

WIPP complies with all regs, EPA says

Storage facility could open this summer following final ruling

By John German

It's still too early to celebrate, but it looks like the finish line is, at last, in sight in the 22-year-long marathon to demonstrate the safety of DOE's Waste Isolation Pilot Plant for disposing of transuranic waste.

On Oct. 29 the Environmental Protection Agency (EPA) published its preliminary ruling on WIPP, decreeing that the facility complies with all applicable federal environmental regulations. The ruling begins a 120-day public comment period, after which EPA will issue its final ruling on whether WIPP is to be certified as the nation's first permanent disposal facility for transuranic waste.

"As required by Congress, EPA has reviewed DOE's application and, today, EPA is proposing to certify that [WIPP] will meet health-based, environmental protection standards for disposal of defense-related radioactive waste," said Richard
(Continued on page 4)

Swords to plowshares: Sandia delivers prosthetics work for Russian weaponeers

By Neal Singer

A Sandia-originated consortium that links an Ohio manufacturer of prosthetic devices for amputees with Russian scientists formerly devoted to perfecting nuclear weapons has been accomplished by an insight of Sandia chemist Mort Lieberman (2418), who currently serves as liaison and co-director for the project.

The company is the Ohio Willow Wood Company in Mount Sterling, Ohio. The 90-year-old firm is a small but well-established leader in the prosthetics industry.

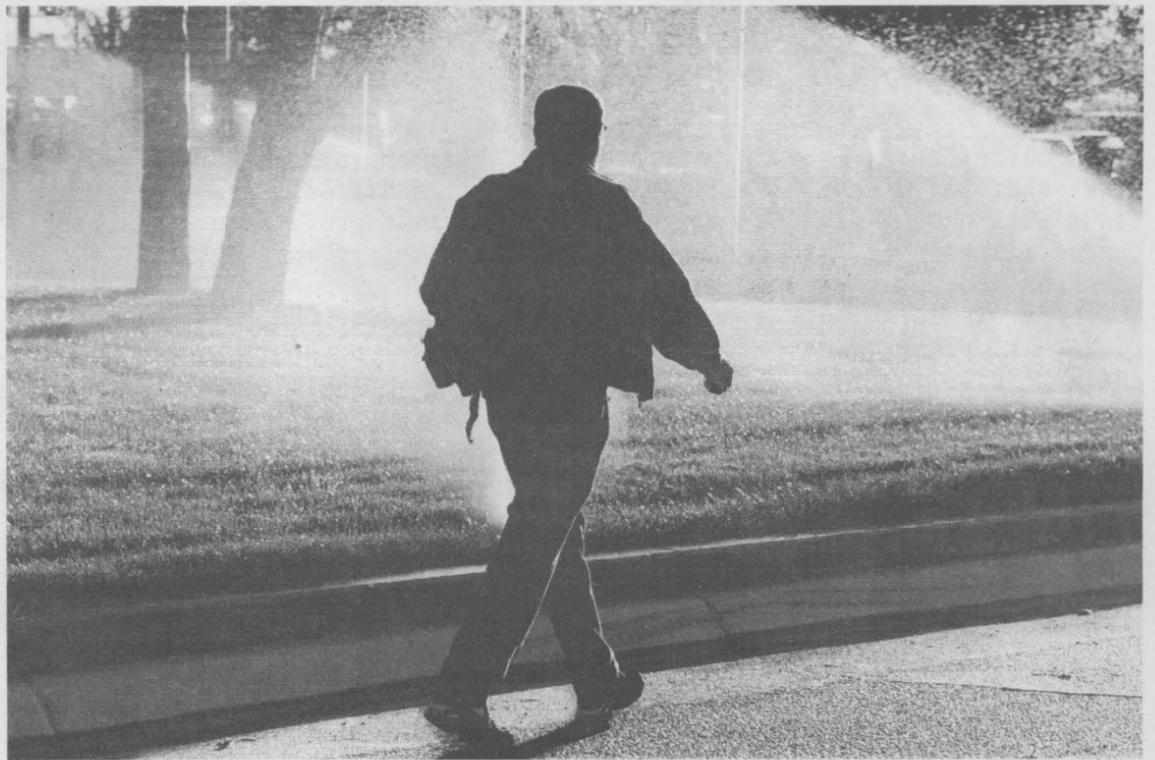
The Russian lab is Chelyabinsk-70, a prominent nuclear weapons laboratory, which is using its advanced skills in materials, stress analysis, mechanical design, and computer simulation to improve on the design of an artificial foot originated by a Tufts University bio-engineer, Mark Pitkin, and licensed to the Ohio company.

"The company furnishes some of the parts for us to send to the Russians," says Mort. "The Russians develop other parts, and evaluations are performed by both [parties]."

Major issues are durability and comfort, says Mort.

The arrangement, begun in late August, got
(Continued on page 4)

A Russian lab is using its skills in materials, stress analysis, mechanical design, and computer simulation to improve on the design of an artificial foot.



CHANGES IN THE AIR? — The first days after the change back to standard time always have a bittersweet feel. The sun is already on the horizon as Sandians end their workday. Here the setting sun's rays illuminate a late-season watering of the lawn last week in front of Bldg. 800 as James Paustian (1486) heads for home. Soon enough the cold and snow will be here, but for now New Mexico is still being blessed with warm, blue-sky fall days with temperatures in the 60s.
(Photo by Randy Montoya)

Sandia LabNews

Vol. 49, No. 22

November 7, 1997



Novel laser net shaping approach reduces time for fabricating parts

Process under development could be quicker than rapid prototyping

By Nancy Garcia

California site reporter

A novel way to fabricate parts, called Laser Engineered Net Shaping (LENS™), is being developed through a \$500,000 cooperative research and development agreement (CRADA) between Sandia and a New Mexico company, Optomec Design Company.

To reduce the time to achieve a finished piece of hardware, researcher John Smugeresky (8712) was exploring alternatives to stereolithography and selective laser sintering, which both produce three-dimensional prototypes, usually in plastic, from computer-generated designs.

He teamed with Clint Atwood (1484) in New Mexico and learned that Sandian David Keicher (1831) had developed a way to repair turbine blades, working under a CRADA with Pratt & Whitney, by spraying a metal powder and fusing the particles in the focal point of a laser beam. A special powder feeding system was independently

"We can envision making parts from materials that can't be machined or deformed."

being developed with Joseph A. (Tony) Romero (1831).

John, who had experience in powder metallurgy, suggested that a Laboratory-Directed Research and Development proposal be submitted to explore fabricating 3-D parts with this approach. After a year and a half of development work, Dave took an entrepreneurial leave of absence in January to take partial ownership of Optomec, a company that also supplies components for stereolithography machines.

Building parts one layer at a time

LENS creates parts by beaming a laser onto a substrate to create a molten pool, then injecting a small stream of powdered metal to increase the size of the molten pool. By moving the laser back and forth, and tracing out a pattern determined by computer design, the part is built line by line, one layer at a time.

With this method, rapidly solidified metal structures are produced, John says, resulting in materials being processed into a net shape that has a yield strength twice that of traditionally annealed stainless steel parts, with the same ductility.

It is also conceivable to change the composition on the fly by feeding in different source materials, creating composites or graded compositions.

"We can envision making parts from materials
(Continued on page 6)

President's Quality Awards gala honors role models in quality

5

Drug Enforcement Administration honors Sandian for tracking system

8



9

Are overhead rates really decreasing? Labs' controller spells it out

12

National Atomic Museum begins charging admission Dec. 15

This & That

Some real winners in this tournament - Former Sandia colleagues and golfing buddies of Ed Salazar - a 40-year employee who retired in 1988 and died in 1989 - hold an annual fall Sandia Golf Association (SGA) tournament in Ed's name, giving tournament profits to needy people and families. The Sandians have done this quietly throughout the '90s, seeking no publicity, so I won't mention their names. But I think their efforts are especially noteworthy this year because the first-, second-, and third-place teams all donated their *personal* winnings to the cause. As a result, the SGA provided about \$500 to help the family of Sean Cuellar, the 12-year-old boy who died Oct. 2 from complications after he was pulled from the waters of an Albuquerque irrigation ditch. Ed Salazar, devoted to many good causes himself, would be proud.

* * *

Helpful hint for dialogue sessions - The topics for the Nov. 17, 18, and 20 employee dialogue sessions look interesting, and host Executive VP John Crawford is hoping for a good turnout. Assuming that happens, Sandia/New Mexico employees should consider attending the second session of the day on Nov. 17 in the Technology Transfer Center. The first session is often crowded, but there has always been plenty of room in the second session. (See story at right for the main topics and a complete list of dates, times, and places.)

Thanks to everyone who submitted potential topics for the sessions, either directly to John's office or indirectly and anonymously through me. John says he'll do his best to cover those issues that are of greatest interest Labs-wide.

* * *

Honored to be included? - National Atomic Museum Manager Jim Walther (12660) isn't quite sure how proud to be that the museum is featured in a new book, *Offbeat Museums - The Collections and Curators of America's Most Unusual Museums*. Among the other 50 listed (honest) are: Marvin Johnson's Gourd Museum, the Cockroach Hall of Fame, American Sanitary Plumbing Museum, the Museum of Bathroom Tissue, and the New Orleans Historic Voodoo Museum. For a short update about the improved National Atomic Museum, see the article on page 12.

* * *

Problem page - Similar to the sword, when you live by the word, you can die by the word (or "dye" by the word; read on). My colleague Neal Singer and I both used one wrong word apiece on page two of our last issue, and our crack proofreader, 82-year-old Fanny "Eagle Eyes" Oosterdorf, missed 'em both. I used the word "dying" when I meant "dyeing" in a column item, and Neal used "breeches" for "breaches" in a story. Several helpful Sandians brought these to our attention.

We could offer excuses, such as the larger-than-usual fall hatch of type lice in the *Lab News* office, but we'll just swallow our pride and admit we messed up. If our spelling and word usage don't improve, Neal and I figure we may have to go into engineering.

- Larry Perrine (845-8511, MS 0167, lgperri@sandia.gov)

Hiring plans, budget outlook, job security among Nov. 17-20 dialogue topics

How good is our FY98 budget, and how many jobs will it support? What are Sandia's budget projections for future years? How many new employees will Sandia hire this year and what type?

These questions are among the topics that Executive VP John Crawford will discuss at the employee dialogue sessions Nov. 17-20. John and President Paul Robinson alternate hosting these sessions, held about three times a year.

Most topics are based on suggestions and questions that Sandians submitted to John in recent weeks. This system began with the February 1997 sessions, and attendance has been up markedly this year.

What Sandians want to hear about

"This system allows us to talk about what Sandians most want to hear about," says John. "Since so many employees submit suggestions, I can't cover every subject, but I'll definitely talk about the most requested ones."

Several other subjects John plans to cover:

- Sandia secretaries' concerns about job security.
- Why salary increases for technical managers - as a group - were lower than usual this year.
- Various operational issues, including the 9/80 workweek, telecommuting, the post-and-bid system, and space consolidation.
- How the Labs is doing in reducing overhead costs.
- Why Sandia emphasizes ethics training and conflict-of-interest awareness.
- How Sandia's internal goals and Lockheed Martin goals are set and how they are intertwined.
- Recent events and accomplishments.

As time allows near the end of each session, John will also answer employees' oral and written questions. The dialogue schedule:

- Monday, Nov. 17, 1:30-2:30 and 3-4 p.m., Sandia/New Mexico's Technology Transfer Center (Bldg. 825)
- Tuesday, Nov. 18, 9-10 a.m., Sandia Vista Building, 2301 Buena Vista SE in Albuquerque
- Thursday, Nov. 20, 1:30-2:30 and 3-4 p.m., Sandia/California's Bldg. 904 Auditorium



Web Watch

'About Sandia' page gives info about history, activities, plans

Sandia's customers, prospective visitors, and the merely curious can get a quick overview of our history, what we do, and where we're headed by checking the "About Sandia" page on Sandia's External Web.

The page can be accessed by clicking on the

About Sandia button at the top left of Sandia's External Web home page (<http://www.sandia.gov>) or by going directly to <http://www.sandia.gov/About.htm>.

Included is a brief introduction to the Labs, President Paul Robinson's "Welcome" page, the Labs' History and Mission page, and an organization chart showing Sandia's upper management (directors and above).

Other links lead to pages explaining the Labs' national security program, energy and environment program, and primary research and technology areas. Some of Sandia's major planning documents also are linked, including the Strategic and Institutional Plans.

Prospective visitors may find the Visiting Sandia/New Mexico and Visiting Sandia/California pages particularly helpful. Both include maps and information about finding our sites, and requirements/procedures for arranging visits.

"The About Sandia page is designed primarily to give customers, visitors, and employment candidates an easy way to learn more about us, our services, and what we do, but it goes beyond that," says Sandia Webmaster Larry Perrine. "Links to even more pages give us a chance to promote our capabilities, employee and team accomplishments and awards, and community involvement activities."

"Another useful feature," he adds, "is the link to our Technical Library page, which offers many unclassified technical reports produced

since 1993; reports can be downloaded and printed out. In the past, most people had to order paper copies from the National Technical Information Service."

("Sandia Web Watch" is a *Lab News* series featuring news and developments about Sandia's Web sites.)

CostCo Pharmacy added to Caremark Network

Effective immediately, CostCo Pharmacy, located at 1420 Renaissance Blvd. in Albuquerque, has been added to the Caremark Retail Pharmacy Network for Triple Option Plan participants. To receive the copayment level of benefits, show your Triple Option Plan ID card when you request an initial prescription fill or refill.

