

# Sandia expertise, experience key factors in newly dedicated Solar Two power tower

Central receiver system using Sandia-developed molten-salt technology supplies power to grid

By Chris Miller

Lab News Staff

When Sandia solar engineers Dan Alpert (8301), Jim Chavez (6215), and Greg Kolb (6216) scheduled a meeting with Southern California Edison officials in January 1991 to discuss a major new solar project, never did they imagine how fortuitous their timing would be.

What occurred in the meantime was Operation Desert Storm, the US-led effort to oust Iraqi forces from Kuwait. The actions of Iraqi President Saddam Hussein had sent gasoline prices spiraling upward, and utility companies such as Southern California Edison were quickly looking to develop alternative energy resources.

What the Sandians came to discuss was the conversion of a 300-ft solar tower in California's Mojave Desert to a molten-salt system, a technology Sandia researchers were proving to be a reliable and efficient way to produce and store large quantities of solar energy. Such a system represented a giant step in the field of solar energy because it could generate electricity when needed, including on cloudy days and even long into the night. The tower's previous water/steam system, known as Solar One, had operated successfully from 1982 to 1988, but its inability to store energy efficiently meant it was not practical to operate the sys-



DEPARTMENT OF ENERGY Secretary Hazel O'Leary radios instructions to fire up the Solar Two power plant at its recent dedication near Barstow, Calif. O'Leary told reporters covering the event that Solar Two represents DOE "using its national laboratories to develop unique solutions." (Photo by Randy Montoya)

tem on cloudy days or after nightfall.

With the help of propitious timing, DOE buy-in, and a generous Southern California Edison-led utility/industry consortium, Sandia lent its technical expertise to create Solar Two.

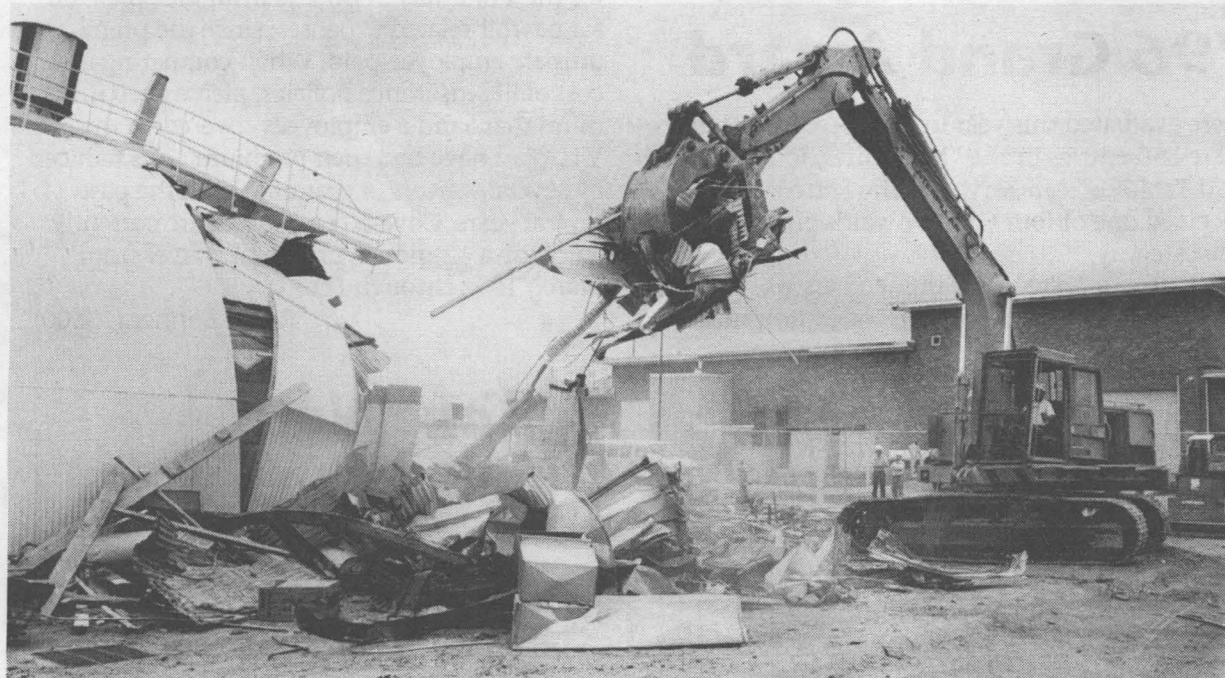
Located about 10 miles from Barstow, Calif., the plant can produce 10 megawatts of electricity, enough power to supply 10,000 homes. DOE Secretary Hazel O'Leary presided over the

(Continued on page 6)

## Sandia National Laboratories Sandia LabNews

Vol. 48, No. 13

June 21, 1996



QUICK END — One of Sandia's oldest buildings, a Quonset-style hut otherwise known as Bldg. 844, succumbs to the efficient grip of a wrecking machine last week. The building, in the northeast part of Area 1, was erected in either 1946 or 1947, says Paul Silva (7904), and is one of Sandia's original buildings. In its half-century of use, it was occupied by many different groups. Paul says it is one of about half a dozen old, obsolete buildings in Area 1 taken down in the past two years by Facilities Center 7900. He says the cost of maintaining or refurbishing them far exceeds the cost of removal. There is one more Quonset hut in this row to be taken down, and then all will be gone, he says. The area will be cleared and left open. (Photo by Mark Poulsen)

## Sandia makes TIGER computer code 300 times faster

By Neal Singer

Lab News Staff

A Sandia computer program revised to function up to 300 times faster — the better to simulate radiation effects of nuclear explosions — has improved the capability for more precise radiation treatment for cancer patients.

The sped-up program, which makes possible the use of a complex statistical method, also should improve analyses of nuclear reactor safety and of the vulnerability of orbiting satellites to radiation from the Van Allen radiation belts in space, as well as aid in detecting military landmines.

Electron-beam welding and high-temperature ceramic joining are among other processes that should benefit from the advance.

Sandia computational scientist Greg Valdez of Simulation Technology Research Dept. 9341 modified a Sandia program intended to run on a single computer so that it distributes work among a number of computers working simultaneously toward a solution, a method called parallel processing.

The program he adapted is the Integrated Tiger Series (ITS), available publicly since 1985.

The complex statistical method is called Monte Carlo electron-photon transport, the most effective tool to simulate the interaction of radiation — composed of billions upon billions of particles — with complex

(Continued on page 5)

First-ever forum on atomic-scale modeling gets down to business 3

SQLC seeks managers' input on Labs' new strategic objectives 4



9 New central point mail delivery approach makes the rounds

12 Cactus drama continues . . . Portion of cactus transplanted

# This & That

**Sandia super savers** - We're starting to approach the billion-buck mark in the company 401K savings plans. As of April 30, about \$907 million was credited to our (employee and retiree) accounts. This is up from \$733 million about 13 months earlier (big increase due in large part to the bullish stock market). A total of 9,360 folks participated as of April 30, meaning that each participant's account averages about \$97,000. (My \$147.16 account brings down the average a bit.)

The largest amount (23 percent) of the \$907 million is invested in the Interest Income Fund, but many Sandians are opting for stocks and stock funds, hoping to grow their savings faster. Here are the remaining funds/portfolios and percentages of the total: Contrafund, 20; AT&T Shares Fund, 16; Growth & Income, 15; US Equity Index Commingled Pool, 9; Balanced, 8; Institutional Short-Intermediate Government Portfolio, 8; and Lockheed Martin Company Common Stock Fund, 1. (Sandians can't invest new contributions in the AT&T Shares Fund; that option ceased several years ago when the new Savings Plan was started, and plan participants must move out of this fund by June 1, 1998.)

For more information about the savings plans, call Project Manager Rebecca Spires at 844-9965 or Administrator Dave Medina at 844-0997.

\* \* \*

**Barry blows prediction** - My colleague Barry Schrader (8802) took a little ribbing for this headline he printed above a story in a recent issue of Sandia/California's newsletter, *The Communicator*: "Earthquake scheduled at Sandia June 4th." Barry left out one small, but important, word: "drill." This is such a fun business!

\* \* \*

**"Pet positives," anyone?** - Several months ago, I encouraged readers to send in their pet peeves about Sandia. Many did, and I printed most of them. But there's also a lot to like about this place. Here are a few things I enjoy about working here:

- We call our company kingpins and colleagues alike by their first names instead of Dr. Robinson, Dr. No, Mr. Dithers, Miss Manners, etc. In this case, I think familiarity breeds respect.

- I like working with bright and hard-working people, many of whom often come early and stay late just because they enjoy what they're doing. (Some folks come early and stay late simply because they have too much to do, and they deserve much credit for that, too.)

- Despite our shrinking budget, Sandia does the finest engineering and science R&D in the world. I'm proud to say I work here.

I don't want to sound like the company cheerleader (my skirt hasn't fit since high school), but I'd like to hear some of your "pet positives." Submit them with your names or anonymously if you prefer.

- Larry Perrine (845-8511, MS 0129, [lgperri@sandia.gov](mailto:lgperri@sandia.gov))

## Feedback

**Q:** The cost of Group Life Insurance becomes more expensive with age. Why not use Universal Life Insurance policies instead? In addition to providing low-cost life insurance, it offers the employee an opportunity to also "save." I have a Universal Life policy that I took out at age 43 for \$100,000. My premium is only \$75/quarter. And I can put more into the account as a savings account. The value of the policy has increased over time as well. It would seem that such policies could lower the cost to Sandia and provide another savings method for employees.

