beginning in 1975 to document tests for the weapons reports sent to the Departments of Energy and Defense, remembers the weather at the desert site.

"The hottest place I've ever been is the test site," said Martinez, who is now deputy director of the Laboratory's Community Relations Office (CER-3). "And the coldest place I've ever been is the test site. With winds up to 60 mph, the wind chill could drop well below zero."

Yates remembers one cold, snowy night when he and two colleagues were trying to fix some equipment problems. "We were working under near-blizzard conditions, and we managed to drop some things downhole. The last straw came when one fellow dropped his security badge, and the security guards wouldn't let us leave. Eventually, the guy without a badge had to spend the night at the control point."

Don Collins, a retiree believed to be the only Lab employee who spent his entire career at NTS, said the isolation and unusual geography of the site led to some strange situations.

"Sometimes someone who was visiting would get on the wrong road and head for

Salt Lake City instead of California, and we'd get a faint radio call asking for help.

"One time we were sitting at a roadblock during a dry run for Rover (a one-time Lab program to develop nuclear reactors for space) a few miles from where the reactors were tested," said Collins, who still lives in Las Vegas. "We heard a funny noise, and here comes a small airplane that flies right over the reactor. The security people were going crazy. We had some B-57s that were getting ready for a training flight and so we scrambled them to chase this guy.

"It turned out that he was flying cross-country and just following the highways. He got to a fork with one road that was reddish and one that was black, and he just figured he should follow the black one, which took him right over the site."

For the most part, Lab employees who worked at the test site cherish the experience.

"The projects were exciting and the people were great," Collins recalled. "I had a series of really great friends and bosses from the Laboratory. The people were just super."

"Those days are gone, but I look back on them fondly," said Martinez. "Your mission was clear. Your focus was clear. It was a special set of circumstances, but the world has changed."

Test Site science spin-offs

The mission for scientists from Los Alamos and elsewhere at the Nevada Test Site was evaluating nuclear weapons performance and blast effects, but their work produced valuable spin-offs. Here is a sampling:

- The Plowshare tests explored the feasibility of using nuclear explosions for excavation, natural gas exploration and other peaceful uses.
- The Rover Project successfully demonstrated that a nuclear reactor could be used to heat liquid hydrogen for spacecraft propulsion.
- The extreme temperatures and pressures of a nuclear explosion — over 100 million degrees and 10 million atmospheres — have helped scientists learn more about extreme energy-density conditions.
- Research into the large electromagnetic energy pulse released by a nuclear device led to the development of a communication system for use in mines.
- Another spin-off of electromagnetic pulse research led to instruments that can detect underground pipes, other infrastructure and even archeological sites.
- Fiber optic cables developed to transmit data from an explosion are now used for diagnostics in the nuclear power industry.
- A camera system developed to image nuclear tests is helping the military detect mines in the water.



Signal cables spread across Yucca Flats, the principal underground nuclear weapons testing area at the Nevada Test Site. The tower, which was used to mount instruments in the canister suspended from the crane, will be removed before the detonation. The cables will be lowered downhole with the canister and then relay data to the surface. Photo courtesy of the U.S. Department of Energy

Department of Energy

Just another day for the Lab's 'Dawn Patrol'



by James E. Rickman

It's 6:30 a.m. Do you know where your package is?

For those involved with the Lab's "Just In Time" procurement system, 6:30 a.m. is the busiest time of the day. Each morning at the crack of dawn, a cavalcade of trucks loaded with the essentials of Laboratory life line up at the loading dock outside of SM-30, the Lab's warehouse facility.

The morning silence is broken as drivers hastily roll open the doors of their trailers, exposing the cargo inside. The big garage-type doors of the warehouse open simultaneously, exposing an army of eager workers clad in coveralls and steel-toed boots. Drivers and warehouse workers greet each other on the loading dock. They have one mission on their minds: getting packages to their destinations by 10 a.m.