! Take Note

Martineztown House of Neighborly Service (United Way agency) is holding its annual Posole Dinner and Dance to raise funds for its programs on Saturday, Nov. 15, 6-10 p.m., at Albuquerque High School (800 Odalia NE). Tickets are \$8 adults and \$3 seniors/children to age 10. The price includes dinner and admission to the dance. Music will be provided by DJ Sonido. Dinner will be served from 6-8 p.m. only. For more information and tickets, call MHNS at 242-4333.

Sandia LabNews

Sandia National Laboratories

An Equal Opportunity Employer

<http://www.sandia.gov>

Albuquerque, New Mexico 87185-0165
Livermore, California 94550-0969
Tonopah, Nevada • Nevada Test Site • Amarillo, Texas

Sandia National Laboratories is a multiprogram laboratory operated by Sandia Corp., a wholly owned subsidiary of the Lockheed Martin Corp. and a prime contractor to the US Dept. of Energy.

Ken Frazier, Editor505/844-6210
Barry Schrader, California site contact510/294-2447
Lab News fax505/844-0645

Published Fortnightly on Fridays by
Employee Communications Dept. 12640, MS 0165

LOCKHEED MARTIN

LEAP campaign aims for new heights: 75 percent employee participation, \$175,000 in contributions

Tri-Valley Community Fund assists LEAP committee to realize ambitious goals

The Livermore Employees Assistance Plan (LEAP) committee has set specific goals for the first time in three years — and they aren't being a bit conservative in their outlook. Their hope is for 75 percent employee participation this year, considerably higher than the 63 percent (a historic low) and the \$149,000 in giving a year ago.

To stir up some interest, a LEAP Faire was held last Thursday with some 20 charitable agencies onsite to explain their programs and needs to willing contributors and potential volunteers.

Center meetings have been scheduled early this month, and LEAP chair Brian Maxwell is aiming for wrapping up the campaign by Thanksgiving. The first-ever Leadership Campaign for management will have results to report this week, it is hoped, so Sandians will know the level of commitment among managers and directors.

Another new approach this year is enlisting the fundraising expertise of the Tri-Valley Community Fund, which has been assisting the LEAP committee in recent months. Much of the campaign material was designed by the Community

Fund, and with their help all funds will be distributed to the agencies at no cost to Sandia.

After visiting some of the recipient agencies the past two years, Brian is sold on the good being accomplished by Sandia dollars.

"When I started to get involved (with LEAP) I found that a large number of those in need are not able to get help because the resources are not available. We can and do make a difference in people's lives with our donations," he says.

One example of a little money going a long way was given by the Family Crisis Center, which provides food to low-income families and interim housing for women and children with no lodging. The Crisis Center provides food for 1,800 to 2,000 people

"We can and do make a difference in people's lives with our donations."



DISCOVERY CENTER VISIT — The LEAP Committee is visiting some of the agencies being funded to get a better picture of their needs and services. From left at the San Ramon Valley Discovery Center in Danville are Geri Carson (8421), Brian Maxwell (8940), and Center executive director Diana Li-Repac.

monthly. Just \$5 buys 40 pounds of foodstuff, which can feed a family of four for nearly a week. This is possible because of the bulk purchases the FCC is able to make.

The LEAP committee has decided on the following allocations of undesignated money pledged by Sandians this year: Homeless and Needy agencies will receive 29.5 percent; Disabled Services will get 18.5 percent; Family Counseling programs, 19 percent; Youth and Education, 17.5 percent; Troubled Youth, 10.5 percent; Elderly programs, 4 percent; and Others (Valley Humane Society), 1 percent. Employees can also choose their own favorite charity and designate it on the pledge card if they wish.

Sandia California News



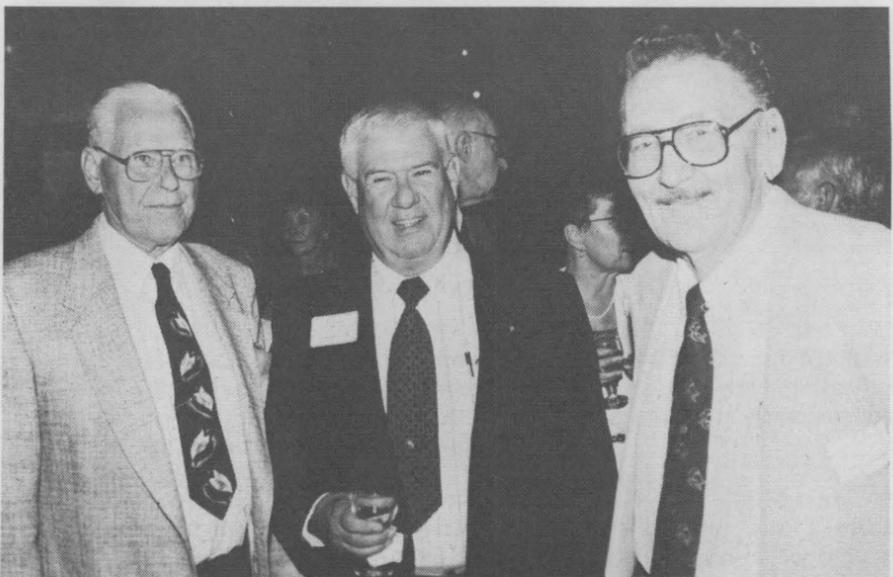
OLDEST RETIREE present at age 91 was Frank Moon (left) with his wife Ruth, along with Hilton DeSelm and Muriel.

More than 400 gather for annual California retiree dinner

Sandia/California retirees gathered for their 32nd annual retirement dinner recently at Castlewood Country Club in Pleasanton. The largest turnout ever, 410 people, reminisced, had dinner, and heard remarks by California VP Tom Hunter as well as Human Resources manager Marge York and Benefits & Retirement Planning coordinator Belva Mayfield (8522).

The oldest retiree in attendance was Frank Moon, 91, who had come to Sandia from AT&T in the early days.

Out-of-state retirees included Bill and Pat Childers from Buchanan, Texas; Lewis "Bud" Clauson from Livingston, Texas; Bob Crow from Wilsonville, Ore.; Ann Hogan from Albuquerque; Martha Leverenz from Truth or Consequences, N.M.; Hugh Odell from Sequim, Wash.; Joyce Willford from Tacoma, Wash.; and Don Werner from Sun City, Ariz.



SOCIALIZING were (from left) Rex Richardson, Bob Crow, and Lloyd Rothaker.



CHATTING were Hesa and Gloria Yano with Darlene and Ray Leri.

Prosthetic foot

(Continued from page 1)

off the ground because it could be jointly funded by two agencies that previously have had little opportunity to cooperate with each other — the DOE's Initiative for Proliferation Prevention and the National Institutes of Health's National Center for Medical Rehabilitation Research (NCMRR).

The international project originated when Mort, after spending six months at the NIH center as a technical expert, envisioned both a national defense and national medical reason for funding the arrangement and thus was able to leverage it into existence.

Nonproliferation and health

DOE is charged with helping find new employment for Russian nuclear weapons scientists, some of whom might otherwise be vulnerable to overtures from unfriendly national states or terrorist organizations. Mort's idea of using Russian scientists to develop prosthetic devices — solidified into a formal proposal with project co-director Louis Quatrano, director of a rehabilitation engineering program at NCMRR — drew DOE funding of \$250,000.

For the DOE, "This is not a health care project," Mort says. "It is a nuclear nonproliferation project in prosthetics."

To the National Institutes of Health, "the need for improved prosthetics and orthotics is well known and a subject of continuing research," says Mort.

There are an estimated 260,000 lower limb amputees in the United States, with an occurrence rate of 40,000 per year, at an estimated cost to society of \$1 billion a year, says Mort.

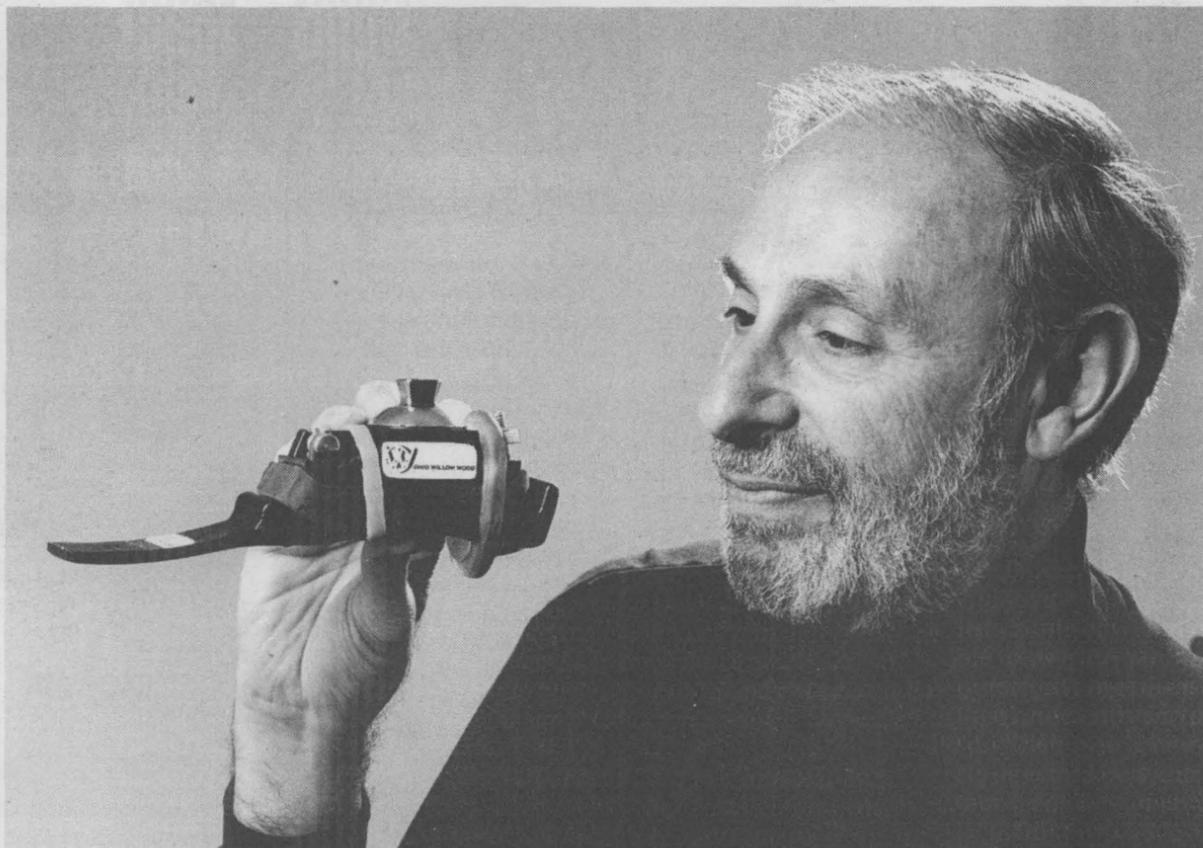
The loss of lower limbs is an even bigger problem in other countries. "Land mines are a major cause of lower limb loss and amputation in Africa, and the high rate of amputees due to mines in Bosnia is expected to continue," says Mort. In Vietnam, from 1967 to 1969, land mines accounted for 14 percent of US casualties.

The NIH agreed to contribute \$100,000 a year for two years for the project.

Part of the money will pay salaries of eight Russian scientists and engineers to redirect their areas of expertise.

There will be no cost overruns because each stage of the project is contracted at a fixed cost.

The problems with currently existing limb prosthetics are that they can be uncomfortable to wear and require high energy expenditure to use. The development of prostheses that provide a more normal gait can alleviate these problems.



FANCY FOOT WORK — Sandia liaison Mort Lieberman examines the latest version of a prosthetic foot created by US private industry and checked by Russian nuclear weapons scientists — a cooperative project originated by Mort. (Photo by Randy Montoya)

While many improvements in prosthetic devices have been made, studies have shown that one-third of transtibial (below knee) and four-fifths of transfemoral (above knee) amputees choose not to wear prostheses. Another study indicated that 78 percent of all amputees never wear prostheses or use them no more than one hour per day.

In the device originated by Pitkin, a rolling joint allows the artificial foot to offer little resistance at the beginning of its motion — when an unimpaired person merely pushes his or her weight forward over the foot — and more at its end, when a biological foot would aid in propelling its owner forward. The proposed artificial foot has the potential of causing less user discomfort because its action more closely corresponds to that previously experienced by the leg.

But much research remains to be done to bring the best possible device to market.

In the current arrangement, begun in September, the Ohio Willow Wood Company has sent its plans for the design of the foot to the Russian scientists, who will develop and test components under stress and use computer simulations to improve the foot's action.

According to a letter from Jan Sokosa, president of the National Association for the Advancement of Orthotics and Prosthetics, "Prosthetic research is ideally suited for federal attention. Amputees are relatively few in number and rely on often costly lower limb prosthetic devices for mobility. . . . NAAOP enthusiastically supports the . . . collaborative project between the [DOE] and [NIH] that . . . addresses lower limb prosthetic research [and] could result in exponential progress in this area."

A letter from John Billock, president of the American Academy of Orthotists and Prosthetists, states: "The Academy board appreciates your efforts to expand needed research in the field and to team small companies with government to expedite development of needed products and international market growth. The approach you propose fills an important void by combining the technical resources of major US and Russian laboratories with US government support and input from US prosthetists and orthotists."