**A:** You are correct when you say that the premiums paid by employees enrolled in Sandia's Voluntary Term Life (VTL) insurance increase with the employee's age. (The premiums paid by Sandia for the Basic and Basic Supplemental Group Term Life Insurance policies are not age-related but are based on blended rates incorporating the ages of all covered employees and past claims experience.) However, this same principle applies to most universal life insurance policies. Typically, the premium charged to an employee for a universal life insurance policy is used for two purposes — to purchase term life insurance coverage and to invest in the policy's investment side fund. The level premium charged to the policy owner is allocated between the life insurance coverage and the investment account in different ways at different ages. For example, at age 30 the cost of the life insurance coverage will be relatively low, and a relatively larger percentage of the premium will be allocated to the investment account. However, by age 50, the cost of the life insurance will have increased, and a smaller percentage of the premium dollars will be invested in the side fund. Any premium allocated to a universal life policy's investment account is contributed on an after-tax basis. As an alternative investment, employees can save up to 16 percent of their income (limited to \$9,500 for 1996) on a pre-tax basis in the Sandia savings plans. The only costs incurred by Sandia for the Voluntary Term Life insurance plan are for payroll-related expenses, since the premiums are employee-paid. When comparing the cost of life insurance policies, please keep in mind that Sandia employees covered by the VTL plan have had their premium costs reduced by several waivers of premium over the past several years. Covered employees are currently enjoying a 12-month premium waiver from March 1996 through February 1997.

Ralph Bonner (10500)

## Lab News wins APEX '96 Grand Award

The *Sandia Lab News* received official notification last week that it has won a Grand Award in the APEX '96 Awards for Publication Excellence competition. The award is for the "Magazines, Journals, & Tabloids" category.

The APEX awards, administered by Communications Concepts, Springfield, Va., are based on excellence in editorial content, graphic design, and the ability to achieve overall communications excellence. Corporate and nonprofit publications from throughout the United States take part. Four thousand entries

were evaluated this year in 41 categories. There were 650 entries in the "Magazines, Journals, and Tabloids" category, and the *Lab News* received one of four Grand Awards given in the category.

Last year *Lab News* staff members won three individual APEX awards for communications excellence (news writing, photo spread, and column writing). Individual awards for this year are yet to be announced. But this Grand Award goes to the entire *Sandia Lab News* staff, in Employee Communications and Media Relations Dept. 12640.

The core staff consists of John German, Bill Murphy, Janet Carpenter, Howard Kercheval, Mark Poulsen, Randy Montoya, Nancy Campanozzi, and Philip Higgs (writer intern). Other department members including Ace Etheridge, Chris Miller, Neal Singer, Kathy Kuhlmann, and Julie Clausen (now 12620) also periodically contribute to the *Lab News*, and former editor Larry Perrine (12630) is our columnist. Nancy Garcia and Barry Schrader (8802) report the news from Sandia/California.

This is a team award, and that is highly fitting because the *Lab News* is the epitome of team effort at Sandia. I am very proud of our staff and excited for them. This award recognizes the superb job they do, week in and week out, bringing accurate, comprehensive, and readable information to all Sandians. This is a talented, conscientious, and capable editorial team that deserves enormous credit and recognition.

— Ken Frazier, Editor

## Take Note

University of New Mexico's Chapter of Sigma Xi, the Scientific Research Society, and Department of Physics and Astronomy will present an economic conversion seminar on Tuesday, July 2, 7:30 p.m., at the UNM Physics Department (800 Yale NE), Rm. 184. The seminar features Robert Bowman's presentation, "The Weapons Production Industry: Can This Tail Wag the Foreign Policy Dog?" Discussion will include the interrelationship between foreign policy and weapons production and will include several case studies, such as the MX, the B-1, and SDI.

## Note to readers: expect next Lab News late

Because of the July 4 holiday, which falls on the Thursday prior to our normal Friday publication date, the next issue of the *Lab News* dated Friday, July 5, may not reach mail stops until Monday, July 8.

## Sandia LabNews

Sandia National Laboratories

An Equal Opportunity Employer

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, Editor .....505/844-6210  
Barry Schrader, California site contact .....510/294-2447  
Lab News fax .....505/844-0645

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

LOCKHEED MARTIN

# Modeling, simulation at the atomic level gain 'critical mass' in new multisite research forum

*Sandia scientists share secrets of their success in Atomic-Scale Simulations Forum*

By Nancy Garcia

California Reporter

Given more powerful codes and computers to solve weapons problems, Sandians who predict basic material behavior are joining forces in a research forum that spans both sites, Albuquerque and Livermore; both sectors, National Security and Energy & Environment; and four research divisions.

Ellen Stechel, Manager of Advanced Materials & Device Sciences Dept. 1153, first began discussing the Atomic-Scale Simulations Forum around the time Sandia won the next-generation supercomputer due under DOE Defense Program's Accelerated Strategic Computing Initiative (ASCI). The supercomputer will be 10 times as powerful as the fastest machine today, capable of more than one trillion floating point operations per second (teraflops).

She has successfully proposed the grassroots technical network to the Sandia Research Council with Computational Materials Science Dept. 8717 Manager Bill Wolfer, Sudip Dosanjh (9221), Jeffrey Nelson (1113), Michael Cieslak (1831), and Mike Baskes (8712). Overall, the forum has about 50 members from centers 1100, 1800, 6100, 6200, 8100, 8300, 8700, and 9200. The first workshop for technical staff to get to know each other and share their work occurred last month in Albuquerque.

The forum will allow scattered computational materials scientists, most of whom already work individually with experimentalists in different sections of the labs, to share experiences and expertise that can leverage their separate projects. Sandia's theorists, Ellen says, are outstanding in knowing how to make the connection between what they can calculate and what the experimentalist can measure. At the workshop the participants learned simultaneously about computational approaches and application areas.

The forum should provide a critical mass to



ELLEN STECHEL

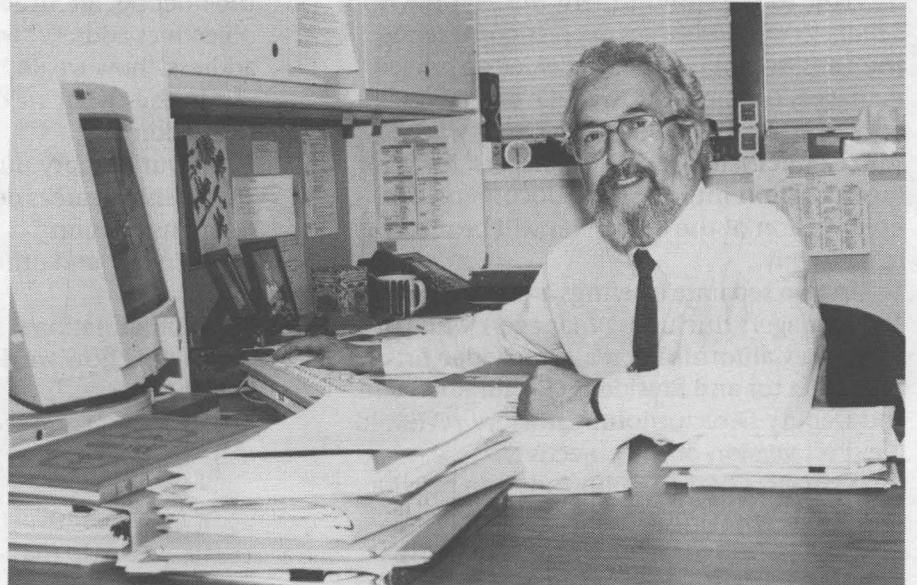
efforts of individuals who are already recognized leaders in this emerging field, allowing Sandia as a whole to attract deserved attention, she says.

"We really feel it's a new science and technology," Bill says about atomic-scale simulation. "It's still in its infancy, being developed and pioneered. We still need a lot of sorting out of ideas, trying different things, seeing what technologies rise to the top."

Applications at Sandia include understanding defects in semiconductors, the motion of atoms along a surface (in formation of thin films, for instance), and the function of small, catalytically active clusters of atoms whose manufacture Sandia has pioneered. For instance, Sandia is using its modeling tools to simulate semiconductors at an atomistic level in a cooperative research and development agreement with the Semiconductor Research Corporation and Los Alamos and Lawrence Livermore national laboratories, says Jeff Nelson, Manager of Semiconductor Material and Device Sciences Dept. 1113.

A goal of atomic-scale simulation, Ellen believes, is to accurately predict from first principles the geometry, electronic structure, and motion of atoms within materials that may have from 100 to 20,000 variants, or "inequivalent atoms." One ultimate goal is to remove all empiricism from materials modeling by using first-principles atomic-scale calculations to ensure that models on larger-length scales incorporate all the essential physics.

"With our current tools," Ellen says of the computational challenge, "we might be able to occasionally determine the electronic structure of 1,000 inequivalent atoms. The limitation



BILL WOLFER (8717) manages Sandia's first group of theorists dedicated to computational materials modeling.

occurs because, with traditional algorithms, the work ultimately scales as the cube of the size of the system.

Hence, even with computers getting substantially more powerful at an accelerated rate, if you double the size of a very large system, you work eight times as hard to get an answer and you see very quickly it just blows you out of the water."

To solve this, "we need to continue to scale up the hardware and to scale up the software as well. We certainly have state-of-the-art codes

## Sandia California News

### Learning what occurs atom by atom

The Atomic-Scale Simulations Forum also includes members who focus on microstructural modeling, which could benefit from taking atomistic behavior into account in simulating larger quantities of material.

"The real challenge is to connect those scales," says Liz Holm (1831), a member who studies grain growth in welds. "The increase in computing power is enabling us to do things at a size scale and time scale now that is growing more valuable. As supercomputers get more super, we can find out how things we know happen actually happen, atom by atom. Finding the link to larger scales is the biggest challenge with potentially the most payoff."

"It's really impressive to see how much expertise there is across the Labs. We are among the world experts here."

today, but the algorithms were really designed with relatively small systems in mind."

### A quantum QUEST

Mark Sears and Peter Schultz (both 9225) created a powerful code at Sandia based on "first principles" calculations of atomic behavior. Dubbed QUEST for Quantum Electronic Structure, the code is suited to fairly large problems in which it begins to scale close to the size of the problem in computational cost until the systems get very large. With the arrival of the teraflop computer, Sandians using QUEST will be able to tackle numerous complex problems including some of a size for which the computational effort will be dominated by the cubic scaling. This summer Mark and Ellen will be working to make the code scale linearly for any size system.