Like a well-disciplined military unit, warehouse workers fan out and begin their individual tasks. Some are armed with pistol-gripped laser scanners that will record the bar code on each package received. Others use forklifts to whisk towering pallets of supplies to sorting areas. Others assemble into a brigade and move smaller packages hand-to-hand into one of four large, gray plastic bins. In this way, the nearly 2,000 packages typically received from 27 New Mexico vendors each day are consolidated into four Lab delivery routes.

The rumble of forklifts and the rustle of packages are dampened by the voices of workers delivering good-natured wisecracks to one another or by tales of escapades the night before.

To an observer, the scene inside SM-30 looks chaotic. To those involved, it runs like clockwork.

Just In Time, known as JIT to the initiated, is the Lab's version of overnight express delivery. Lab customers can order JIT items — paper, office supplies, electric components, lumber, metal, etc. — directly from vendors, through the Lab's Web site or at the Materials Management (BUS-4) Customer Service window up until 3:30 p.m. the day before they're needed. Routine, stock items are scheduled to arrive by 10 a.m. the day after the order is placed. Special orders take up to 10 days.

Once the order is in "the system," New Mexico vendors are committed to having the order on a truck that is greeted the next day by SM-30's "Dawn Patrol," unless it's a special order, says Bob Travis, leader of the Lab's Receiving, Customer Service and Transportation Team in BUS-4.

After each delivery, those armed with the laser scanners validate receipt of each order; the scanner places the shipment into an automated tracking system linked to inventory, payment and accounting

continued on Page 7



In the photo at top, Danny Pacheco, left, and John Maestas of Materials Management (BUS-4) unload trucks at the SM-30 warehouse at the crack of dawn. Once items are unloaded, they are sorted into routes. In the middle photo, BUS-4 employees (clockwise from left) Rudy Herrera, John Maestas, Fred Moya, Danny Pacheco and Michael Padilla assemble into a "bin brigade" that sorts items according to route. After sorting, the items are loaded into Lab trucks for distribution. In the bottom photo, Rudy Lovato of BUS-4 loads paper onto an awaiting truck. Photos by James E. Rickman

Tips for getting your order 'Just in Time'

- 1) Customers should ensure that their location information is correct in the Lab's Employee Information System.
- 2) Customers with special handling requirements (i.e., requestor to be notified when shipment arrives at SM-30, or shipment should be held for customer pickup) should contact the Customer Service Department at 7-4171.
- 3) Customers should remove material promptly from the drop point. Customers will receive an e-mail notification informing them of where their order was delivered.
- 4) Customers should respond to the e-mail notification promptly if they have concerns about an order, about damage, about incorrect delivery, etc.
- 5) The Customer Service Department can track or trace shipments for customers.

Laboratory Director **John Browne** and **Thomas Terwilliger** of the Bioscience (B) Division have been elected fellows of the American Association for the Advancement of Science. The AAAS



John Browne



Thomas Terwilliger

cited Browne for "distinguished contributions to the field of nuclear physics and for outstanding leadership" of the Laboratory and Terwilliger for making "fundamental advances in macromolecular crystallography and protein chemistry." They will be honored Feb. 17 during the annual AAAS meeting in San Francisco.

Susan Seestrom is the new director of the Physics (P) Division. Seestrom, who joined the Laboratory as a post-doc in 1981 and became a staff member five years later, earned bachelor's and doctoral degrees in physics from the University of Minnesota. She was elected a fellow of the American Physical Society in 1994. Seestrom previously served as deputy group leader of Neutron Science and Technology (P-23) and shared responsibilities as acting P Division director.



Susan Seestrom



Roger Pynn

Division Director **Roger Pynn** and Deputy Director **Stan Schriber** of the Los Alamos Neutron Science Center (LANSCE) separately announced plans to step down from their

positions to return to research. Pynn and Schriber had served in the LANSCE management positions for

the past three years. A search and screening committee was formed to begin the search for a new division director.



Stan Schriber

Brad Vierra of Ecology (ESH-20) has been named to the New Mexico State Land Office Archeological Advisory Committee.