A national committee set up by Quatrano has identified additional tasks related to lower limb prosthetics that may involve further Russian and US cooperation.

WIPP ruling

(Continued from page 1)

Wilson, Acting Assistant Administrator for EPA's Office of Air and Radiation.

"This is as close as we've been in terms of accomplishments," says longtime Sandia WIPP project leader and Sandia Fellow Wendell Weart (6000). "A few years ago Congress specified what we needed to do to begin operations at WIPP, and we've followed that path. This is an indication that we're on course."

Preliminary stamp of approval

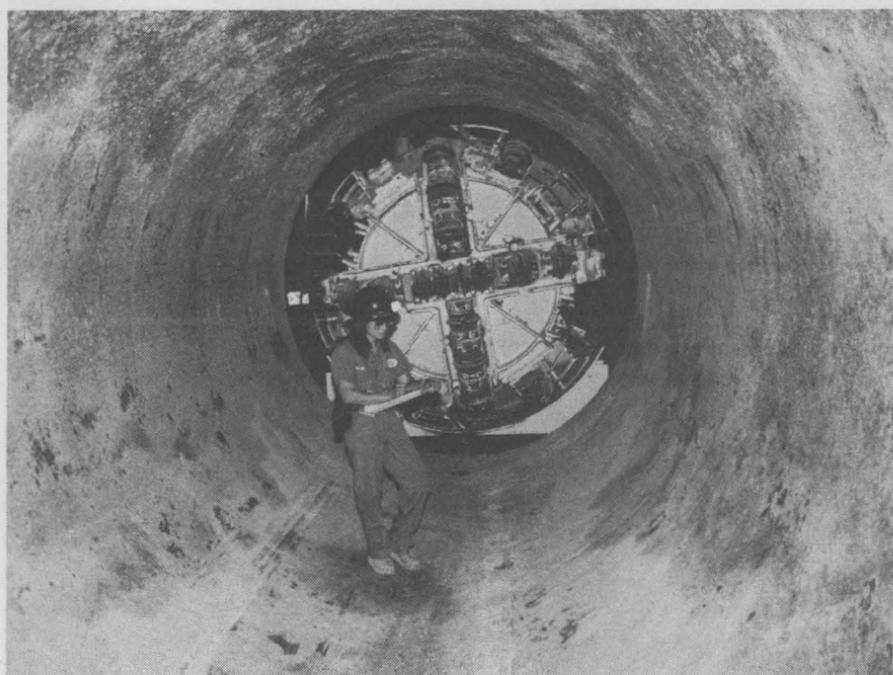
WIPP is an underground network of chambers and tunnels excavated in a layer of geologically stable salt near Carlsbad, N.M. Since 1975, Sandia geologists and engineers have served as scientific advisors to DOE and Westinghouse, helping design the facility and determine whether it could safely contain transuranic waste for thousands of years without release of radioactivity to the biosphere, either as the result of human intrusion or through migration of contaminated materials in groundwater. (Transuranic waste comprises a variety of materials — such as protective clothing, lab equipment, and machine parts — contaminated with radioactivity, principally plutonium, during the handling or manufacture of nuclear weapon components.)

Last October, DOE submitted to EPA the

Compliance Certification Application comprising more than 20,000 pages of technical information and documentation — the results of 20 years of study by Sandia of the site's geology, hydrology, physics, and chemistry, taking into account possible earthquakes, erosion, ground water movement, volcanic eruptions, and human intrusions.

Since then, the agency has conducted detailed technical reviews of the application and requested follow-up documentation from Sandians in Nuclear Waste Management Programs Center 6800 and Geoscience and Geotechnology Center 6100.

"They've reviewed every aspect of the application, looking at the regulations point-by-point to make sure they're satisfied with how we've addressed the issues," he says.



A WORKER inspects a 10-foot-diameter tunnel at the Waste Isolation Pilot Plant in southeastern New Mexico. In the background is a special tunnel-boring machine used temporarily at the site in the 1980s for brine-seepage and rock mechanics tests. (Photo courtesy of Corporate History Archives)

EPA's preliminary ruling represents the agency's tentative stamp of approval. EPA administrators will conduct three public comment meetings in New Mexico in January. (Continued on next page)

PQA awards ceremony honors 'trailblazers' of quality

Sandia 'Father of Quality' honored with sole 1997 Gold Award

A dazzling light show choreographed with the Star Trek theme song was the energetic prelude to an hour honoring Sandians' quality accomplishments during this year's Sandia President's Quality Awards (PQA) ceremony.

Award winners and their colleagues and management gathered at the Technology Transfer Center in New Mexico and the Combustion Research Facility in California the afternoon of Oct. 29 to pay tribute to the members of 16 teams who, through diligent adherence to quality principles and processes, earned Silver, Turquoise, and Special Recognition awards in the 1997 PQA process. (The award-winning teams, their members, and their contributions were announced in the Sept. 12 *Lab News*; see box below for a list of teams and their award levels.)

In opening remarks, Virgil Dugan (4500), the event's master of ceremonies, welcomed participants and guests, saying the awards represent Sandia's "firm commitment to providing our customers with the greatest service possible by being a leader in customer satisfaction and process improvement."

He introduced Labs President C. Paul Robinson, who congratulated the people who are "using quality in very imaginative ways to better their own work processes and to move the laboratory ahead."

Surprise Gold Award presented

Paul then coaxed a surprised Charles Tapp onto the stage, calling him an "evangelist" for quality and the "Father of Quality" at Sandia, and presented him with this year's sole Gold-level Award. Although Charles retired from Sandia Oct. 31 as Sandia's ethics officer, he was director of Sandia's quality organization for many years and was instrumental in establishing major quality initiatives at Sandia and within the community during his 33-year career, including the successful Quality New Mexico campaign.

In an impromptu speech, Charles drew on

the words of quality guru Stephen Covey, who said companies that focus on their customers will do better than those that don't; companies that get their employees involved in focusing on the customer will do better than those that don't; and companies that get employees involved in improving processes to delight the customer all the time will become "world-class" companies.

Sandia owes much of its success to quality, Paul noted, adding that he has been "particularly delighted over this past year to see the emergence of a stronger focus on customer satisfaction" at Sandia.

He said he believes hard-working Sandians focusing on individual customers throughout the Labs collectively made possible last fiscal year's \$1.352 billion in total budget authority (funding received), a figure that exceeded top management's goal.

Before turning the stage over to Bruce Twining, Manager of DOE's Albuquerque Operations Office, Paul called the winning teams "trailblazers in quality" and remarked, "One key to improving quality is to choose quality role models. These winners surely qualify."

Twining pointed out that nine Sandians were among those winning awards in DOE's own quality recognition ceremony the following day. "We've built quite a legacy here in Albuquerque in teaming between the feds and the labs," he said. "Every one of these teams can look at their peers, at their customers, and at the taxpayers and say they made things better and they made them cheaper. I come here today with my commitment to continue working with you on this."

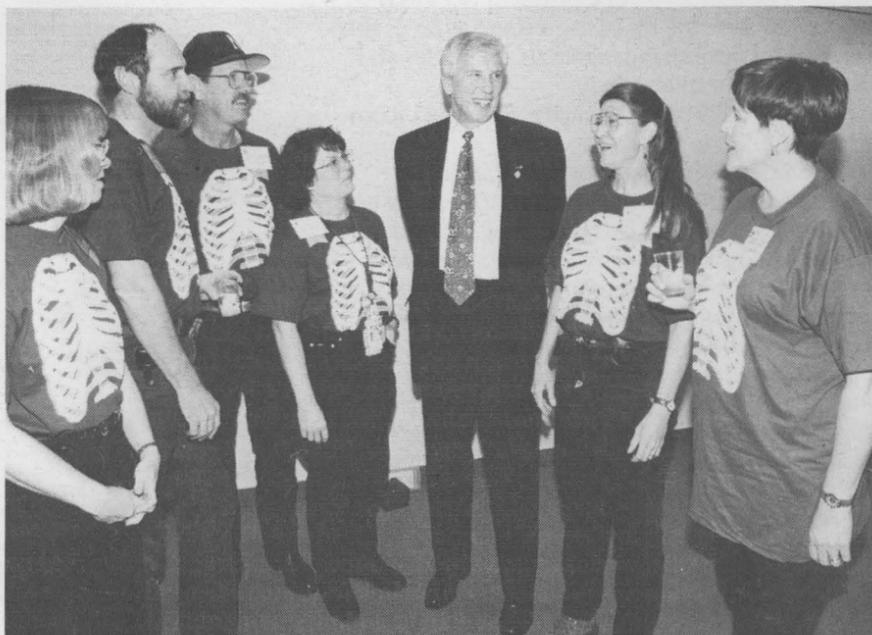
Teamwork is not an option

Then it was time to honor the winners, as California Laboratory VP Tom Hunter (8000) began presenting awards, via live videolink, to Sandia/California teams and team members.

"I don't think I have to convince anyone here that the world is a competitive place. The expectations and standards of our customers are high and always increasing," Tom said. In this environment, "effective teamwork is no longer an option; it is, in fact, essential. Our customers deserve and expect nothing less."

Through the principles of quality and continuous improvement, he said, "we have found yet another way to provide exceptional service in the national interest."

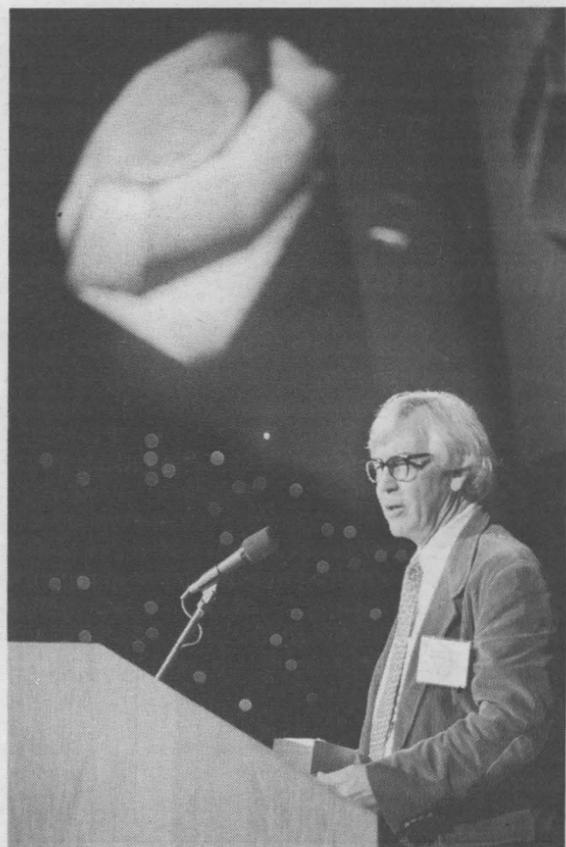
Each winning team, first in California and then in New Mexico, took the stage and was pre-



NO BONES ABOUT IT — During a reception following the PQA awards ceremony, Paul Robinson congratulates members of the MC4380 X-ray Process Team, which won a Silver PQA award for developing, implementing, and documenting an X-ray inspection process for neutron tube subassemblies.

sented with a diamond-shaped PQA award.

When the presentations were over, Virgil's closing remarks punctuated the event: "This ceremony is not the end of a process but the beginning of a process. The challenge is to go out and disseminate, model, and set the mark for good business practices at Sandia." —John German



SURPRISE GOLD AWARD — Charles Tapp, the "Father of Quality at Sandia," as Labs President C. Paul Robinson described him, delivers an impromptu talk moments after a surprise 1997 Gold PQA Award was presented to him for his years of dedication to Sandia's quality program.

1997 PQA-winning teams

Silver Awards:

MC4380 X-ray Process Team
Staff Augmentation Systems Automation Project
Manufacturing User Reports Project

Turquoise Awards:

Combustion Research Facility Phase II
WIPP Shaft Sealing System Design
Explosive Detecting Personnel Portal
Metal Retardation in Soils
MC4300 Neutron Tube Product Realization Team
Property Inventory Reengineering
Sandia/New Mexico Telephone Operations
SALUD Health Promotion Program

Special Recognition Awards:

Cleaning for Adhesive Bonding LDRD Project
Laser Wire Deposition LDRD Project
Product Realization Enterprise Employee Safety Program
Software Test and Assessment of Reliability Project
Cost-Per-Copy Team

(Continued from preceding page)

Following the public comment period, which ends in late February, EPA will decide whether to certify WIPP as a permanent repository and announce that decision by May 1.

Probably not the last hurdle

A few other "technicalities" remain before operations can begin, says Wendell.

State permits for transporting and emplacing waste with hazardous constituents need to be obtained, and DOE still must issue a Record of Decision on the site's Supplemental Environmental Impact Statement.

As part of its preliminary ruling, EPA also has proposed that DOE meet four additional condi-

tions for certification, for example, ensuring that generator sites can accurately characterize the contents of waste containers and requiring WIPP waste panels to be sealed with special concrete.

If DOE shows the additional conditions can be met and EPA issues a positive final ruling this spring, he says, the WIPP team, including Sandia, would begin preparations to move the first shipment of transuranic waste from Los Alamos National Laboratory into WIPP's 2,150-foot-deep repository chambers by as early as June 1, 1998.

"This isn't the last hurdle. There may be some legal issues and objections raised between now and then that could delay the opening," he says. "But it's hard to imagine better news right now."