"Linear scaling is a very active, rather competitive field," Ellen says. "I'd say we're right out there in the forefront. As individuals, we have made an impact, but Sandia as a whole

(Continued on next page)

## Washington State University honors retiree Alec Willis

Alec Willis (8203, ret.) was surprised recently with a presentation at Washington State University (WSU), where he has been a Sandia recruiter for more than 15 years.

He and another member of the Industrial Advisory Board, Bob Stuart of PG&E in San Francisco, were given the distinguished Adopted Cougar Award, reserved for "non-WSU graduates who have shown through their dedicated support and involvement in the activities and programs of WSU that they earned this recognition and the appreciation of the University and Alumni Association."

Alec has participated in engineering career fairs and presented seminars to engineering classes and student groups for many years. He also serves on the Industrial Advisory Boards of the WSU Schools of Electrical Engineering and Computer Science and Mechanical & Materials Engineering. In addition, he and his wife are regular contributors to the engineering school's scholarship program.

Alec credits Marge York (8522) and her staff in Human Resources for supporting Sandia recruiters over the years and helping maintain strong Sandia/university ties.

# SQLC solicits managers' input on Sandia's new strategic objectives document

**New objectives will be published in early July**

True to the commitment made at the April *Sandia 2000: United for Success* conference, the Labs' senior leadership last week briefed managers on the draft strategic objectives developed by SQLC (Sandia's Quality Leadership Council) and sought managers' ideas for incorporation into the final document. The final version of the objectives will be released in early July.

In two separate briefings attended by some 400 managers (including managers who participated in California via real-time video link), Labs Director and President C. Paul Robinson and Deputy Director John Crawford reviewed the draft version of the objectives.

Managers had an opportunity to provide comments and concerns about the strategic objectives during the briefings or via written communication.

The draft objectives, as reviewed by John at

the briefing, are structured in two parts. Four objectives address "what we do," and four address "how we do it."

In the "what we do" category, the objectives address:

- Our primary nuclear weapons mission
- Mission areas derived from our nuclear weapons mission
- Energy and other critical infrastructure threats
- Other national security threats

In the "how we do it," category, the objectives address:

- Research and technology base
- Partnerships
- People
- Agile infrastructure

In a letter to managers soliciting comments on the objectives and inviting them to the briefing sessions, John said, "When this round

of strategic planning for the Laboratory began in late January, it was with the expectation that we would create a new set of strategic objectives that are worthy of a great lab and that provide real guidance for decision-making and for action as much as ten years into the future. Members of SQLC have worked hard to generate objectives that meet this expectation. Before we press on to finish this work and publish these objectives, we need your insight and feedback on how well our expectations (and yours) have been met. . . . With that thought in mind, your reactions to the enclosed material [the draft objectives] would be greatly appreciated."

During the managers' briefings, John noted that the VP "owner" of each of the eight objectives is working to develop a set of three-to-five-year goals to enable Sandia to meet the objective. SQLC intends to monitor progress each quarter, John said.

*(Continued from preceding page)*

deserves visibility as a force to be reckoned with." Creating powerful computational tools in-house, she says, "is essential to the problems we will need to solve to meet our mission. My expectation is that Sandia will have all of the state-of-the-art tools to take us into the next century for all our materials science needs."

At the same time, partners are also looking to Sandia for its atomic-scale simulations strengths. For example, Sandia's intent to upgrade a tool developed by San Jose State University and Hewlett Packard has left Hewlett Packard very excited, Bill says. Norm Bartelt (8717) and others in Bill's group took on the so-called interconnect reliability project to better predict integrated circuit failure within weapons.

Integrated circuit lines, called interconnects, develop small holes that obstruct current flow "like an obstacle in a traffic lane," Bill says. That creates current crowding, which leads to heating and circuit failure.

The existing tool can only be used for older integrated circuits with lines of roughly 5 microns in diameter — 10 times wider than currently produced microchip features.

"We need a finer tool," says Bill. "By upgrading the existing code, we learn how to walk, as it were. It's (eventually) going to be state of the art."

## Circuits, simulations, and statistics

The quality standard for commercial microchips is for no more than 1 in 1,000 to fail in 100,000 hours of operation. To confirm this performance, manufacturers run accelerated tests on perhaps 300 prototype circuits.

For efficient circuit design, Bill says it would be ideal to have statistics for thousands of microchips to discover the few destined to fail very early.

To obtain that statistical variation, his group plans to run the upgraded computer model hundreds of times with a range of realistic variations on a massively parallel computer

*"Very little is known about where atoms go, or why they go where they go, what the relative energies are."*

## Molecular building and embedded atoms

In addition to QUEST and EPIC, other important Sandia-developed codes for atomic-scale simulation are:

- The Signature molecular builder by Jean-Loup Faulon (6211), which can build structures to mimic biological enzymes for catalysis or statistically evaluate very complex structures and reactions of large tangled molecules such as petroleum, lignin (common in woody plants), or new, rationally designed pharmaceuticals.

Work on so-called biomimetic catalysts, says Gary Carlson (6211) is "unlike anything going on anywhere else in the world." The code he calls "absolutely unique" will also be used to study polymer aging under ACSI.

Richard Judson (8117) has begun applying the code to model and predict the mechanical properties of potentially brittle foams used to pad weapons components. He's also using a quantum chemistry code

by Mike Colvin (8117) which he says has allowed just two or three code writers at Sandia to be as productive as 20 people elsewhere.

Quantum chemical calculations also help Celeste Roling (8353) design novel materials for sensors and molecular switches.

• Embedded atom calculations, developed about a decade ago at Sandia by Stephen Foiles (8717) and Mike Baskes (8712), are now internationally recognized. The calculations can be used for many elements of the periodic table and their combinations. The approach allows realistic modeling of metals, solder, and interfaces, such as the sapphire/aluminum interface of some electronic components in the stockpile.

"Nobody else in the world can do these kinds of calculations at this level," Mike says. "The approach was developed here, ahead of everybody."

under the ACSI program. (Grant Heffelfinger of Dept. 9226 is the programmatic lead for ACSI, which also involves four other defense-related Sandia projects.)

Dwight Jennison of Surface & Interface Science Dept. 1114 is also looking forward to the arrival of the teraflop supercomputer next winter, which he says will allow realistic solutions of larger problems that were "just unheard of" previously.

He is modeling nanoclusters, a new class of matter that is made of more than 100 atoms, larger than a single molecule but too small to be considered a solid. Dwight is particularly interested in nanoclusters of catalytically active transition metals such as iron, molybdenum, and palladium. His simulations have closely correlated with experiments showing how ammonia adsorbs on pancake-shaped clusters of platinum.

He uses QUEST, which he calls "certainly the most powerful code in existence."

QUEST was rewritten and adapted for parallel supercomputers by Mark Sears, based on a set of codes first developed by Peter Feibelman of 1114. Peter's work stems in part from the experimental confirmation of a theoretical prediction some five years ago

by Gary Kellogg (1114) that atoms on a metal surface can sometimes move by exchanging with a surface atom. "People really paid attention to that," Peter says. Atomic motion on surfaces governs crystal growth and thin-film development.

"Very little is known about where atoms go, or why they go where they go, what the relative energies are," Peter says. A complementary set of codes, EPIC, developed by Andrew Quong (8717), can compute atoms' vibrational modes, which influence important phenomena ranging from material defects, which are temperature dependent, to superconductivity and surface catalysis.

## Recent Patent

Rick Spielman (9573): X-Ray Transmissive Debris Shield.

## Welcome

New Mexico — Steven Biehl (1252), Joseph Guerrero (7315)

Indiana — Jung Han (1314)

Michigan — Joel Lash (9531)

## Computer code

(Continued from page 1)

material objects.

Faster simulations of the effects of nuclear explosions lessen the need for underground tests forbidden by international treaty.

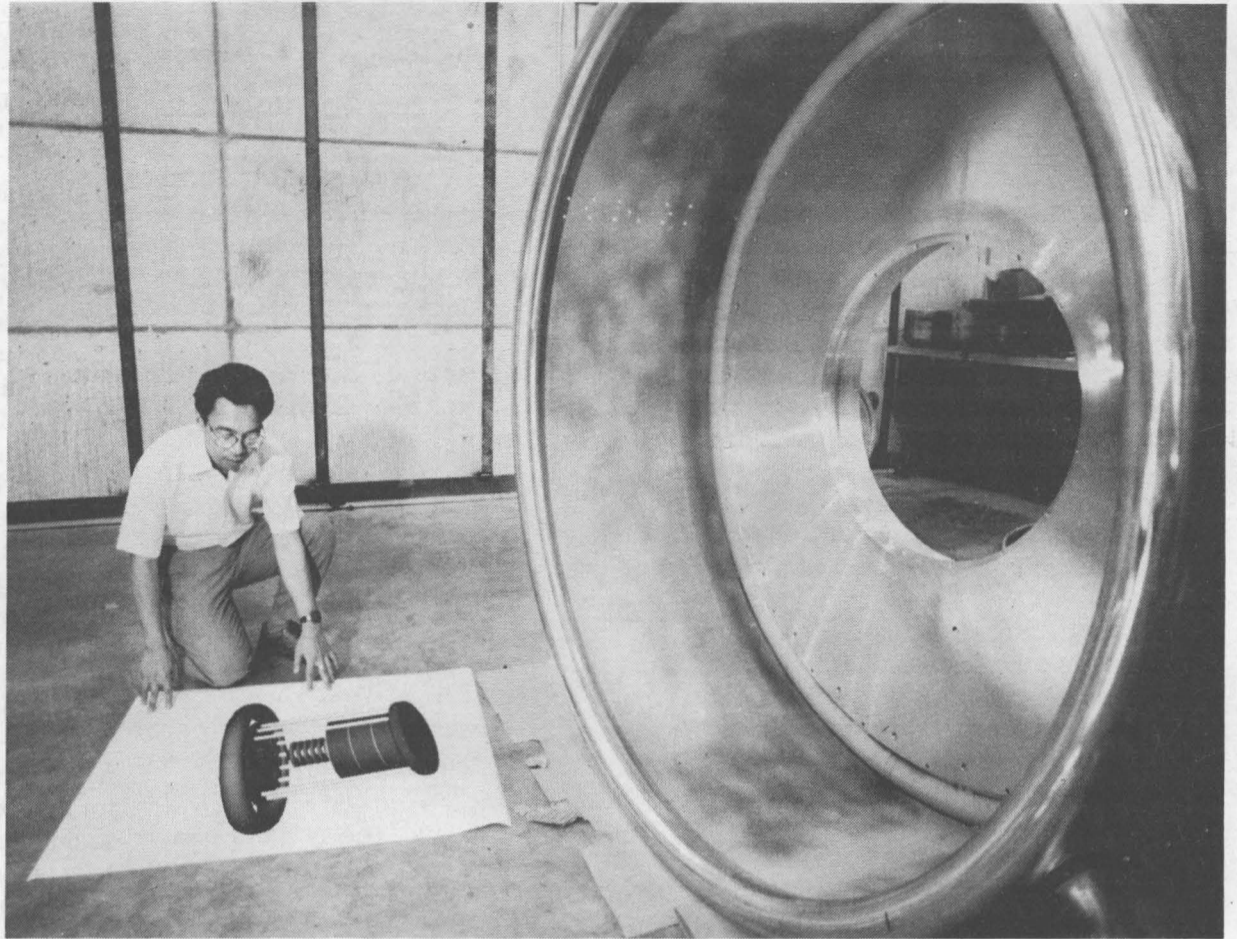
"These are merely a few of the more important examples from among many simulations made more feasible that otherwise would have been difficult, if not impossible, without the advance in computational speed," says Sandia physicist John Halbleib (9341).