Brad Vierra

The group, composed of archeologists and historical preservation experts from agencies throughout the state, advises the State Land Office on issues relating to the protection and management of cultural resources on state trust lands. Vierra, who joined the Lab in 1997, has

authored numerous papers on southwestern archeology and is considered an expert on Spanish Colonial archeology.

Geoffrey West of Elementary Particles and Field Theory (T-8) has been named to the Science Board of the Santa Fe Institute. The board advises SFI on board issues related to its scientific programs. West, a Laboratory fellow who previously served as group leader of T-8, holds positions as an adjunct professor at the University of Sussex in England and the University of New Mexico. He also is a research professor of biology at UNM.



Geoffrey West

In Memoriam

Walter Goad

Walter Goad, founder of GenBank, the first nucleic acid databank, died in Santa Fe last November. Goad joined the Laboratory as a graduate student in 1950 and spent his entire career in the Theoretical (T) Division, except for sabbaticals at the University of Colorado Medical Center and the Medical Research Council Laboratory of Molecular Biology in England. He earned a doctorate in theoretical physics from Duke University in 1954. From 1950 to 1965 Goad was a member of the team that developed the first and subsequent generations of thermonuclear weapons. In the 1960s he turned his attention to molecular biology. Although he came to biology in mid-career, his impact on modern molecular biology will persist. His vision and his leadership, coupled with his knowledge of computers, mathematics, the physical sciences and biology, resulted in the creation of GenBank. GenBank, in turn, would become a cornerstone in the revolutionary field of bioinformatics. In 1987 Goad was named a Laboratory Fellow. He also was a fellow of the American Physical Society and the American Association for the Advancement of Science.

Jake C. Salazar

Lab employee Jake C. Salazar died Sept. 1. He received a degree in business administration from New Mexico Technical Vocational School in El Rito in 1968. He came to work at the Lab January 1973 with the former Mail and Records (ISD-5). Salazar was a member of the Chimayo Fire and Rescue. In Salazar's honor, colleagues organized a procession, which included 15 to 20 fire trucks, tankers, engines and other vehicles. At the time of his death, Salazar worked as a mechanical technician with High Intensity Beam Lines, Accelerator, Experimental Areas and Remote Handling (LANSCE-7).

Jose Rudy Archuleta

Lab employee Jose Rudy Archuleta died Oct. 30. He was 49. Archuleta received general machine shop operations training at Albuquerque Technical Vocational Institute in 1968. Archuleta was active in community affairs and charitable causes. He came to work for the Lab in 1969 as a machinist trainee with the former Shops Department Office (SD-DO). At the time of his death, Archuleta worked in Space Engineering (NIS-4).

API task force...

continued from Page 3

- Routinely advertise all division-level and program-level jobs externally through API web sites and in newspapers and magazines that have a high API readership;
- Widely inform APIs at the Lab about mentoring programs and encourage them to participate;
- Have each member of the Senior Executive Team and each division director and program director select an API employee or other ethnic minority or female to mentor;
- Encourage program offices and divisions to seek out interested APIs for team/project leader appointment and formally demonstrate consideration of minority candidates in the selection of each new team leader and project leader;
- Increase the number of participants in the Lab's management and leadership institutes by encouraging group leaders to nominate APIs for the classes;
- Identify two successors for each manager at the group-leader level and above.

The director is reviewing the report and will discuss the findings and proposed options with the SET. He then plans to meet with the Lab's Asian/Pacific Islander community. Before the winter closure, Browne named Steve Younger, associate Laboratory director for nuclear weapons, to serve as champion for API issues. For more on the API Task Force, see the Jan. 11 Daily Newsbulletin at <http://www.lanl.gov/orgs/pa/News/newsarchive.html>).