The National Academy of Sciences first recommended a deep salt-bed repository for nuclear

waste disposal in the 1950s. When Sandia assumed responsibility for characterizing, designing, and evaluating the performance of a repository in southeastern New Mexico from Oak Ridge Laboratory in 1975, Labs engineers believed the project would last only six years. But numerous regulatory changes, political maneuverings, and other setbacks delayed the facility's opening.

In 1992, the Land Withdrawal Act designated EPA as WIPP's certifying agency, finally establishing a clear path to compliance after years of uncertainty, says Wendell.

Many Sandians have been involved in the WIPP project over the years, with a peak number of 122 employees in 1995.

Watch future issues of the *Lab News* for updates on WIPP certification.

Net shaping

(Continued from page 1)

that can't be machined or deformed," John says. "We've just seen the tip of the iceberg as far as the potential for optimizing materials properties and composition simultaneously."

His role has been to evaluate, test, and recommend materials to use.

For a neutron generator application, it might be possible to mix electrical insulating and conducting properties by fabricating a blend of ceramic and metal, thereby solving a materials processing problem and reducing the cost of production by using fewer steps.

Or self-lubricating materials might be applied to weapons stronglinks (by mixing metal with either Teflon™, graphite, or molydisulfide).

Outside Sandia, tool and die companies are interested in using LENS to make dies from tool steels for plastic injection molding machines.

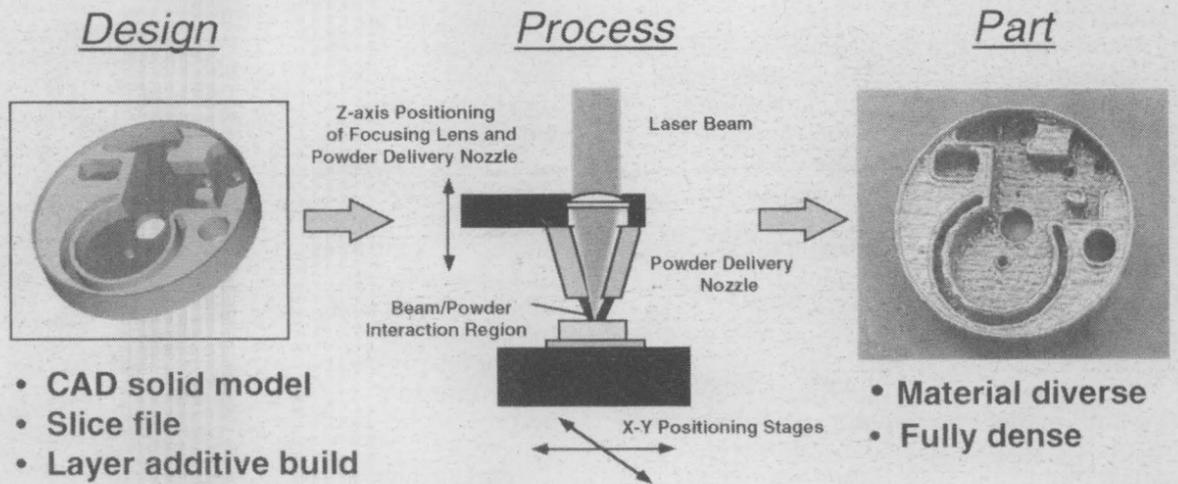
Aerospace companies are interested in reducing costs of parts manufacture, Keicher says. LENS promises flexibility in creating small custom lots, or providing unique features or markings to individual parts.

Hope to provide a commercial system

With funding through Small Business Innovation Research proposals, Optomec is working on improving the surface finish and dimensional accuracy (especially in the growth direction), minimizing residual stress and distortion caused by the thermal gradient of the growing part, and developing appropriate engineered materials. The company is also scaling up to deposit more material faster.

Through progress in the two-year CRADA,

Laser Engineered Net Shaping (LENS™)



CHICAGO.PM2TEC.6/97.JES/8712: 10/10/97: 6

 Sandia National Laboratories

LENS fabrication converts a virtual component, such as this proposed stronglink housing, left, to an actual part, right, through building a net shape line by line and layer by layer.

Optomec hopes eventually to provide a commercially viable LENS system for end-users such as Sandia and the tool and die industry.

Other Sandians who have contributed to LENS are Tony Romero (1831), who originally told John and Clint about Keicher's work,

Michelle Griffin (1484), Lane Harwell (1484), Francesco Jeantette (formerly of 1831), and Don Greene (1484). Eric Schlienger (1831) and Mike Oliver (1831) recently became part of the LENS™ team, which will grow in the new fiscal year.



FREEWAY FUMING — You can decrease the fumes and help clear the air by seeking alternative transportation during the annual Albuquerque Clean Air Campaign.



CYCLE CIRCUIT — According to the Sandia Bicycle Commuters Group, "Sandia workforce bicyclists commuted approximately 110,000 miles during the Winter Pollution Advisory Period, avoiding about 5,500 gallons of gasoline consumption and about 5,000 pounds of carbon monoxide pollution." If biking to Sandia appeals to you, see the SBCG Web page at <http://www-irn.sandia.gov/organization/div4000/ctr4600/bicycle/sba.html>. (Photos by Randy Montoya)

Let's clear the air: Take the Clean Air Challenge this year

Sandia is again participating in the annual Albuquerque Clean Air Challenge.

Clean Air Campaign pledge cards were distributed Oct. 27-31 via interoffice mail. Employees are encouraged to make pledges and return their cards to the Commuter Assistance Program at MS 1021 before Dec. 19. The Transit Department's deadline for receiving employee pledge bundles from local companies is Dec. 31.

Pledge to use alternative transportation for work or shopping during the 1997-1998 Clean Air Campaign and you'll help keep Albuquerque's air cleaner and be eligible for prizes and services. Win a mountain bike courtesy of Oshman's or a trip on Amtrak. Grand prizes will be awarded Dec. 31.

To participate, employees need to pledge to use alternative transportation to or from work, school, or shopping:

- Every day for a week,
- Once a week for one month, or
- On all "Yellow Alert" days.

More than 1,000 employees already do one or more of the above regularly. Printed bike maps and bus routes are available from 844-7433. Carpools and vanpools at Sandia have more than 800 participants. With the cost of gas and maintenance, along with increased construction and hassles, ride sharing is the way to go.

How to make our air healthier

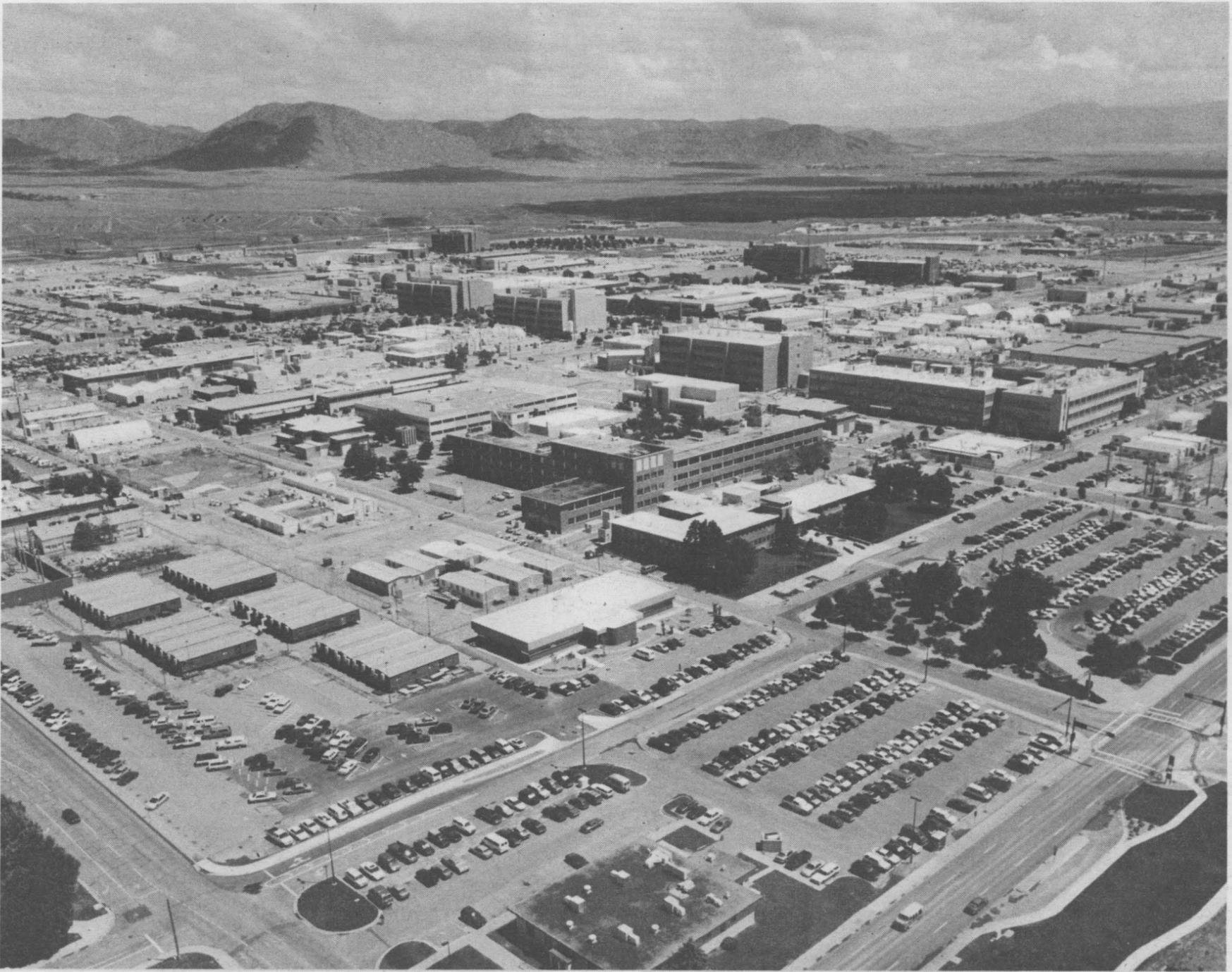
Albuquerque's new challenge is to improve our air for a healthier community even though the city's air quality now meets federal clean-air standards. Albuquerque's air quality is at its worst from October through February. Cars and trucks are a major cause of wintertime carbon monoxide. But the number of miles traveled on Albuquerque's roadways is increasing yearly.

You can listen to local radio and television stations for daily air quality announcements from October through February or call 768-BURN (2876) for updates. "Yellow Alerts" are issued if the air quality is marginal. This means wood-burning is strongly discouraged and driving should be held to the absolute minimum that night and the next morning. If the air quality is dangerous, a "Red Alert" is issued and wood-burning is prohibited and citizens are encouraged to ride the bus, bike, walk, or ridepool.

Because vehicles are the main cause of pollution, driving fewer miles will reduce air pollution. The bus costs only a dime on Fridays and Saturdays during shopping season (Thanksgiving to New Year's). When you shop in the Uptown area, you can take advantage of the Transit Department's free Shopping Shuttle that circles Coronado Center and Winrock Shopping Center. City buses are equipped with bus racks so you can bike one way and ride the bus back. Finally, campaign officials point out, regular maintenance makes good sense for your car and it's good for the air.

For information about the Clean Air Campaign, call Amy LeVan (3344) at 844-7433.

Sandia/New Mexico: The new view from on high



Although it isn't too apparent at first glance, there have been some significant changes at Sandia/New Mexico since photographer Walter Dickenman spent a couple of days circling the site snapping photos in late July. Perhaps the most significant is that the new Center for National Security and Arms Control — the large dark building just beyond Bldgs. 800-802, which are pretty much the center of the photo — was dedicated Aug. 28 and now houses in its 85,000 square feet ultra-secure space for the planning and management functions of the nuclear weapons program and conduct of other nonproliferation and national security projects and activities. In the vertical center near the left margin, a redesigned Gate 4 entry to Tech Area 1 is under construction just south of Medical (Bldg. 831), in the vacant block marked by

a white triangle; the entry will offer access via badge readers for pedestrians, bicyclists, people in wheelchairs, and vehicles. The Robotic Manufacturing Science and Engineering Laboratory is visible on the edge of the developed area in the upper left corner near the left margin, and the barely discernible complex in the upper center — between the edge of the developed area and the long cloud shadow — is the Explosives Components Facility (Tech Area 2). While those are additions since the last aerial photo of the lab site, other things have disappeared since even the photo above was made. Crews have been at work in the area pictured in the lower left quadrant of the photo, disconnecting and moving all the mobile office buildings; that space will become a parking lot when the move is finished.

L&M Technologies to oversee a variety of Sandia's microelectronics services

The presidents of Sandia and L&M Technologies, Inc., have put their names on the dotted line during a special ceremony to recognize the new \$37 million contract the two organizations have entered into.

The new, first-of-its-kind, five-year contract signed Oct. 24 names L&M Technologies of Albuquerque to oversee a variety of major technical and administrative services required to operate the Labs' microelectronics facilities. These facilities, among other things, test and fabricate circuits used in a broad range of military and commercial applications.

Under the terms of the contract, for which there was a national competitive bidding process, L&M will be responsible for key activities at some of Sandia's newest, most technically sophisticated, and widely known facilities — the Microelectronics Development Laboratory, the Compound Semiconductor Research Laboratory, and the Microsensor Research and Development Laboratory.