### Analysis at a speed closer to real-time

The Monte Carlo method in principle can be used to maximize the dose to cancerous tissue while minimizing the dose to healthy tissue. But in clinical settings, at current computational speeds, it takes a "prohibitive" amount of computing time to lessen "the statistical uncertainties inherent in the method," John says.

Says Greg, "Tumors change shape and position over a waiting time of weeks or even days. So their treatment by medical therapists must employ less accurate, but faster, alternatives that combine Monte Carlo data obtained from much simpler geometries. Our new code system will permit hospitals to do a more detailed and accurate analysis at a speed closer to real-time, when the code becomes publicly available."

Greg's parallelization program, in a series of tests at the Maui High Performance Computing Center early this year, was able to increase the speed of computation nearly linearly with each processor activated on an IBM SP2 until approximately 180 processors were included.



**SHIELD AND SPEED** — The radiation-shield wall behind this single test module of the proposed Advanced Radiation Source facility currently being installed in Bldg. 963 was subject of one of the Maui simulations demonstrating the speed of the parallel version of the Sandia ITS code. Greg Valdez (9341) displays a graphic of the module. (Photo by Randy Montoya)

The code then solved problems 165 times faster than a single computer. Adding still more processors — the machine has 400 — increased the computational speed further, but at a slower rate. For example, the process, which was 92 percent efficient at 180 processors, dropped to 77 percent efficiency with 360

processors. However, the increase in computational speed was still dramatic — 278 times faster than one computer working alone.

The code's answers check out to eight decimal places with the simpler, single-computer TIGER code used as a benchmark.

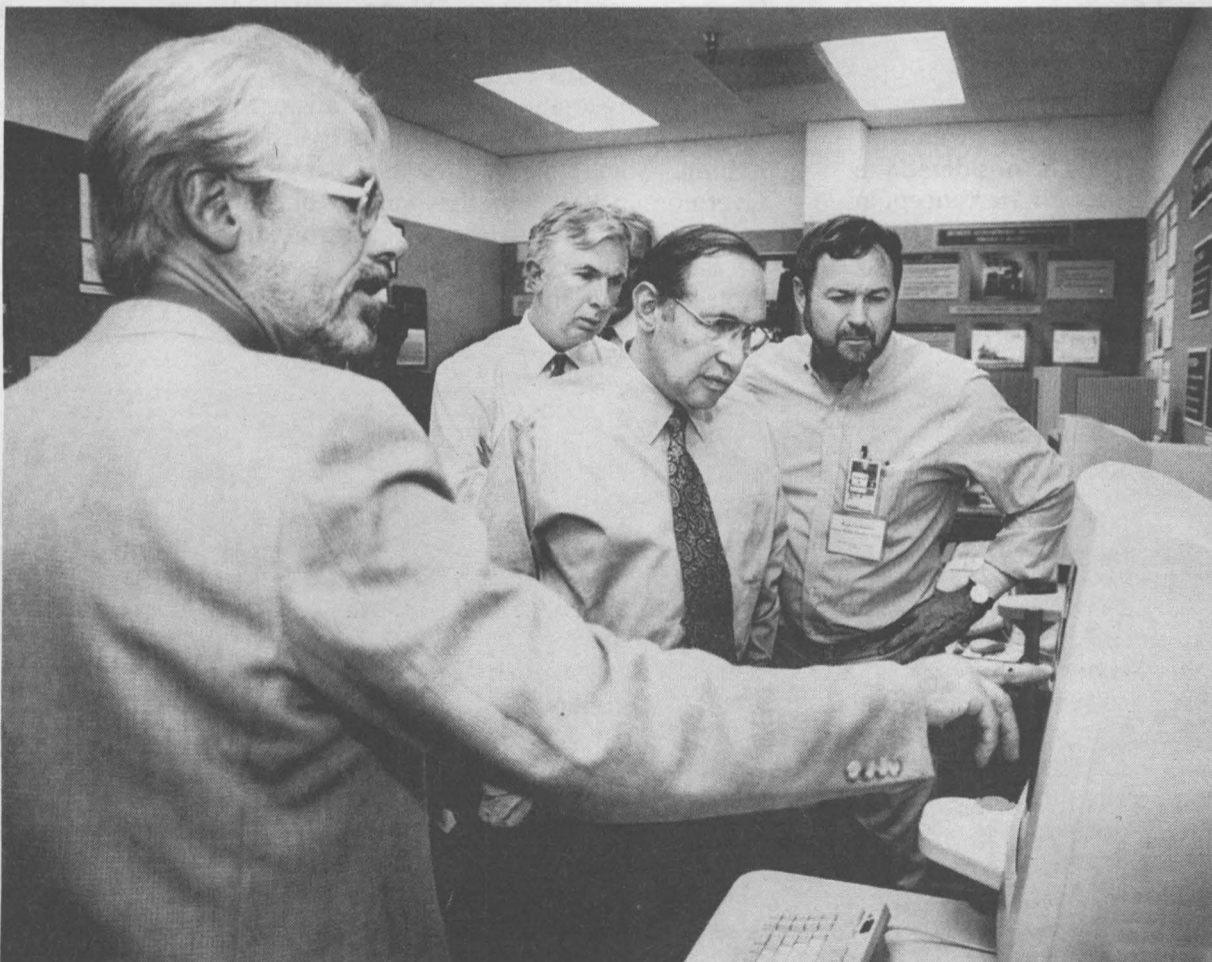
The codes are being modified further for defense purposes to run on still-faster computers that reach teraflop (trillion operations per second) speeds "to take advantage of the hardware developed for DOE's Accelerated Strategic Computing Initiative," says James R. Lee, Manger of Dept. 9341.

The earlier code is used by at least several hundred institutions worldwide. It is distributed by DOE's computer code center at Oak Ridge National Laboratory and the NEA Data Bank in France.

"The largest number of users are concerned with weapon radiation effects work or medical physics for cancer treatment," says John, an original developer of the ITS system. "One of our objectives is to make this system more practical in a clinical setting."

The parallel program will run any combination of UNIX workstations that use TCP/IP (transmission control protocol/Internet protocol) with a publicly available program called PVM. This creates a virtual parallel-processing computer of any number of computational units, or nodes. The computational units need not all be located directly at the hospital or clinic but may be joined from different locations via telephone lines.

The cooperation of the Department of Defense, the Air Force's Phillips Laboratory, and the University of New Mexico in permitting use of the massively parallel Maui machine was essential, says Greg. "The efforts of the entire staff at the Maui High Performance Computing Center, especially Dr. Lon Waters, an applied mathematician, were crucial."



**CONGRESSIONAL VISIT** — John Olsen (5341, left) of Sandia's Cooperative Monitoring Center shows satellite images to three leaders of the House Science Committee during a tour of Sandia on June 7. From left are Rep. Bud Cramer, D-Ala., ranking minority member of the Basic Research Subcommittee; Rep. Steve Schiff, R-N.M., Chairman of the Basic Research Subcommittee; and Rep. Dana Rohrabacher, R-Calif., Chairman of the Energy & Environment Subcommittee. The three congressional leaders met with Sandia officials, including Tom Sellers, Director of International Security Programs Coordination Center 5300; Al Romig, Director of Microelectronics and Photonics Center 1300; and Executive VP John Crawford. On the same day, they held a subcommittee hearing in Albuquerque on research funding and interactions with industry and academia. Sandia VP for Laboratory Development Dan Hartley made a strong case for the value and continued need for the national labs' partnerships with industry and universities. Such partnerships "are essential for our laboratory's mission success. . . . We must offer a rich and productive national R&D environment that exploits the strengths of government, industry, and universities as partners in science and technology," he said.

## ★ Congratulations

To Elizabeth and J. Mark Harris (5736) on the birth of triplet boys, Nathaniel Quinn, James Zachariah, and Mark Wesley, May 29.

To Debbie (6217) and Darwin (9323) Brown, a son, Noah Barnard, June 11.



Retired Sandian Tom Brumleve was honored as "Power Tower Visionary" during Solar Two dedication ceremonies. Brumleve is considered the father of molten-salt technology, having come up with the concept in 1974. Brumleve's image is reflected in a heliostat; behind him the central receiver glows white hot from light reflected by many of the plant's nearly 2,000 heliostats.

## Solar Two

(Continued from page 1)

plant's June 5 dedication, which officially connected it to the utility grid in Southern California.

"The world is ready for this technology," O'Leary announced during the ceremony, which drew about 300 people amid 110 degree temperatures. O'Leary later told the approximately 30 media representatives covering the event that Solar Two represents DOE "using its national laboratories to develop unique solutions."