December service anniversaries

40 years

T.V. Hargenrater Jr., ESA-DE

35 years

George Yates, P-23

30 years

David Carroll, MST-7
Robert Sander, C-PCS

25 years

Nancy Baca, NIS-4
Frederick Cooper, T-8
Leola D'Anna, AA-1
John Fowler Jr., X-8
Thomas Gunderson, DLDOPS
Leeroy Herrera, CER-2
Richard Kissane, ESH-5
Kien Lee, DX-2
Amos Lovato, CCN-7
Teresa Lucero, B-DO
David Madland, T-16
Angie Martinez, DX-DO
Benjamin Martinez, CCN-2
Michael McNaughton, ESH-17
Christopher Quihuis, DX-1
Jerry Romero, C-PCS
Kenneth Salazar, MST-7
Richard Scammon, ESA-EA
Arnold Sierk, T-16
R.C. Smith, P-21

20 years

Timothy Benjamin, C-INC

David Bish, EES-1

Albert Cordova, CER-3
John David, CCN-12
Jean Dewart, ESH-17
Lawrence Earley, LANSCE-9
Brent Espinoza, MST-7
Mary King, NMT-11
Linda Kolar, STB-RL
Pei-Jar Liu, P-23
Carla Lowe, C-INC
Carlos Lujan, CCN-2
A.M. Martinez, CCN-2
Donald McCoy, NW-SC
Charles Miller, NW-SC
Joann Montoya, MST-6
Michael Padilla, NMT-5
John Pedicini, X-4
Carolyn Romero, BUS-DO
Robby Russell, X-8
Erwin Schwegler Jr., ESA-EA
Floyd Sigler, LANSCE-1
Maxine Torres, TSA-3
Eliseo Vigil, NMT-4
James White, ESH-19
S.W. Wright-Hoffman, BUS-1

15 years

Carey Bare, ESH-20
Julie Canepa, E-ER
Jeanette Esparza, ALDNW
Jerry Foropoulos, NMT-3
Scott Gibbs, NW-MM
Ruth Hapke, NMT-4
James Hammerberg, X-7

Matthew Hardy, LANSCE-6
Edward Heighway, P-DO
Richard Hemphill, ESA-TSE
Barbara Hoffbauer, CCN-12
Larry Hoffman, ESH-10
Shelly Hoth, IM-6
Kevin Kinter, DX-4
Michael Kluk, IM-6
Mary Labadie, NIS-6
Patrick Lara, LANSCE-12
Mary Lucero, NMT-16
Gilbert Murrinan, ESH-14
Sammi Owens, NMT-2
William Powers, X-1
Evelyn Roybal, CCN-5
Alan Shapiro, LANSCE-1
James Steiner, TSA-11
Clara Trujillo, CCN-2
George Vaughn, LANSCE-8
Ray Wilson, LC-BPL

10 years

Mark Domzalski, ESA-DE
Doris Ford, NMT-11
Anne Khoury, HR-DO
Steven McKee, NMT-15
Constantine Sinnis, P-23

5 years

Kirsty Archuleta, HR-7
Margaret Garduno, BUS-7
Carl Sovinec, T-15

Just another day ...

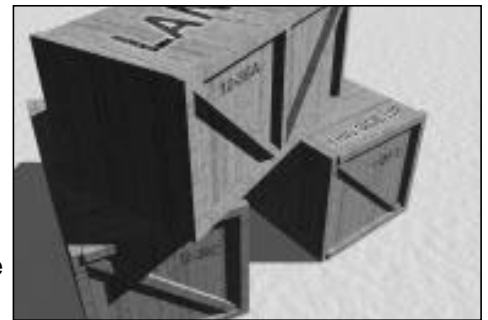
continued from Page 5

systems within the Lab. Packages that don't arrive are noted, too — as a black mark in a vendor-performance database.

Forklift operators sort items by route and then later load items onto Laboratory delivery trucks, which, by 7 a.m., are backed up to the loading dock, ready to receive cargo. By 7:30 a.m., the bin brigade has finished its sorting work and has rolled each gray container to its corresponding truck. Between brisk spates of loading and organizing cargo, delivery drivers shuffle their feet nervously in the frigid morning air, waiting an anxious 10 seconds for the next pallet to arrive.