Among the primary duties: performing standard processing, process development, and device

or integrated circuit fabrication at all three facilities and maintaining, calibrating, upgrading, and repairing sophisticated microelectronics equipment such as scanning electron microscopes, surface particle detectors, photolithographic equipment, and reactive ion beam and plasma etching systems.

L&M will be responsible for quality control, including integrated circuit and device reliability and testing, inspection, yield analysis, calibration, micromechanics evaluation, incoming silicon wafer processing, and inspection.

L&M will also have oversight for all environmental safety and health requirements at the facilities along with responsibility for information systems development and maintenance, including administration of the facilities' local area networks, hardware and software maintenance, and upgrades.

Sandia President C. Paul Robinson and Antonio Montoya, president and chairman of L&M Technologies, signed the contract. L&M began operations in 1972. It generated \$10 million in revenue in 1996 and has about 250 employees.

Around the corporation

LOCKHEED MARTIN

Beitchman will head LM Intersputnik

James Beitchman has been named president and chief executive officer of Lockheed Martin Intersputnik, a joint venture company of LMC's Space & Strategic Missiles Sector and the Intersputnik International Organization of Space Communications. The latter is a 22-member-country organization established more than 25 years ago to operate a satellite communications system and provide worldwide communications. The first satellite deployed by the new organization will be LMC's A2100, aboard a Proton rocket in late 1998.

Lockheed Martin collects awards

Lockheed Martin was notified recently that it was being honored by two separate organizations. The corporation was selected by *Industry Week* magazine as one of the country's 100 best-managed companies, and the US Environmental Protection Agency gave it the agency's "Best of the Best" award for ongoing efforts to combat depletion of Earth's ozone layer.

DEA honors Sandian for developing systems to track its aircraft

On Aug. 27, 1994, the crash of a US Drug Enforcement Administration (DEA) airplane in Peru took the lives of five DEA special agents.

During the investigation of the crash, US Attorney General Janet Reno determined that there were inadequate means of accurately tracking DEA aircraft. As a result, the DEA asked Sandia to accelerate the aircraft tracking systems portion of the overall project and to provide complete systems, including installation oversight, for DEA aircraft at the Air Operations Center (AOC) in Fort Worth, Texas.

These systems provide DEA with aircraft position and location information every 10 minutes, with data reporting directly to the Air Operations Center. The position and location data are determined using an integral Global Positioning Satellite (GPS) receiver, transmitted via satellite, and received on a dedicated personal computer monitor using a map display. This system is currently in operation and continues to be the only system in use accurately providing aircraft location for DEA.

Special DEA citation

The work carried out at Sandia has resulted in a major DEA award to Sandian Ellis Heustess of Digital Signal Processing Dept. 5934, the Sandia project leader. The DEA, under the Department of Justice, recently presented Ellis a special citation for outstanding contributions to the operational support and development programs in the area of tracking and sensor technology.

"Mr. Heustess is to be commended

for his outstanding support to the DEA and our nation's drug control efforts," says the award citation, in part.

"We are pleased that the DEA, a valued sponsor, has so publicly recognized Ellis's contributions," says David Nokes, Director of Systems Assessment and Research Center 5900. "Ellis clearly understood the sponsor's problem, provided a strong technical solution, and achieved results that exemplify what Sandia National Laboratories is all about."

"I was totally surprised by this award," says Ellis. "It was the last thing I expected. It's a nice thing to have happen."

Enhancing safety, efficiency

Sandia and DEA are producing limited quantities of field deployable equipment, including mobile satellite-based vehicle, vessel, and aircraft tracking systems, as well as sensor reporting devices. The systems developed not only increase the level of safety and security of DEA personnel during marine and air operations but also significantly enhance the efficiency and effectiveness of DEA's global enforcement operations.

As a result of the Sandia/DEA testing and implementation of the aeronautical systems into DEA AOC aircraft, the US Air Force has purchased 324 similar systems and is currently installing them into C-5, C-141, KC-10, and C-135 aircraft. The Air Force is considering purchasing and installing 600 additional systems to complete its fleet management and tracking operations requirement.



BOOK FAIR FAN — Sandra Madril (4916) was among the employees who purchased more than \$43,000 worth of books during the Books are Fun Book Fair Oct. 20-23 to kick off the 1997 Employee Contribution Plan/United Way (ECP/UW) campaign, which raises funds for United Way of Central New Mexico and health and human service organizations anywhere in the world. Books were offered at discounts of up to 70 percent. The ECP/UW general campaign ends today, Nov. 7.

Twenty-two Sandians feted at 'Honoring Professional Excellence' luncheon

Twenty-two Sandians who have received national or international awards this past year (most of them previously reported in the *Lab News*) were honored recently at a luncheon hosted by President C. Paul Robinson and VP of Physical Sciences & Components Div. 1000 Bob Egan.

The luncheon, at the Kirtland AFB Officers Club, was part of a new program, "Honoring Professional Excellence," to encourage and honor Sandians who have demonstrated professional excellence and brought honor to Sandia by receiving prestigious awards.

"Our staff members are recognized by the world's leading professional societies for their technical work and their leadership," says Bob. "We are proud of their accomplishments, which not only help us achieve mission success but also show the opportunity to excel offered by Sandia."

The Sandia honorees feted at the luncheon (teams were represented by one of their members) and their earlier awards were:

- Ernest O. Lawrence Award winner Charles Jakowatz (5912) for technical excellence in national security (synthetic aperture radar signal processing).

- R&D 100 Award winners Stephen Montague (1325), Richard Brow (1833, also winner of the Gottardi Prize from the International Commission of Glass), and Jeff Brinker (1831, also winner of the American Chemical Society's Ralph K. Iler Award).

- R&D 100 Award winners Lyndon Pierson (4616, for team members Joseph Maestas, Luis Martinez, and Thomas Tarman), Steve Gossage (4616, for team members Michael Vahle and Thomas Pratt), and James Miller (1845, for team members Jim Krumhansl, Dan Trudell, Linda McLaughlin, Elmer Klavetter, Howard Stevens, and Larry Bustard).

- Basic Energy Science Award winners Brian Swartzentruber (1114, also winner of the DOE

- Young Independent Scientist Award) and Jess Wilcoxon (1152, for team members P.P. Newcomer, David Bliss, George Samara, and Anthony Martino).

- Peter Feibelman (1114), the Medard W. Welch Award for predictions and explanations of surface phenomena.

- Terry Michalske (1114), the Edward Orton Jr. Memorial Lecture Award from the American Ceramics Society.

- Michael Cieslak (1860), the William Irrgang Memorial Award from the American Welding Society.

- Charles Robino (1833), the Professor Masubuchi/Shinbso Corporation Award from the American Welding Society (to the best welding scientist under the age of 40 in the world).

- Charline Seyfer (3525), for being named President of the International Society for Performance Improvement.

- Charles Lee (5941), the Intelligence Community Seal Medallion from the Director of

- Central Intelligence.

- Stephen Lott (6113, and team members Tim Gardner, Steve Lockwood, and Linda McLaughlin) for the Partnership for a New Generation of Vehicles NOx Emission Award from Vice President Al Gore.

- James Pacheco (6216), the Hispanic Engineer National Achievement Award for Technical Contribution.

- Kenneth Wilson (8716), the DOE Distinguished Associate Award.

- Ralph James (8230), the Discover Award from *Discover* magazine.

- John Dec (8362), the Horning Society of Automotive Engineers Award.

- Pat Eicker (9600), the Joseph F. Engelberger Robotics Award from the Robotics Industries Association.

- Jill Fahrenholtz (9621), the Distinguished New Engineer Award from the Society for Women Engineers.

Employee death

Donna Renaud of Advanced Networking Integration Dept. 4616 died Sept. 17.

She was 46 years old.

Donna was a member of the technical staff and had been at Sandia since 1984.

She is survived by her parents Mr. and Mrs. Warren Harkey and brother Lance Harkey.

Sympathy

To Gerrie (10267) and Ruben (7435) Garcia on the death of her father and his father-in-law in Albuquerque, Sept. 18.

To Mike Coltrin (1126) on the death of his mother, Faye Coltrin, in Albuquerque, Oct. 19.

Retiree deaths

| | | |
|-------------------------|-----------|---------------|
| Edwin Bruce |1714 |June 22 |
| Katherine Roger (80) |4152 |Aug. 27 |
| Daniel Miko (61) |2412 |Sept. 1 |
| Thomas Myers (75) |1823 |Sept. 4 |
| Everett Click (89) |2335 |Sept. 6 |
| Allan Fine (68) |7733 |Sept. 6 |
| John Shunny (72) |3162 |Sept. 11 |
| David Carrick (83) |7422 |Sept. 23 |
| Burnice Workman (89) |4513 |Sept. 25 |
| Charlotte Heidrich (71) |3422 |Sept. 28 |
| Emily Class (87) |3412 |Sept. 30 |

Organization numbers indicate retirees' positions at the time of retirement and may not correspond to present-day organizations.

Feedback

Apples to oranges: Comparison of FY97 to FY98 Spend Plan Tool calculations isn't valid, Labs controller says

Q: I have been working on an FY98 Spend Plan and am extremely disappointed in the numbers I see coming up. Last year, 0.3 FTE + 11K purchases + 57K in service center costs resulted in a total cost of \$142K. This year, the exact same amounts in the same department resulted in a total cost of \$152K, a 7 percent increase that is occurring all in loads. This is awful! All the presentations I hear about costs being reduced and overhead decreasing are delusions, frauds, lies, untruths. This is what we see on the line. Management needs to pull its collective head out of the sand and actually input a spend plan. Then they'll see how "far" a Sandia dollar goes. I want to know what this money is being used for because it sure as heck isn't being used for technical work.

A: The 0.3 of an FTE, \$11K of purchases, and \$57K of service center costs on an LDRD case does price out at \$142K in the FY97 Spend Plan Tool, based on an average organization base salary of \$74K. In the FY98 Spend Plan Tool, this same input, for a specific person, prices out at \$152K. This \$10K, or 7 percent, increase is due to a number of factors, including an increase in base salary, conversion to Standard Labor Rates (SLR), and changes in loads. Table 1 at right shows a breakout of the increase from FY97 to FY98.

The Table 1 comparison shows that while 27 percent of the increase is due to corporate loads (\$2.9K/\$10.6K) and 10 percent is due to our conversion to SLR (\$1.1K/\$10.6K), the remaining 63 percent of the increase is due to changes in base labor and center support.

Apples to oranges

These two changes are not corporate-driven but instead are the results of decisions at the organizational level. More important, this example of comparing FY97 versus FY98 Spend Plan Tool calculations is not a valid comparison since the FY97 calculation represents the spend plan (which would only match costs if the charging individual's salary equaled the organizational average base labor rate, which it does not) while the FY98 calculation represents costs (which, thanks to SLR, will match the spend plan). Thus, this example is comparing apples to oranges. A more appropriate analysis would use the specific person's actual FY97 base salary to determine the comparable FY97 total cost versus FY98. Such an analysis is presented in Table 2.

The Table 2 apples-to-oranges comparative cost analysis shows the impact of the change in base salary, our change to a standard labor rate system, and changes in loads for FY98. For this particular example, an increase of less than 2 percent seems quite reasonable, especially considering the increase in base labor and center support.

FY98 tool will accurately predict costs

Significantly, the end results of these two analyses point out the problem with our current spend plan system and the correction of that problem through our implementation of a standard labor rate system. In this example, the FY97 Spend Plan Tool understates the actual total cost by \$7.7K, or 5.1 percent, while the FY98 Spend Plan Tool matches the actual total cost exactly. Thus, our ability to accurately predict costs will increase significantly in FY98, which should enhance the ability of case/project/program managers to generate proposals and quotations, plan their work, and manage their resources.

Another interesting analysis would use the specific person's FY98 base salary and then calculate the resultant total cost using the loading rates and mechanisms of FY97 versus FY98. This analysis is presented in Table 3.