Sandia solar engineers Jim Chavez, Craig Tyner (6216), Mike Prairie (6216), and Jim Pacheco (6216), all of Sandia/New Mexico, as well as Hugh Reilly (6216), who has been stationed permanently at Solar Two since August 1994, led VIP and media tours, explaining the plant's molten-salt system. Molten-salt solar plants operate by using large, sun-tracking heliostats to concentrate sunlight on a receiver that sits atop a tower. The concentrated sunlight heats the molten salt to 1,050 degrees Fahrenheit as it flows like water through the receiver. The very hot salt is then piped away, stored, and used when needed to produce steam to drive a turbine/generator that produces electricity. The salt is a mixture of sodium and potassium nitrate and is environmentally benign and noncombustible, and has excellent heat-absorption qualities.

### Power tower visionary

Sandia, under DOE's auspices, has been developing solar central receiver technology since the 1970s. Sandia conducted large-scale experiments on the components needed in a molten-salt system at its Central Receiver Test Facility in Albuquerque, and developed much of the knowledge necessary to spur confidence in molten-salt solar power towers. Sandian Tom Brumleve, now retired, is considered the father of molten-salt technology, having come up with the concept in 1974. Brumleve, who worked at Sandia/California from 1958 to 1984, attended the dedication sporting a nametag with the title, "Power Tower Visionary." O'Leary, who told Tom she was well acquainted with his contributions, hugged him at the ceremony.

"We were looking for a better transfer fluid (of heat) than water/steam, and molten salt seemed a natural," Tom says. "I started the solar program in Livermore in 1972, and that was one of Sandia's first endeavors outside nuclear energy at the time."

Sandia will continue to support the Solar Two project through the remaining phases of startup, test

and evaluation, and operation, or through 1998.

"This is a large-scale demonstration of what we and industry have been developing, testing, and refining for the past 15 years," Hugh says. "We (Sandia) have also become the world experts in how to keep a field of heliostats working."

Solar Two is surrounded by 1,926 heliostats.

The project is intended to demonstrate the economic viability of solar power towers. Project representatives say future commercially viable towers will be capable of producing 100 to 200 megawatts, or 10 to 20 times the electricity of the Solar Two demonstration project.

Mike, who has served as Sandia's Solar Two project leader, will continue to chair the Technical Advisory Committee, composed of representatives of all 10 consortium members and DOE. The committee was responsible for reviewing the project's design and engineering and will now oversee all testing and evaluation.

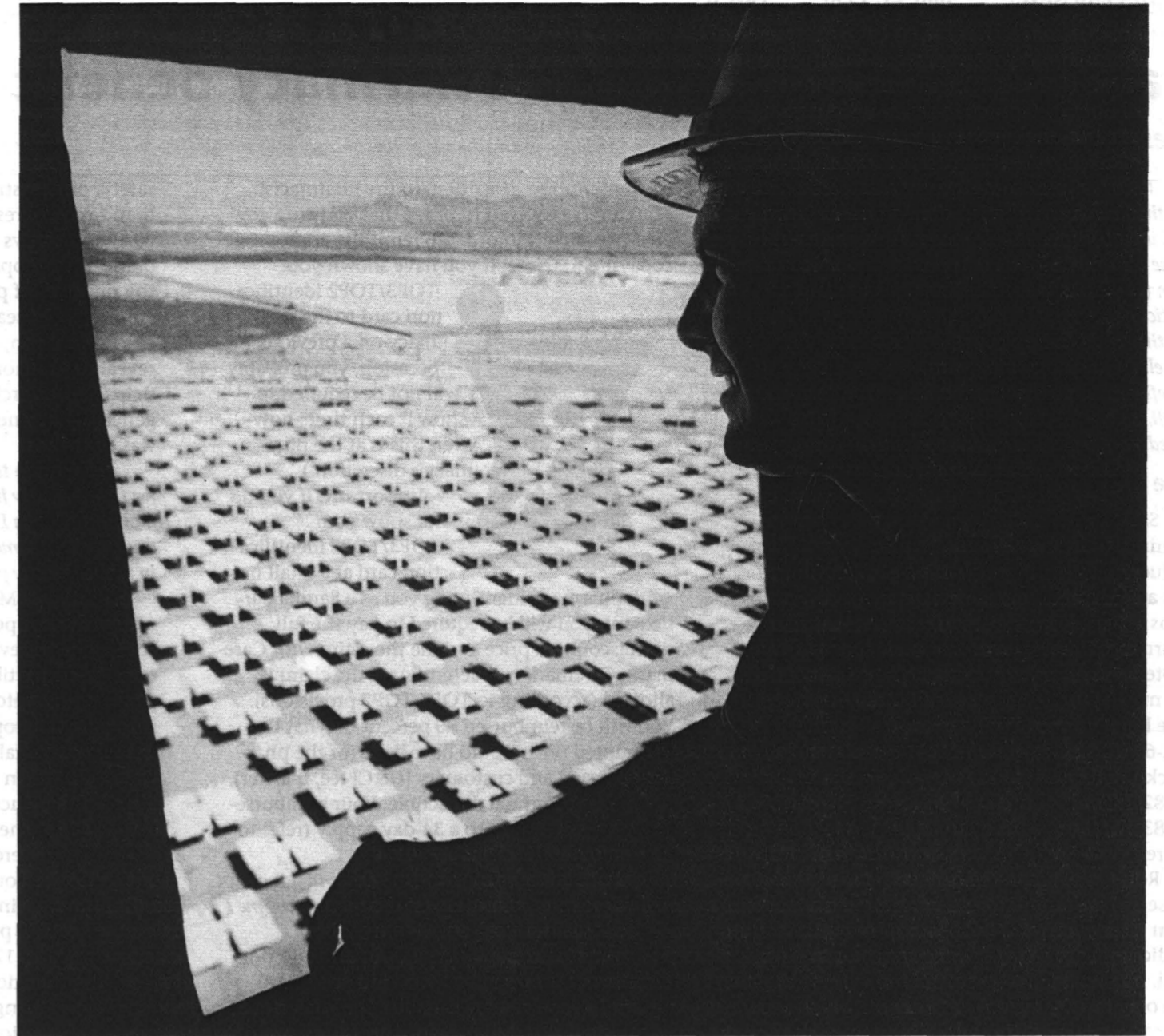
### Sandia's role paramount

"Sandia's role was paramount to the success of the project," says DOE solar engineer Bob Martin, who has been the overall project manager since the start of Solar One's conversion in 1992. "Every time we encountered a problem, Sandia attacked the problem and solved it."

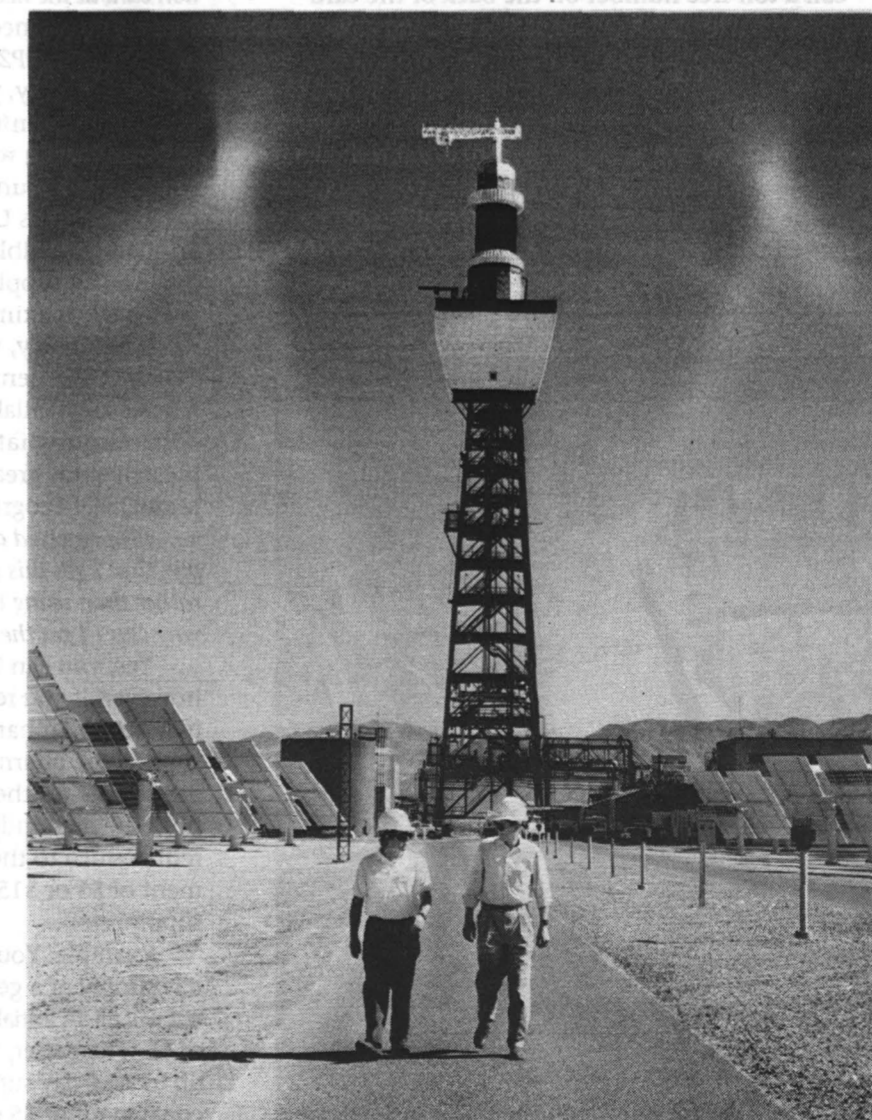
Other key Sandia staff supporting the Solar Two project include Dan Dawson (8746), Robert Edgar (6215), Scott Faas (2271), Dick Houser (6215), Scott Jones (6216), and Earl Rush (6215). Many other Sandians have supported the project since its inception.