By 8:30 a.m. the trucks are rolling and drivers begin to deliver their supplies to sites located throughout the Lab's 43 square miles of property. Each drop-off is recorded with the laser scanner. Lost packages are extremely rare.

By 10 a.m. most people know where their package is — at their work site, right where it should be. At the work site, the JIT package sitting quietly in the delivery area does little to betray the story of its first frantic hours at the Lab. And that's the way it should be, Travis says.



ISM Corner

Safety and Security Policy



"We will never compromise safety or security for programmatic or operational needs."

John C. Browne

Maintaining a community tradition

by John A. Webster

Headaches and hassles come with the job of deciding who gets how much water in Northern New Mexico, especially when it's dry, but three Laboratory employees have found that it also brings great personal satisfaction.

Ken Salazar, Bob Lopez and Rick Velasquez are the commissioners of the La Mesilla Community Ditch Association, which distributes irrigation water from the Santa Cruz River to some 340 users in and around the town of La Mesilla.

Lopez, a training manager in Security and Safeguards (S-DO) and the association treasurer, said the usual disputes and complaints about water allocation have been heightened in recent years by near drought conditions.

"I've been a farmer at the same place since I was a little boy, and this (water shortage) is the worst I've ever seen," he said in late summer. "We're managing a very scarce resource, and it keeps getting scarcer."

The changing nature of farming at La Mesilla, a small Rio Arriba County community near the confluence of the Rio Grande and Santa Cruz River, also has impacted the association's job, said Salazar, a chemist in Polymers and Coatings (MST-7) and chairman of the association.

"It was easier a few years back when the farms were generally 20 acres or so," Salazar said. "Now, they're subdivided into 20 one-acre plots, so just keeping track of the paperwork has become a monster."

Irrigation ditches, or acequias, have played an important role in New Mexico's development. In early Spanish settlements, residents typically lived clustered in a village surrounded by cultivated land and pastures. Families depended on small, irrigated tracts of land, and tight control over the distribution of the water was necessary to survive.

By 1700, about 60 ditch associations were operating in New Mexico, according to the State Engineer's Office. By 1900, the number had risen to about 400. Now, there are about 800 community associations in the state.

The La Mesilla association is governed by bylaws specifying, among other things, that the members elect the commissioners for two-year terms. Salazar has served seven years, while Lopez is in his first year. Velasquez, an environmental technician in Ecology (ESH-20) and the association secretary, has been a commissioner for three years.

The commissioners set policy, provide overall direction and determine irrigation schedules, while the day-to-day operations of the association are handled by an executive



Lab employees Bob Lopez, Ken Salazar and Rick Velasquez, left to right, get their hands dirty and their feet wet while checking the water flow in the Santa Cruz River. It's just part of the job of being a commissioner of the La Mesilla Community Ditch Association. Photo courtesy of Lopez

officer called the mayordomo. At La Mesilla, the mayordomo is Lab retiree George Velasquez.

In addition to dry conditions and land-use changes, the commissioners must contend with developers who buy water rights and then sometimes sell them to commercial

users, environmental groups seeking to re-establish historic flows of water in rivers and pueblos claiming rights to water. They also must deal with farmers who divert water illegally or block their neighbors' water supplies.

So why would a person want to put up with the hassles of a volunteer, time-consuming job as a ditch association commissioner?

"Water holds a special place for me, and I want to make sure the acequia tradition is never lost," said Salazar. "I think everybody should give a little back to their communities, and this is my part."

The commissioners also are proud of the changes they've brought to association operations in recent years. The association has changed from what Salazar calls an "old-boy network" to a democratic system.

"There are more people coming to the meetings, and they believe that we're spending the money wisely and running things honestly," he said. "They're giving us credibility and respect."

The three commissioners are grateful that the Laboratory allows them to take community service time for association business. They also have received Lab assistance in creating a World Wide Web site, whose address is <http://www.lmacequia.org>.

Los Alamos News Letter

Mail Stop C177
Los Alamos, NM 87545

Nonprofit Organization
U.S. Postage Paid
Albuquerque, NM
Permit No. 532

LALP-01-4