The Table 3 analysis shows just the impact

Comparative Spend Plan Tool analyses

Table 1

| Element | FY97 | FY98 | Change | % Change |
|-----------------------------|--------------|--------------|-----------|----------|
| Base Labor | \$22.1K | \$26.7K | \$4.6K | 20.8 |
| Conversion to SLR (Band 15) | --- | 1.6K | 1.6K | 7.2 |
| Fringe Base | \$22.1K | 28.3K | | |
| Fringe Rate | (33%) 7.3K | (24%) 6.8K | <0.5K> | <6.8> |
| Center Support Base | 29.4K | 35.1K | | |
| Center Support | (17.8%) 5.2K | (20.5%) 7.2K | 0.9K | 38.5 |
| Service Centers | 57.0K | 57.0K | no change | |
| Value-Added Base | 91.6K | 99.3K | | |
| Corporate Tax | (9.1%) 8.4K | (9.4%) 9.3K | 0.9K | 10.7 |
| Management Fee | (2.5%) 2.3K | (2.8%) 2.8K | 0.5K | 21.7 |
| Site Support Base | 102.3K | 111.4K | | |
| Site Support | (28%) 28.6K | (27%) 30.1K | 1.5K | 5.2 |
| Purchases | 11.0K | 11.0K | no change | |
| Total Cost | \$141.9K | \$152.5K | \$10.6K | 7.5 |

Table 2

| Element | FY97 | FY98 | Change | % Change |
|-----------------------------|--------------|--------------|-----------|----------|
| Base Labor | \$25.6K | \$26.7K | \$1.1K | 4.3 |
| Conversion to SLR (Band 15) | --- | 1.6K | 1.6K | 6.2 |
| Fringe Base | \$25.6K | 28.3K | | |
| Fringe Rate | (33%) 8.4K | (24%) 6.8K | <1.6K> | <19.0> |
| Center Support Base | 29.4K | 35.1K | | |
| Center Support | (17.8%) 6.1K | (20.5%) 7.2K | 1.1K | 18.0 |
| Service Centers | 57.0K | 57.0K | no change | |
| Value-Added Base | 97.1K | 99.3K | | |
| Corporate Tax | (9.1%) 8.8K | (9.4%) 9.3K | 0.5K | 5.7 |
| Management Fee | (2.5%) 2.4K | (2.8%) 2.8K | 0.4K | 16.7 |
| Site Support Base | 108.3K | 111.4K | | |
| Site Support | (28%) 30.3K | (27%) 30.1K | <0.2K> | <0.7> |
| Purchases | 11.0K | 11.0K | no change | |
| Total Cost | \$149.9K | \$152.5K | \$2.9K | 1.9 |

Table 3

| Element | FY97 | FY98 | Change | % Change |
|-----------------------------|--------------|--------------|-----------|----------|
| Base Labor | \$26.7K | \$26.7K | no change | |
| Conversion to SLR (Band 15) | --- | 1.6K | 1.6K | 6.0 |
| Fringe Base | \$26.7K | 28.3K | | |
| Fringe Rate | (33%) 8.8K | (24%) 6.8K | <2.0K> | <22.7> |
| Center Support Base | 35.5K | 35.1K | | |
| Center Support | (17.8%) 6.3K | (20.5%) 7.2K | 0.9K | 14.3 |
| Service Centers | 57.0K | 57.0K | no change | |
| Value-Added Base | 98.8K | 99.3K | | |
| Corporate Tax | (9.1%) 9.0K | (9.4%) 9.3K | 0.3K | 3.3 |
| Management Fee | (2.5%) 2.5K | (2.8%) 2.8K | 0.3K | 12.0 |
| Site Support Base | 110.3K | 111.4K | | |
| Site Support | (28%) 30.9K | (27%) 30.1K | <0.8K> | <2.6> |
| Purchases | 11.0K | 11.0K | no change | |
| Total Cost | \$152.2K | \$152.5K | \$0.3K | 0.2 |

of our implementation of a standard labor rate system and changes in loads for FY98, and for this particular example the impact is negligible.

The bottom line is that increases in base labor and center support rates have a significant impact on total costs, regardless of corporate loads. Just as important, loads themselves are merely a function of various pools of expenses and the respective bases those pools are recovered against.

While many of our corporate indirect costs will decrease from FY97 to FY98, those rates will decrease only if their respective bases increase or sustain a less than proportionate decrease. If there is a greater than proportionate decrease in a base, the rate will actually increase. (As an aside, bear in mind that exceptions and exemptions merely serve to decrease against which pools are recovered, thus driving rates up.)

— Dick Shepardson, Controller (10500)

Recent Patents

Robert Benham (1553), Jerry Brock (1554), John Emerson (1472), Karl Schuler (ret.), Philip Stanton, Curtis Blount (Wasilla, Alaska), Keith Ferguson, Donald Scheve, and Joseph Schmidt (all Anchorage, Alaska): Apparatus and Method for Sealing Perforated Well Casing.

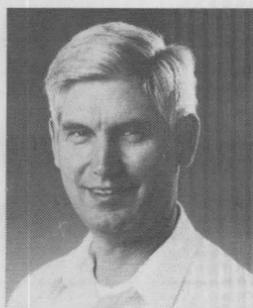
James Spates, Stephen Martin (both 1315), and Arthur "Chip" Mansure (6111): Acoustic-Wave Sensor Apparatus for Analyzing a Petroleum-Based Composition and Sensing Solidification of Constituents Therein.

Welcome

New Mexico — Martin Thompson (2345)
Florida — Geraldine Wimmers (1492)