John Bryson, chairman and CEO of Edison International, told the crowd attending the dedication that he's convinced Solar Two represents a "historic milestone that will show the great promise of solar power to provide clean, reliable, renewable energy worldwide." O'Leary says DOE already is talking with representatives of other nations about using the technology to produce electricity in remote areas of the globe.

The \$48.5 million cost of Solar Two's design, construction, and three-year operation is equally shared by DOE and the consortium. In addition to Southern California Edison, the second largest electric utility in the nation, the other project participants are: Arizona Public Service, based in Phoenix; Bechtel Corp., San Francisco; California Energy Commission, Sacramento; Electric Power Research Institute, Palo Alto, Calif.; Idaho Power Co., Boise; Los Angeles Department of Water and Power; PacifiCorp., Portland, Ore.; Sacramento Municipal Utility District; and Salt River Project, Tempe, Ariz.

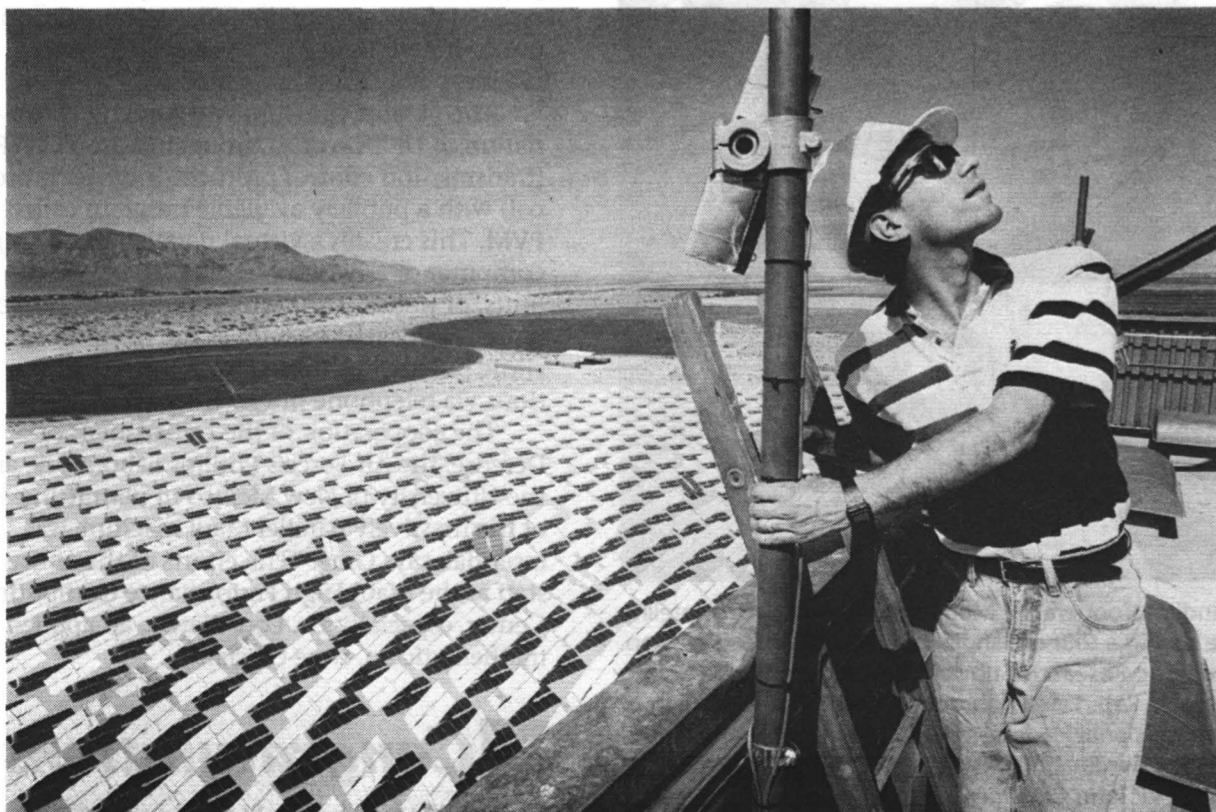


Jim Chavez, Manager of Solar Thermal Test Dept. 6215, looks out from a mid-level of the 300-ft Solar Two "power tower." Below is a portion of the 2,000-heliostat field that surrounds the tower.



Sandians Mike Prairie, left, and Hugh Reilly walk down a path leading from the Solar Two central receiver tower. The plant's heliostats are in a standby position, focusing sunlight in midair on either side of the tower's receiver, a 30-ft tall black tubelike structure near the top.

Photographs by  
Randy Montoya



Jim Pacheco (6216) stands near the top of the 300-ft Solar Two power plant near Barstow, Calif.



Solar engineers (from left) Hugh Reilly, Jim Chavez, and Jim Pacheco of Sandia, Bob Martin of DOE, and Mike Prairie, also of Sandia, stand on one of the lower levels of the Solar Two receiver tower. Sandia has had the technical lead in developing molten-salt technology for solar plants such as Solar Two.

# Sandia's Retail Network Pharmacy benefit

## Prescription drug program, Part 2

This is the second in a series of articles concerning the Prescription Drug Program (PDP). The first was in our June 7 issue. The PDP is available to those participants enrolled in the Triple/Two Option Plan (TOP3/TOP2); however, covered TOP3/TOP2 participants who have primary coverage under another group health plan other than Medicare are not eligible to use the retail network pharmacy benefit. This article explains the main benefits of the retail network pharmacy and answers frequently asked questions about it.

### The Retail Network Pharmacies

Sandia has contracted with Caremark to administer our Prescription Drug Program. This includes providing Sandia-select retail pharmacies across the nation that will provide prescriptions to Sandians at discounted rates. These pharmacies are known as **network pharmacies**. (Note: The network listing is updated as needed; the most current update is available from Sandia Line by calling 845-6789 [1-800-417-2634, then 845-6789 if outside Albuquerque]. Press "9" for quick dial codes, and press "1281#" for a fax, "1282#" for internal mailing to employees, and "1283#" for external mailing to your home address.)

Retail network pharmacies are available for those participants who need **immediate, short-term** prescription medications and prescription medications that cannot be shipped through the mail. When purchasing a prescription through one of Caremark's Sandia-select retail network pharmacies, you will pay a \$5 copayment for a generic prescription and a \$15 copayment for a brand-name prescription, or the price of the drug if lower than the copayment, for up to a 34-day supply. Over-the-counter medications are not covered.

To obtain a prescription through a retail network pharmacy, you will need to have your physician provide you with a written prescription or call the prescription in to the pharmacy. If the prescription is called in, the pharmacy should be notified that this is for a Sandia participant. Present your TOP3/TOP2 identification card and

the prescription, if written, to the pharmacist. The card is **required** to prove that you are a covered participant in order to remit the appropriate copayment. (Note: If you have shown your



TOP3/TOP2 identification card to the pharmacy on a previous occasion, you probably will not be required to show it each time; however, this is at the pharmacy's discretion.)

**Important:** If you do not show your TOP3/TOP2 identification card at a retail net-

work pharmacy identifying you as a Sandia participant, you will be required to pay the full nondiscounted price and file the claim with Caremark. Caremark will determine if the claim is allowed (according to TOP3/TOP2 provisions). You will be reimbursed 80 percent of what the discounted price would have been (or the pharmacy's usual and customary [U&C] fee, if lower), after the \$25 annual deductible. Your reimbursement will be limited to a 34-day supply (refer to Question #4).

*(1) What do I do if the pharmacist will not accept my TOP3/TOP2 identification card and informs me I need a Caremark identification card?*

Explain to the pharmacist that you do not need a separate Caremark identification card and that the information needed to access the Caremark system to fill a prescription and electronically file the claim with Caremark is on the back of the identification card. If the pharmacist still has a problem filing the claim, he or she can call a toll-free number on the back of the card for assistance.

*(2) Why can't I pay the generic copayment if a brand-name prescription does not come in generic form?*

Generic drugs are copies of brand-name drugs for which the patent has expired. They are, in general, much less expensive than brand-name drugs. By law, both brand-name drugs and generic drugs must meet the same standards for

safety, purity, strength, and quality. Because a brand-name prescription is more expensive, the participant pays the corresponding higher brand-name copayment. This is consistent with the majority of prescription plan designs among employers. Research conducted by our benefits consulting firm, William M. Mercer, Inc., revealed that none of its 88 clients allowed participants to purchase brand-name drugs for a generic copayment when no generic substitute was available.

*(3) I have to take medication for a heart condition for the rest of my life. The drug costs only \$30 each month. Why am I paying 50 percent of the cost of the drug (\$15 copayment for a brand name drug) where in the past I only paid 20 percent?*

Under the Medical Care Plan, you were reimbursed 80 percent of the cost of the prescription; however, you still had to meet the required deductible through physician services, prescriptions, etc. Many employer groups have implemented copayments for prescriptions, so this was a logical step for Sandia to take with the implementation of the Triple Option Plan. The copayment structure was designed to move maintenance medications to the Mail-Order Program. If you were to obtain this maintenance medication through the Mail-Order Program, you could obtain up to a 90-day supply for \$15; therefore, your payment would represent approximately 17 percent of the cost. Maintenance prescriptions are those drugs taken routinely over a long period of time for an ongoing medical condition. Mail-Order Program benefits will be explained in the next article.

*(4) Why is the reimbursement limited to a 34-day supply if I don't show my TOP3/TOP2 identification card at the network pharmacy?*

As mentioned earlier, if you do not show your TOP3/TOP2 identification card at the network pharmacy, you will be required to pay the full nondiscounted price and file the claim with Caremark. You will be reimbursed 80 percent of what the discounted price would have been (or the pharmacy's U&C fee, if lower), after the \$25 annual deductible. The reimbursement is limited to a 34-day supply at a network pharmacy as that is the maximum you can obtain at a network pharmacy, whether or not you use your TOP3/TOP2 identification card. Network pharmacies are available primarily for participants to obtain **immediate, short-term** prescriptions. For prescriptions greater than a 34-day supply, the Mail-Order Program is available. See Question 5.

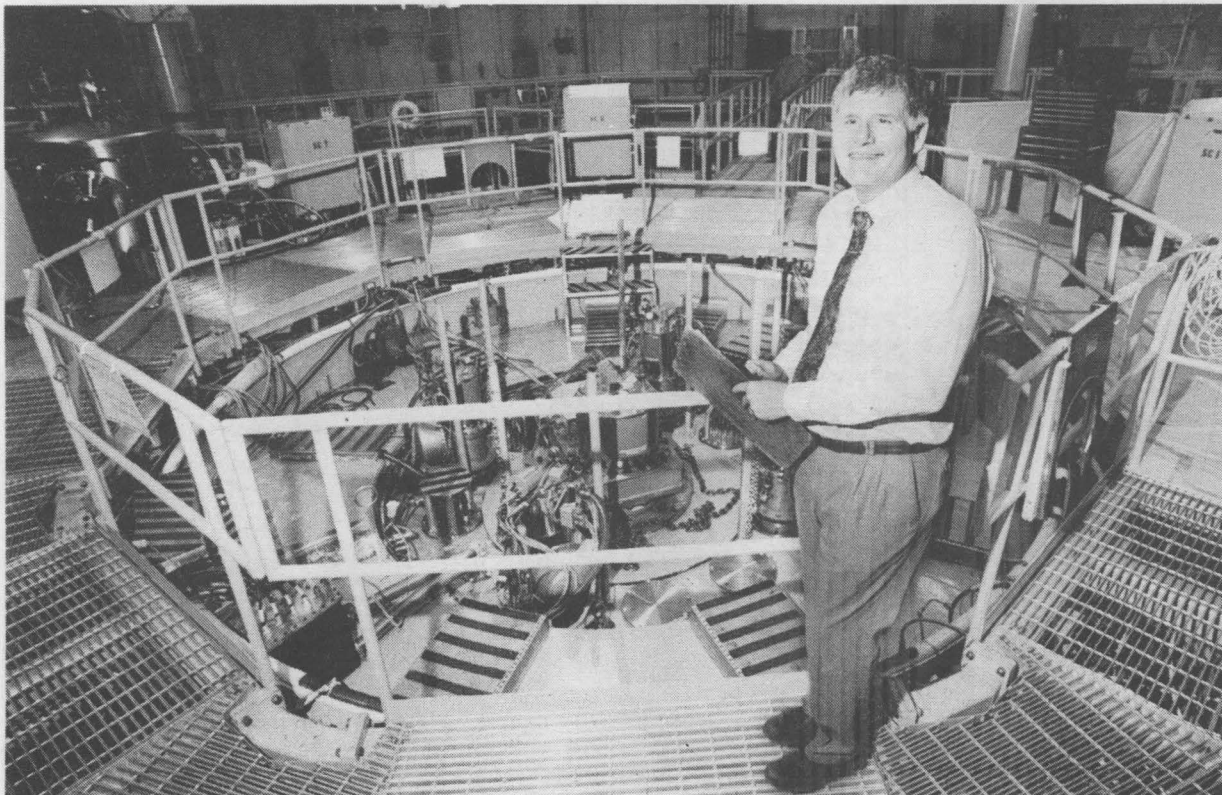
*(5) I received a prescription for a 100-day supply. Can I get this filled at a network pharmacy rather than using the Mail-Order Program? If yes, why can't I get the full 100-day supply all at once?*

Yes, you can fill this at a network pharmacy; however, if you request a prescription to be filled in a network pharmacy for greater than a 34-day supply, the pharmacist will only fill an initial 34-day supply for the copayment of \$5 or \$15 and hold the remainder as refills. When you need a refill, return to the pharmacy, pay another copayment of \$5 or \$15, and receive another 34-day supply, etc.

Example: You obtain a prescription for a 100-day supply of a generic medication. The pharmacist will fill an initial 34-day supply for a copayment of \$5. Thereafter, the prescription will be filled for up to a 34-day supply, at monthly intervals, for a copayment of \$5 each.

The limit-on-days supply at a network retail pharmacy is designed to contain prescription costs. Although Sandia does not have a mandatory Mail-Order Program in place, we are trying to encourage participants on maintenance medications to utilize the Mail-Order Program by placing

*(Continued on next page)*



**NEW IEEE FELLOW** — Jeffrey Quintenz, Manager of ICF Program Dept. 9502, was recently elected a Fellow of the Institute of Electrical and Electronics Engineers (IEEE) "for technical contributions to the focusing of intense light ion beams and particle-in-cell computer codes to model pulsed power devices." Less than one in a thousand IEEE members will receive this honor in 1996. Jeff has been at Sandia since 1975 and has a PhD in electrical engineering. IEEE, with nearly 320,000 members worldwide, is a nonprofit technical professional society devoted to advancing the theory and application of electronics and computing.

## Central Delivery Points mail coming to a location near you

Like every Sandia organization, Mail Services Dept. 7613 is always looking for improvements in efficiency. One approach currently making the rounds is the Central Delivery Points (CDP) mail delivery system.

As its name implies, the CDP system uses large compartmentalized containers to store mail for a number of different mail stops in a single building. A "key person" for each mail stop keeps the key that unlocks the stop's compartment — usually the office administrative assistant (OAA) for that department.

The containers, which are typically steel cases with 10 individual compartments, are placed in a central location so that all key people in the building have easy access to them.

"I'm responsible for 200 people," says Nicole Bottarini, OAA for Depts. 7874 and 7876, "and on payday, each one of them gets a little envelope with their paycheck in it."

That's a lot of mail to carry from stop to stop, but CDP takes some of that burden off of the mail carrier. "CDP lets Mail Services get its job done that much quicker," says Carter Kidd, Mail Services Dept. 7613 Team Supervisor.

For example, Bldg. 887 actually comprises six mail stop numbers: 0910, 0932, 0933, 0936, 0937, and 0946. Until recently, a mail deliverer would carry each stop's bundle of mail to each section of the floor — over here for 0936, there for 0910, through that door for 0933, and so on.

With the CDP system, he or she has one stop to make in Bldg. 887 — the CDP container.

Classified mail is still controlled and delivered following DOE and Sandia guidelines, of course, but most mail delivered is or soon will be sent to CDP boxes.

Bldgs. 957, 887, and 885 already have boxes; Bldgs. 890 and 962 are scheduled to receive them within the next few weeks.

"The time savings allows us to stretch resources and maintain a high level of customer service," says Carter. "That's the main difference."



INSIDE-OUT — Nicole Bottarini (7876) gets her mail from inside this central delivery box. Central delivery points allow Sandia mail carriers to complete their day's delivery in a fraction of the time it would take to bring mail to each mail stop in a building. (Photo by Randy Montoya)

## Sandia Night at The Beach Waterpark

June 29, 1996

7:30 p.m.-midnight  
\$3/person (\$5/door)

All Sandia and DOE employees, families, and friends invited.

Tickets available at SERP office in the Coronado Club.

*The Beach*  
WATERPARK

## Sympathy

To Jane Elson (1) on the death of her father, Jack Weathers, in Phoenix, Ariz., April 9, and her mother, Stella Weathers, in Phoenix, May 4.

To Michael McDonald (9661) on the death of his father-in-law, Earl Beecher, in St. Paul, Minn., May 17.

To Rochelle Lari (2000) and Luis Abeyta (9761) on the death of her father and his father-in-law, Frank Gurule (ret.), in Albuquerque, May 21.

To Felix Silva III (7435) on the death of his grandmother and to Leonard Casaus (1315) on the death of his mother-in-law, Susie Silva, in Albuquerque, May 29.

To Bruce Walker (2345) on the death of his father, Tommy Walker, in Albuquerque, June 5.

To W. David Williams (2300) and Cecelia Williams (6621) on the death of his mother and her mother-in-law, Evelyn Williams, in Orlando, Fla., June 6.

To Jon Bedingfield (3535) on the death of his wife, Susan, in Tulsa, Okla., June 10.

(Continued from preceding page)

limits at retail. Encouraging participants to utilize mail-order for maintenance medications helps control costs by providing Sandia with much better prices by mail. Limits also protect participants from purchasing more medication than may be necessary. As the claims administrator of the PDP, it is Caremark's responsibility to apply the limits/edits applicable to Sandia's plan design as appropriate to manage drug costs and steer you into the programs that help Sandia control prescription costs.

Patient safety is another reason for steering maintenance medication purchases to mail-order. A registered pharmacist at Caremark will review your patient profile and medication history and determine whether your current medication order may cause a drug interaction. If a potential drug interaction is possible, a call will be made to your physician to discuss the situation.

If you are taking a maintenance prescription, you should strongly consider using the Mail-Order Program. To participate, complete a Patient Profile/Mail-Order form,\* obtain an original prescription from your physician (written for up to a 90-day supply with refills), include the appropriate copayment, and mail to Caremark. You will receive your prescription(s) within 14 calendar days after Caremark receives your order. (Note: The 300-unit

limitation at Mail-Order has been removed.)

(6) I went to a network pharmacy and the pharmacist was unable to fill the prescription. What do I do?

Contact Caremark at 1-800-833-4914. If the problem concerns eligibility, Caremark will contact the Sandia Benefits Department to verify eligibility and update the system, if appropriate. If it is a problem with the access codes or edits in the system (such as too early to refill, days supply limit, etc.), Caremark will be able to assist the pharmacist in filling the prescription, if appropriate, and filing the claim electronically, or provide the pharmacist with information as to why the prescription cannot be filled as requested. If you require the medication immediately and these problems arise after Caremark's normal business hours, pay for the prescription and contact Caremark as soon as possible. Caremark can assist in resolving the issue, if appropriate, so that the pharmacist can electronically file the claim, in which case you can return to the pharmacy and receive a refund down to the appropriate copayment. Note: The pharmacist has a narrow "window" of approximately a week by which he can do this.

(7) Can I file my copayment receipts under the Reimbursement Spending Accounts?

Yes, active employees who are enrolled in a

Health Care Reimbursement Spending Account can submit copayment receipts for reimbursement. Complete a Choiceflex Account Reimbursement Request form, attach receipts, and mail to Mutual of Omaha, Group Premium and Enrollment Services, Mutual of Omaha Plaza, Omaha, NE 68175.