Mileposts

November 1997



Wilson Barnard
30 1272



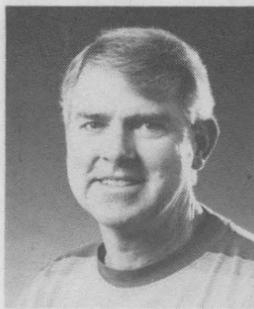
Christopher Flores
20 7844



Marcella Madsen
35 5806



Ed Cassidy
35 3545



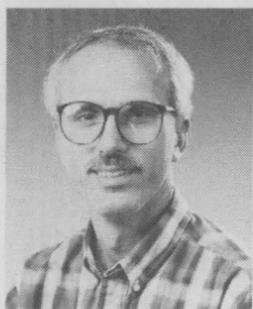
Marvin Nicholson
20 7842



Theresa Chiarella
15 10507



Martin Stevenson
25 2674



Richard Graham
20 9781



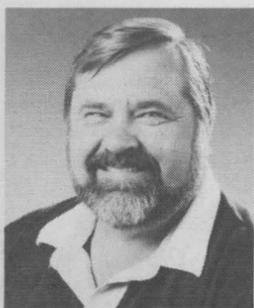
Pamela Johnson
15 9761



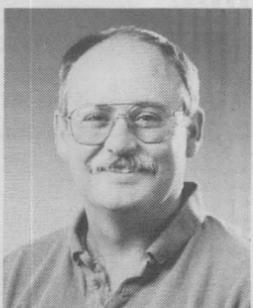
Juanita Evans
20 15103



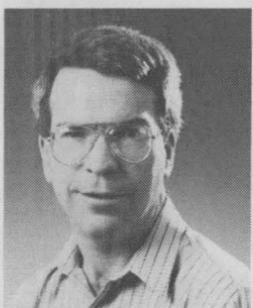
Ronald Halbgewachs
30 2615



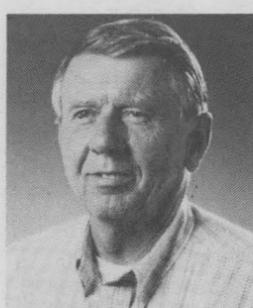
Kenneth Varga
30 2643



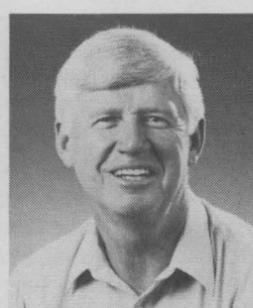
David Stout
20 7432



David Turner
15 9352



Steven Shope
25 9521



David Powers
30 9742



Peggy Morris
15 7846



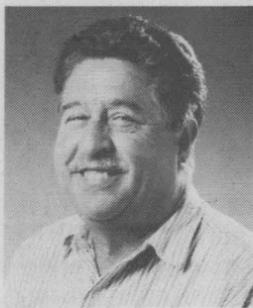
Tony Cordova
20 1481



Willie Doyeto
20 7844



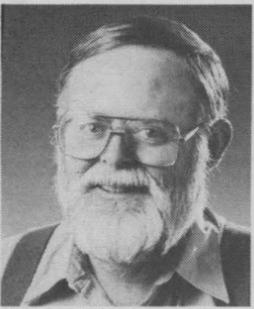
Dorothy Brockman
20 7002



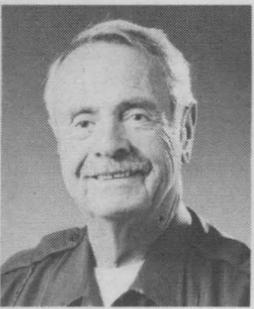
Gilbert Maestes
15 10268



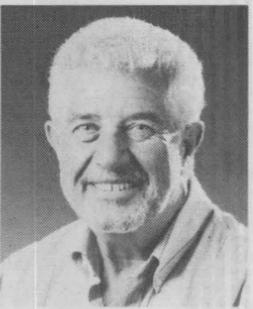
Jean Lopez
20 3335



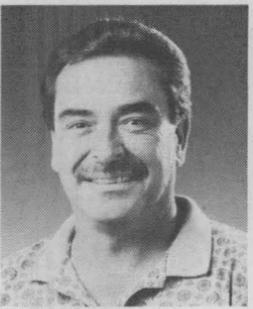
Thomas Merewether
15 14405



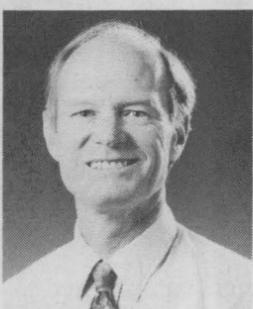
Jacob Aragon
45 7435



Larry Wilhelm
40 4913



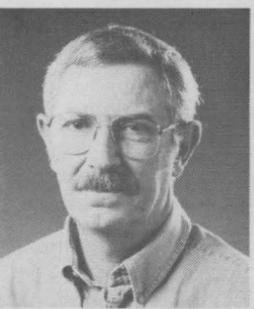
Jim Salas
25 1552



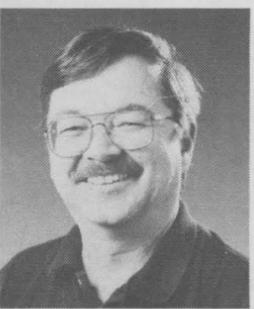
Ron Lipinski
20 6442



Richard Westfall
20 9342



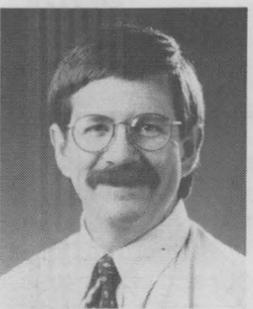
Arthur Verardo
20 9707



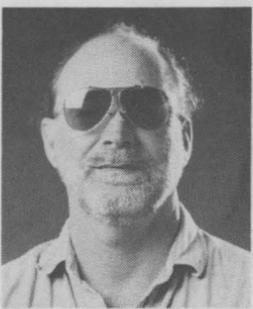
Michael Stark
20 9577



Gilbert Vega
20 7843



Riley Kilgo
15 1251



Michael Taylor
15 2314



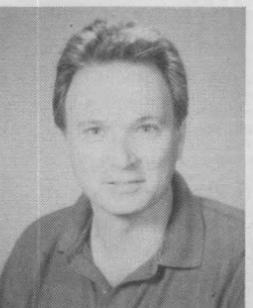
Cathleen Ann Reber
15 1333



James Kobs
35 5717



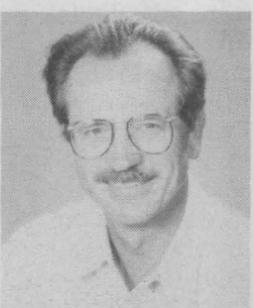
Jerry Hargiss
15 8210



Gary Shamber
15 8511



Bob Bastasz
20 8716



Anton West
25 8240



Laurie Farren
20 8816

Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads

MISCELLANEOUS

- EXTREMELY LARGE YELLOW LAB CROSS, neutered male, very friendly, free to good home. Casbourne, 268-3942.
- RUSSIAN MAKAROV .380 automatic pistol with 3 magazines, holster, trigger job, excellent condition, \$210. Montoya, 296-4268, before 9 p.m.
- IBM PS/2 PROCESSOR, model P70386, 14MB RAM, 120MB HD, great computer for beginners. Lindsey, 291-5485.
- CAMERA LENSES & FILTERS, assorted pieces from very old cameras, telephoto lens for Minolta Talker, all free. Duncan, 271-2718.
- LLOYDS STEREO, w/receiver/tape deck, phonograph, & 2 speakers, \$30; RCA stereo receiver, double tape deck, CD, equalizer, speakers, \$100. Dwyer, 271-1328.
- FIREPLACE TOOLS, brass-colored w/marble handles, almost brand-new, paid \$45, asking \$20. Vigil, 271-1328.
- BABY CRIB & DRESSING TABLE, \$225; portable crib, \$50; more; all excellent condition. Gardner, 296-0274, after 6 p.m., leave message.
- VENDING MACHINES, Tic-Tac breath mints, good weekend or retiree income, 22 brand-new, low maintenance. Garcia, 857-9171.
- WATERBED, queen-size, frame, heater, pad, 2 sets sheets, \$60; Ab-Flex, \$10; HealthRider, \$100. Roehrig, 281-2695.
- THOROUGHbred MARE, available for half lease, intelligent, gentle 6-yr.-old, needs experienced, confident, & gentle English rider, \$75/mo. Baldo-Pulaski, 345-0432.
- WASHER & ELECTRIC DRYER, Speed Queen, matched set, tan, large size, good condition, \$350/both. Lyons, 281-9283.
- HOME THEATER, 41-in. projection TV, 200W Dolby A/V receiver, 5 excellent speakers, \$1,300 OBO. Campbell, 296-8304.
- DAISY-WHEEL COMPUTER PRINTER, Juki 6300 (Diablo clone), parallel, 30 CPS, tractor & cut sheet feeders, many printwheels, \$50. Weber, 275-3719.
- GASOLINE BLOWER, Sears, quit running, \$10. DiPrima, 275-3479.
- WELDER, Montgomery Ward 295-amp AC, complete w/cables & mask, \$110. Mayes, 821-0698.
- GOLF CLUBS, 2-PW, metal driver, \$40; oversized titanium driver, graphite shaft, \$35; electronic brake controller, for trailer, Tekonsha Commander, \$45; dishwasher, \$30. Platzbecker, 299-6096.
- BAR STOOLS, 25-in. high, swivel, wooden base, upholstered seat, \$40; motorcycle jacket, new, size 38, \$100. Malcomb, 294-6975.
- LITTLE TYKES CAR BED, \$50; baby crib, \$50; new candy vending machine, \$200. Schneider, 237-2742.
- CAMPER SHELL, fiberglass, fits long-wide box, excellent condition, \$295 OBO. Schaub, 865-8807, evenings.
- MACINTOSH PERFORMA 6300CD POWER PC, 1.2GB, 8MB RAM, 125-MHz, CD-ROM, monitor, LaserWriter, Microsoft Office, Adobe Illustrator, \$1,100. Gruebel, 332-9216.
- NORDICTRACK PRO, excellent condition, w/video, \$300. Kupferman, 265-7224, after 6 p.m.
- SEGA PICO COMPUTER, w/5 software story/game boards, excellent educational tool, \$100. Maurer, 294-5128.
- ELECTRIC GUITAR, Ibanez "Silver Cadet," white, w/gig bag, Crate GX-15 amplifier; both like new, \$250. Drotning, 821-9598.
- WASHER/DRYER, apartment-size, Whirlpool, \$150. Johnson, 255-8834.
- QUEEN-SIZE BED, extra firm, excellent condition, HD frame, 3 yrs. old, \$300 cash. Sturgeon, 281-9035.
- CHROME CRAFT DINETTE SET, wood/chrome, 42-in. diameter, w/additional 16-in. leaf & 4 swivel chairs w/casters, \$180. Kawka, 823-1570.
- BAND SAW, metal-cutting, Kalamazoo model 7A, w/manual, used little, list price \$2,795, asking \$1,395. Bazar, 898-1467.
- TAPPAN RANGE, w/top & bottom oven; microwave oven; both good condition. Chavez, 298-1649.
- NISHIKI TOURING BIKE, 15-spd., 18-in. frame, \$135; receiver hitch for '85 Ford Ranger or Mazda body style, \$75; metal tool box, \$50 OBO. Hanes, 292-6512.
- NINTENDO 64, 1 controller, 3 games, \$250. Ek, 291-8069.
- DAY BED, white enamel iron, w/trundle, decorative ceramic spindled corners, almost new, see to appreciate, \$450. Strascina, 294-0305.
- EPSON PRINTER 286, 9-pin, wide carriage, money-back guarantee, \$25. Dietzel, 294-4702.
- POOL TABLE LIGHT FIXTURE, 4-ft., Bud Light bottle on ice, \$275 OBO; hard-shell saddle bags, for BMW motorcycle, \$300 OBO; truck shell, \$150 OBO. Pierson, 293-9133.
- DUCKS UNLIMITED 1997, special edition, Browning DPS 12-gauge, 2-3/4-in. & 3-in., locking hard case, \$875. Bottomly, 835-2190.
- AMIGO WHEELCHAIR, good condition, battery charger but needs new battery, \$500 OBO. Taggart, 881-3864.
- TWO EXERCYCLES, Tunturi Executive Ergometer, like new, \$150; Westlo Aero 750 dual-action arms, \$50. McGirk, 884-4592.
- BABY SWING, practically new; 10-spd. bike, Free-Spirit, \$40 ea., Chavez, 842-6374, after 6 p.m., leave message.
- CREAM COUCH, w/bolsters, like new; waterbed, king-size, complete. Griffin, 294-5702, ask for Rose.
- FREEZER, 14-cu. ft., upright, \$250 OBO; bike, 24-in., 5-spd., \$75 OBO. Reed, 275-2980.
- GIUITAR, Epiphone, Joe Pass Emperor, cherry sunburst, pretty wood & inlay, gold hardware, rarely played, w/hard-shell case, \$500. Calderone, 291-9484.
- THOMPSON IN-LINE MUZZLELOADER RIFLE, ThunderHawk 54 caliber, new in box, never fired, drilled for scope & adjustable trigger, accessories, \$250. Miller, 292-5634.
- LABRADOR PUPS, whelped 9/20, champion bloodlines, dew claws, first shots, black, 2 females, \$300/ea., 1 male, \$275. Ortiz, 286-2007, ask for David or Martha.
- HAIRPIECE, 12-in. long, brown, made of human hair, on weft base; another 5-in. long. Wagner, 823-9323.
- COLT SA, .45-caliber, Missouri commemorative, \$1,250; Walther P4, 9mm, w/2 magazines, \$350. Roth, 248-1940.
- HOLIDAY ARTS AND CRAFTS BAZAAR, Cleveland Middle School, Sat., Nov. 8, 9 a.m.-4 p.m., 6910 Natalie NE (near corner of Louisiana & Montgomery). Edgar, 884-8567.
- FIBERGLASS CAMPER SHELL, Brahma, navy blue, fits short-bed Toyota, \$100 OBO. Estill, 883-1531.
- CRAFT FAIR, "Holly Days," Sat., Nov. 15, 9 a.m.-4 p.m., Grace Church, San Antonio at Louisiana NE. Parma, 296-7959.
- COMPUTER PRINTER & MODEM, Epson dot-matrix printer, \$25; internal modem, 14.4kps, \$70; external modem, \$1. Forster, 293-7231.
- LA-Z-BOY RECLINER, excellent condition, blue, \$125. Luikens, 881-1382.
- GIUITARS, Epiphone Emperor & Sheraton, w/hard cases, 25W amp, one antique acoustic, like new. Carson, 858-1460.
- GE ELECTRIC KITCHEN RANGE, self-cleaning oven, white; Litton above-range microwave oven; drapery rods. Schamann, 298-5192.
- EXERCYCLE, Tunturi Ergometer, \$65; dry-erase colored marker "blackboard," 4' x 6', \$20; 3' x 6' Formica-top conference table, \$35. Sparks, 266-5060.
- DINING ROOM SUITE, hutch, beveled glass, 8 gold upholstered chairs, table w/2 leaves, \$1,500 OBO. Carrillo, 296-7461.
- QUILT & CRAFT BAZAAR, New Mexico Quilter's Association, 10 a.m.-6 p.m. Nov. 7, 10 a.m.-4 p.m., Nov. 8, Albuquerque Garden Center (10120 Lomas NE). Fuerschbach, 281-2978.
- NORDICTRACK, Sequoia model, excellent condition, \$225 OBO. Beeson, 821-8393.
- DOUBLE RACING STROLLER, all accessories, \$300; Gerry double-guard booster seat, \$20; Graco swing, \$20; other baby items. Stone, 298-3341.
- MOUNTAIN BIKE, Huffy, 19-in., \$40; 19-in. GE color TV, \$30; 70-watt speakers w/stands, \$45/set. Pena, 271-5222.
- SUPER-SINGLE WATERBED, oak headboard w/shelves, \$175; dresser & desk w/hutch, \$250; upright freezer, 13.5 cu. ft., \$75; all OBO. Jenison, 856-3435.
- MARCY EXERCISE MACHINE, 150-pound weight set, butterfly, all accessories, new condition, will help move, \$300. Brosseau, 286-1969.
- OAK DINING ROOM TABLE, 6 chairs, 2 leaves, coffee table, end table, curio cabinet, all matching, Laughead Gordon piano. Keagy, 899-1439.

DEADLINE: Friday noon before week of publication unless changed by holiday. MAIL to Dept. 12640, MS 0165, FAX to 844-0645, or bring to Bldg. 811 lobby. You may also send ads by e-mail to Nancy Campanozzi (nrcampa@sandia.gov). Call Nancy at 844-7522 with questions. Because of space constraints, ads will be printed on a first-come basis.

Ad Rules

1. Limit 18 words, including last name and home phone (We will edit longer ads).
2. Include organization and full name with the ad submission.
3. No phone-ins.
4. Use 8 1/2" by 11-inch paper.
5. Type or print ad; use accepted abbreviations.
6. One ad per issue.
7. We will not run the same ad more than twice.
8. No "for rent" ads except for employees on temporary assignment.
9. No commercial ads.
10. For active and retired Sandians and DOE employees.
11. Housing listed for sale is available without regard to race, creed, color, or national origin.
12. "Work Wanted" ads limited to student-aged children of employees.

TRANSPORTATION

- '70 FORD BRONCO, V8, 4WD, uncut fenders, many original accessories, great shape, needs paint job, \$3,500. Winter, 831-9699.
- '87 MERCURY GRAND MARQUIS, well maintained, very good condition, \$3,000. Bertsch, 873-0925.
- '66 MUSTANG, straight 6 engine, newly rebuilt w/warranty, rebuilt transmission, almost fully restored, nice, \$5,500 OBO. Tafoya, 873-8077.
- '96 ACURA INTEGRA LS, full warranty, 29K miles, 31-mpg, tinted, keyless entry, AT, AC, PW, loaded, pampered, excellent. Ragland, 864-1388.
- '92 FORD F150, ext. cab, 4.9L 6-cyl., bench seat rear, AC, 5-spd., manual transmission, trailer tow pkg., 53K miles. Boultinghouse, 281-1777.
- '88 TOYOTA PICKUP, 4x4, excellent condition, 49K miles on new V6 motor, alloy wheels, sliding rear window, \$6,100. Martinez, 821-7467.
- '86 TOYOTA CELICA GTS, hatchback, 5-spd., PW, PL, sunroof, 103K miles, 1 owner, \$2,750 OBO. Henderson, 858-1321.
- '86 VOLVO 740 TURBO WAGON, AT, AC, PW, PL, sunroof, cruise, good condition, \$4,750 OBO. Parks, 296-2696.
- '87 NISSAN PULSAR NX, good condition, gray exterior & black interior, \$2,000. Giersch, 897-0229.
- '91 MITSUBISHI GALANT LS, loaded, AC, AT, PS, PW, PL, power sunroof, cruise, AM/FM cassette, excellent condition, 77K miles, \$5,900. Pike, 866-5899.
- '93 CHEV. CORSICA LT, excellent condition, V6, AT, AC, ABS, air bag, low 46K miles, \$6,000 OBO. St. John, 256-1841.
- '94 FORD F150, extended cab, w/camper shell, 6 cyl., 5-spd., 1 owner, very clean, \$12,900. Serna, 897-3204, ask for Mike.
- '93 TOYOTA PREVIA LE, All Track, excellent condition, very low mileage, transferable extended warranty, fully loaded, \$18,900. Skroch, 899-4471.
- '93 FORD TEMPO, ST, AC, AM/FM, very clean, 55K mileage, \$4,800. Rhodes, 892-2158.
- '95 TOYOTA TACOMA, 4x2, extended cab, 4-cyl., PS, cruise, tilt, AC, air bags, loaded, 18K miles, factory warranty, \$12,800. Aragon, 888-3473.
- '95 FORD F250, 4WD, PS, PB, 460 V8, 5-spd., AC, cruise, bedliner, ABS, \$15,900. Starkweather, 268-1182.
- '95 FORD XLT, 46,500 miles; Jayco 9-ft. camper, sleeps 4, AC, AT; both excellent condition. Barbera, 275-2562.
- '85 CORVETTE, black w/gray leather, garaged, Bose stereo, maintenance record, shop manual, 53K miles, \$10,900. Dybwad, 296-9047.
- '86 PONTIAC GRAND AM, AT, AC, cruise, AM/FM cassette, good interior, 72K miles, \$2,800. Hernandez, 242-5552.
- '91 PLYMOUTH GRAND VOYAGER LE, 3.3L V6, AT, loaded, power everything, towing pkg., 69K miles, well maintained & very nice, \$6,950. Molecule, 296-5850.
- '92 PONTIAC GRAND PRIX, 2-dr., V6, 5-spd., clean, sharp looking car. Richards, 281-9471.
- '96 FORD MUSTANG, 20K miles, AT, V6, AC, AM/FM cassette, excellent condition. Strauch, 831-4766.
- '94 MERCURY TOPAZ, 2-dr., manual transmission, 53,250 miles, \$6,000 OBO. Harstad, 298-6551.
- '89 OLDS CUSTOM CRUISER STATION-WAGON, white, 1 owner, clean, excellent condition, 98K miles, \$4,500 firm. Graham, 865-9427.
- '91 SAAB 9000CD, 4-dr., AT, power, leather, sunroof, excellent condition, regular maintenance, low mileage, \$8,195 OBO. Kraft, 797-9700.
- '93 FORD EXPLORER XLT, 4x4, 4-dr., CD, alarm, excellent condition. Kincaid, 296-6014.
- '83 CADILLAC DEVILLE, 4-dr., excellent interior & exterior, mechanically sound, must see to appreciate. Keiss, 299-3312.
- '94 FORD EXPLORER, Eddie Bauer, 4x4, fully loaded, excellent condition, 50K miles, extended warranty, \$18,174 book value, sell for \$16,500. Bragg, 275-3172.
- '95 JEEP WRANGLER, 4-cyl., 5-spd., white, hard/soft tops, one owner, maintenance records, trunk, console, extras, \$12,000 OBO. Caskey, 286-0540.
- '84 MERCURY MARQUIS, white, 4-dr., clean, runs well, passes emissions test, cold air, 86K miles, \$980. Trudell, 822-0602.
- '90 HYUNDAI EXCEL, 4-spd., 1 owner, excellent inside & out, garaged. Saavedra, 836-1647.
- '92 FORD BRONCO XLT, 302 V8, 52K miles, AT, PS, PB, many extras, extended warranty, \$14,000. Pritchard, 299-3543.
- '91 HONDA GOLD WING, low mileage, like new, must sell, \$7,000 OBO. Garcia, 294-6420.
- '91 FORD EXPLORER XLT, 4x4, AT, 4.0 V6, all power, 4-dr., on base lot, \$9,500. Padilla, 281-9550 or 450-7597.
- '96 WINDSTAR VAN, 12K miles, 3.8L, front/rear AC, PW, PL, AM/FM cassette, 80K miles, 72-month warranty, \$17,500 OBO. Garrett, 856-6191.
- '93 FORD TAURUS GL, 3.8L V6, PL, PW, PS, AC, cruise, leather, 58K miles, \$7,200. Griego, 299-4077.

RECREATIONAL

- THULE SKIS/BICYCLE RACK, locks to existing luggage rack, locks for skis & bicycles, \$80. Ayers, 888-8922.
- '86 DODGE RAM MAXI VAN B250, 8-cyl., 5.9L, AT, conversion pkg., low 70K miles, 4 captain's chairs, queen-size bed, dual AC, \$5,350. Loubriel, 268-1341.
- ONE-FIFTH SHARE IN '62 BARON, 200 mph. Lorenz, 281-9321 or 281-1909.
- '93 COLEMAN POP-UP TRAILER, 22-1/2 ft., sleeps 6, excellent condition, \$3,700. Miera, 865-8208 or 897-3204, evenings, Anna or Mike.
- TWO DALLAS COWBOY TICKETS, Nov. 16 game, against Redskins, Section 120, \$100/both. Dickman, 823-6670, ask for Karl.
- AMERICAN AIRLINE VOUCHER, must use by March 5, 1998, for \$293, will sell for \$250. Holmes, 292-0898.
- MAN'S SCHWINN BICYCLE, "Le Tour," 10-spd., w/accessories, \$135; ancient electronic equipment. Brice, 345-4827.
- SAILBOAT, 25-ft. MacGregor, 4 sails, 9.9-hp O/B, sleeps 5, trailer, electronic steering, many extras, \$4,800. Brandvold, 296-4394.
- SKI EQUIPMENT, 2 sets w/skis, bindings, poles, woman's boots size 6-1/2, adjustable ski rack, best offer. Fromm-Lewis, 291-8181.
- SOUTHWEST AIR ROUNDTRIP COUPON, any continental U.S. destination, by Jan. 8, 1998, \$200 OBO. Ontiveros, 294-2406.
- '93 PACE ARROW MOTORHOME, 35-ft., side aisle, loaded, like new, low mileage, excellent in/out. Hoffheins, 994-2588.
- PAGOSA SPRINGS TIMESHARE, week of Nov. 23-29, 1 bedroom, sleeps 4, kitchen/laundry, pool/gym on site, shuttle to Wolf Creek. Tremli, 823-2990.

'83 COLEMAN, 11-ft. fiberglass Crowdad, 17-lb. electric-thrust motor, 2 oars, 2 seats, \$250. Gehrke, 299-2817.

REAL ESTATE

- 4-BDR. HOME, 2-1/2 baths, NW side, Ventana Ranch development, 2-story, fireplace, sprinkler/drip irrigation, premium lot, 6 months new, must sell. Nichols, 899-8532.
- 3 BDR. HOME, Towne Park, near base, 2 baths, pools, clubhouse, parks, security, \$114,000. Lucero, 296-2473.
- 2-BDR. HOME, remodeled kitchen & bath, hardwood floors, oversized fenced backyard, nice neighborhood, Menaul/Washington, \$82,500. German, 883-7002.
- 4-BDR. HOME, 2 baths, large kitchen, 2 fireplaces, 2-car garage, 2,000 sq. ft., 5 minutes to Sandia. Parr, 292-5019.
- 3-BDR. HOME, 2 baths, w/appliances, 2-car garage, 1,250 sq. ft., Rio Rancho area, \$105,000. Hedge, 896-7991.
- 3-BDR. HOME, newly remodeled, 1-3/4 baths, large living room, formal dining room, beautiful kitchen, new flooring, La Cueva school district, 1,900 sq. ft., \$159,000. Miller, 828-2708.
- 3-BDR. HOME, 2 baths, large den & living room, irrigation well, nice yard, Belen, \$94,900. Garcia, 872-9511.
- QUARTER-ACRE LOTS, at Tome, \$1,500 to \$2,000; new green-chile roaster, \$300. Sanchez, 873-4281 or 873-1751.
- 2-BDR. MOBILE HOME, 14 x 60, '87, 1 bath, appliances, AC, skirting, \$9,000 OBO. Padilla, 831-9257.
- 3,200-SQ.-FT. HOUSE, 10 fenced acres, much more, 20 miles from Quemado, N.M., fabulous area. Olivias, 877-1226.

WANTED

- SET OF (70) AUDIOTAPES, *Great Minds of the Western Intellectual Tradition*, to borrow/buy. Rockwell, 884-4206.
- TABLE SAW, 10-in., w/belt drive & casters. Drotning, 821-9598.
- COMPUTER & PRINTER DONATION, for Native American missions outreach, any equipment resource appreciated. Freeman, 268-6235.
- SINGER FEATHERWEIGHT SEWING MACHINE, with case. Carpenter, 256-0614.
- OVERHEAD PROJECTOR. Monnet, 865-7941.
- HOUSEMATE, large home near Candelaria/Tramway, \$500/month including utilities. Widler, 294-4263.
- VAN POOL, from Belen to Sandia Labs or Kirtland, need 3 more riders. Santistean, 864-4647, pager, 845-0142, ID #2713.
- UPRIGHT BASS (3/4-size), to borrow or reasonably rent for remainder of high school orchestra year. Mahoney, 842-5140.
- '68-'71 CORVETTE, prefer big block, 4-spd., but will consider all. Kureczko, 281-8206.
- HOUSEMATE, female, to share 2-bdr./2-bath home, east of Tramway, non-smoker/drinker, \$300 month, half of utilities. Servis, 865-7629.
- HOUSESITTING, mature, responsible individual seeks long-term housesitting position, references available upon request. Baca, 237-9312.
- ROOMMATE, to share 4-bdr. home near Menaul/Juan Tabo. Plummer, 299-5299, after 6 p.m.

LOST & FOUND

- LOST: One Ford car key & remote control, Gate 10 parking lot. Donaworth, 845-8480.
- FOUND: Woman's gray sweater, parking lot behind Medical & Benefits, Oct. 21. Chenoweth, 845-9126.
- FOUND: Woman's bracelet, in Sept., Bldg. 962 restroom off main auditorium, must belong to someone attending meeting in Area 4. Walker, 845-7010, ask for Vicki.
- FOUND: Woman's Napier gold twisted-roped bracelet, Bldg. 800 parking lot. Sorenson, 844-2312.
- FOUND: 2 necklaces, southwest end of parking lot in front of Bldg. 878, claim at reception desk in Bldg. 878. Benton, 844-9839.
- FOUND: Parker mechanical pencil, found in Bldg. 821. Lewis, 844-7641.

National Atomic Museum to begin charging admission Dec. 15

Last fall the National Atomic Museum got a makeover, with remodeled exhibit space and revamped displays that put US nuclear history into context with societal events.

Now as part of its campaign to offer its visitors bigger and better exhibits about the United States' nuclear journey, the museum plans to begin charging admission. Beginning Dec. 15 adult visitors to the museum will pay \$2 and children, senior citizens, and current military personnel will pay \$1. (Special rates are available for groups when the visits are prearranged with the museum staff. Prearranged student tours are still free.)

Current DOE and Sandia employees are admitted free when they present their badges at the door.

"We have big plans for our museum to become one of the nation's premier science and technology museums," says National Atomic Museum Director Jim Walther (12660). "But to fulfill that dream, we'll need to generate some additional revenue."

Until now, the National Atomic Museum has been one of very few museums in the country that didn't charge admission; it has depended on store sales, foundation memberships, visitor donations, and annual line-item funding from DOE and Sandia, he says.

The museum's long-term goals include gradually becoming less reliant on its federal subsidy while expanding the breadth, content, and educational value of its exhibits to encompass science and technology in general, Jim says.

The current prices of admission are set below levels suggested recently by participants in a series of focus groups conducted by Research Polling Inc. of Albuquerque, who said they would pay \$3 to \$5 to be admitted based on what the museum now offers. The admission fees may rise some depending on the initial response, says Jim.

"Even with the fees, this is still the best entertainment value around," he says.

Foundation memberships are available to Sandians who frequent the museum. With membership comes a subscription to the museum's newsletter and invitations to special events and exhibit openings. Inquire at the museum store for membership fees (284-3242). —John German

Sandia News Briefs

Jim Chavez of Solar Thermal Test Dept. wins national award

Jim Chavez, Manager of Solar Thermal Test Dept. 6215, has been named a winner in *Hispanic Engineer* magazine's 1997 Hispanic Engineer National Achievement Award Conference (HENAAC) program. Jim earned his award in the "Professional Achievement — National Laboratories" category. The awards program honors "the best and brightest of our nation's Hispanic engineers and scientists." Winners in each category are determined by an independent selection committee hosted by Rice University. Jim and the other winners accepted their awards Oct. 11 during ceremonies in Houston, Texas. Lockheed Martin engineer W. Carl Martinez was an award winner in the "Professional Achievement — Industry" category.

Coronado Club

Nov. 6, 13, 20 — Thursday bingo night. Card sales and buffet start at 5 p.m., early birds' bingo at 6:45 p.m.

Nov. 14 — Kids bingo. Buffet, 5-8 p.m.; cartoons, 5-7 p.m.; bingo, 7 p.m.

Nov. 7 — "Western Night" dinner/dance. All-you-can-eat buffet, 6-9 p.m. Music by Isleta Poor Boys, 7-11 p.m.

Nov. 16 — Sunday buffet, 10 a.m. - 1 p.m. Music by Swingshift, 1-4 p.m.

Nov. 27 — Thanksgiving Day dinner buffet. 11 a.m. and 1 p.m. seatings. Reservations required (265-6791).

Media coverage highlighted in new display



NEWS FROM ALL AROUND — Newspaper and magazine readers throughout the country and around the world are getting more chances these days to learn about Sandia, and now you'll get a chance to see what they're seeing. Just drop by the new "Sandia in the News" display board in the lobby of Bldg. 802. Here, Iris Aboytes (12640), who's in charge of choosing the displayed clips, pins up some recent Sandia news releases, which also go on the board. (Photo by Randy Montoya)

American Indian Heritage Month activities

November is American Indian Heritage Month. Sandians are invited to the following activities on Kirtland Air Force Base (KAFB) sponsored by Sandia's American Indian Outreach Committee, DOE/AL, and KAFB:

- Student day, Nov. 12, all day — Sam Cata, a motivational speaker from San Juan Pueblo, will address Albuquerque-area Native American students at the KAFB Wing Presentation Center and challenge them to continue their educations past high school. The students will then go to the National Atomic Museum, where they will hear award-winning film producer Leena Carr, who produced the National Geographic documentary film "War Code: Navajo," speak about the Navajo code talkers, the making of "War Code," and her life as a producer of several documentary films relating the Navajo experience. Call the museum

for times.

- Photo exhibit, all month, National Atomic Museum — Photographer Kenji Kawano's popular traveling photo exhibit, "Warriors: Navajo Code Talkers," returns to the National Atomic Museum for the month of November.

- American Indian Heritage Month luncheon, Nov. 17, 11 a.m. - 1 p.m., KAFB Officers Club — Story teller Ernie Dogwolf Lovato will provide entertainment, followed by keynote speaker Joe Aragon, a math and physics teacher at Laguna-Acoma High School. Tickets available through Nov. 13 (\$8); contact Gloria Atencio at 844-2966 or Mary Montoya at 844-3752.

- Indian arts and crafts displays, all month, Coronado Club, provided by the Indian Pueblo Cultural Center.

Feedback

Labs encourages, rewards employee involvement in professional associations

Q: Are we at the present time promoting Sandia employee involvement in professional societies and encouraging nomination of deserving employees for national and international awards? Are we rewarding employees who are recognized by their professional peers while continuing to demonstrate excellence in their job performances?

A: Question 1: Yes, we are actively promoting employee involvement in major professional societies. During the past year, we had a specific corporate goal to increase employee involvement in major national science and technology leadership activities, with participation in professional science and engineering societies relevant to Sandia being an important part of that strategy. [See related story on page 8.]

We are also encouraging nomination of deserving employees for national and international awards. Such nominations are best carried out across the laboratories by management and colleagues on a center-by-center basis where the most compelling cases can be made. It is important for all of us to take the time to nominate our deserving colleagues. Not only is it very rewarding when the nominations are successful, but it also is greatly

appreciated by colleagues just to have one's contributions recognized as worthy of nomination.

Question 2: Yes, we are rewarding employees who, due to their achievements, have been recognized by their professional peers while continuing to demonstrate excellence in their job performance. One of the ways we recognized such achievements was through a corporate-wide selection team this past summer. The team developed a set of criteria, put out a call to all organizations, and selected a group of employees who were recognized for their exceptional technical or professional contributions of the past year. These employees were honored at a luncheon with all of Sandia's senior leadership (director through president) in a special ceremony in August. Other ways of recognizing these achievements are through announcements in the *Lab News*, the *Daily News*, news releases, postings on Sandia's Web, and through local recognition such as center SAFE awards and celebrations. These activities are important to Sandia and to all our employees.

I would welcome further suggestions for promoting employee involvement and recognizing their achievements. —Tom Picraux (1100)