If you have any questions about the Prescription Drug Program, contact Sandia's focused customer service unit at Caremark at 1-800-833-4914.

\*Call Sandia Line at 845-6789 (1-800-417-2634, then 845-6789 if outside Albuquerque), press "9" for quick dial codes, and press "1284#" for a fax of the form or "1286#" to have a form mailed to your home address. The form is also available on the Web (at Web site <http://www-irn.sandia.gov/corpdata/corppforms/formhp.html>). Click on the Services icon and scroll down to Documents, Forms, and Templates. Click on Corporate Forms, then click on Form SF 4400-CMK and follow the instructions.

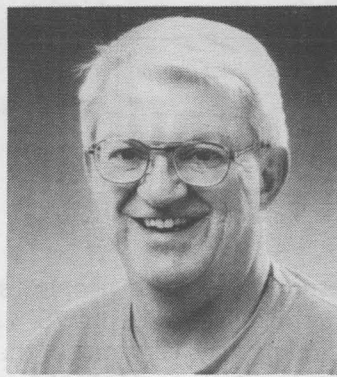
## ! Take Note

Retiring and not seen in *Lab News* pictures: Ronald Oelsner (12367), 35 years; Louis Carillo (7874), 15 years; and Paul Herrera (7815), 23 years.



# Mileposts

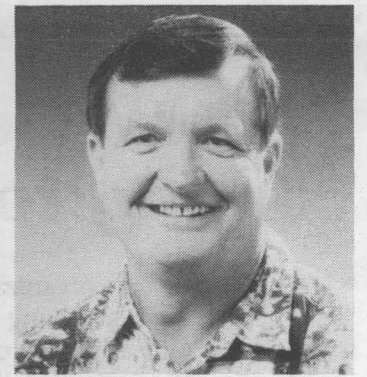
June 1996



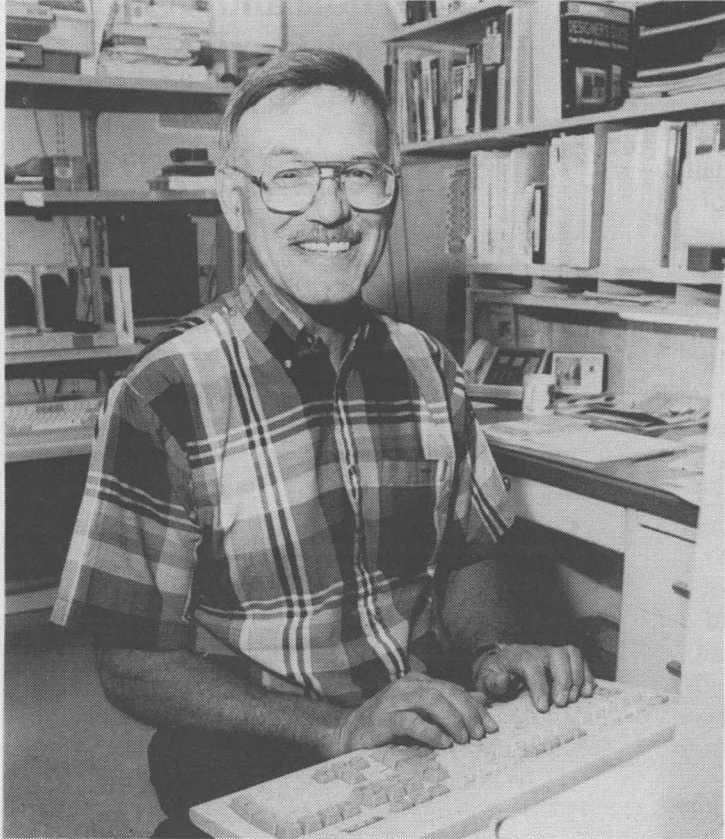
Robert Hatcher 30  
7613



Paula McAllister 15  
7901



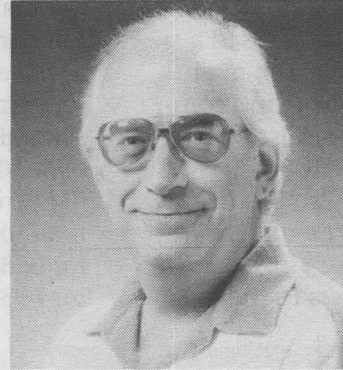
Oliver Davis 30  
7312



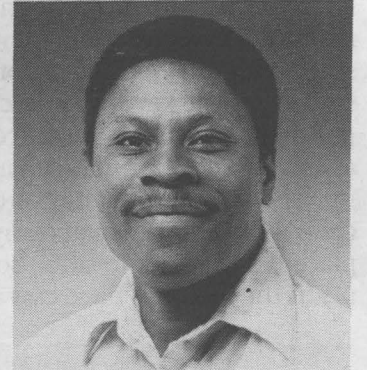
Ken Bauhs 35  
9414



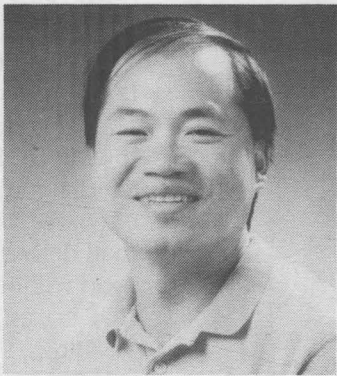
Craig Searls 15  
5906



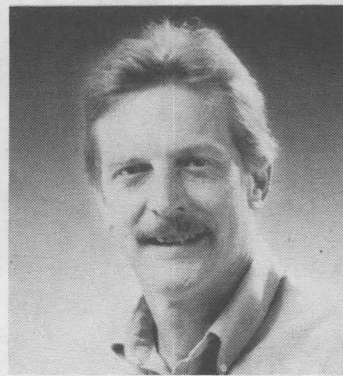
Bob Parson 20  
1552



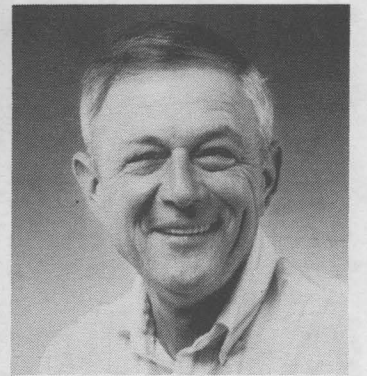
David Samuel 20  
9784



Dahwey Chu 20  
1333



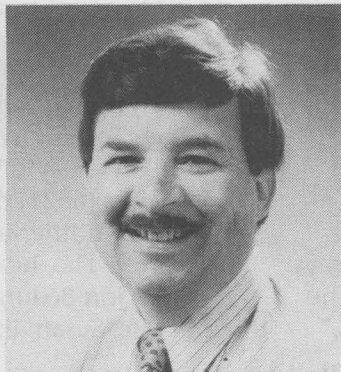
Robert Stiers 15  
14482



Richard Orzel 30  
6641



Holly Duke 15  
14002



Don Daigle 20  
4815



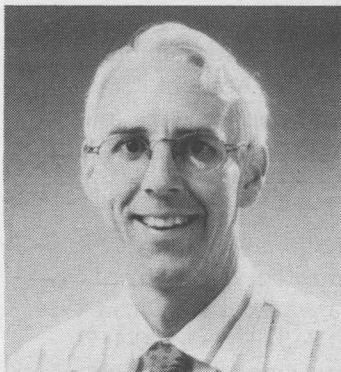
Consuelo Martinez 15  
10203



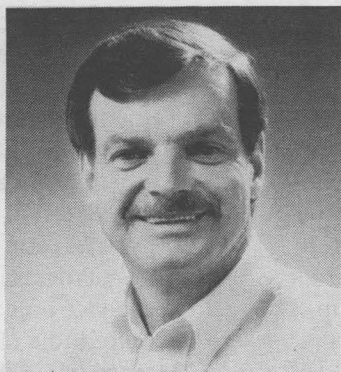
Ralph Peters 20  
9621



Margaret Jacobs 15  
1301



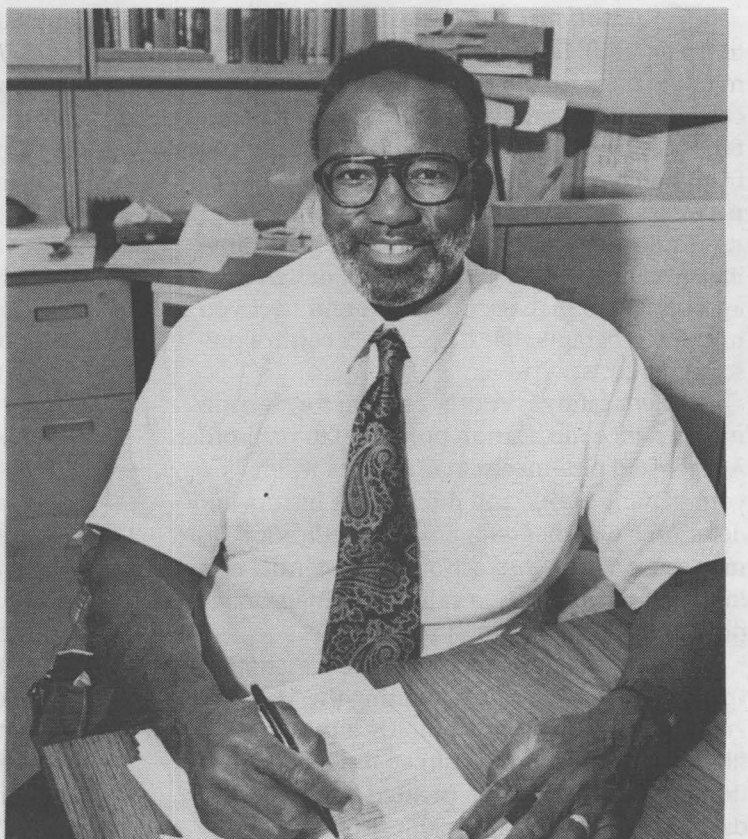
Darryl Drayer 15  
7906



Finis Long 20  
9537



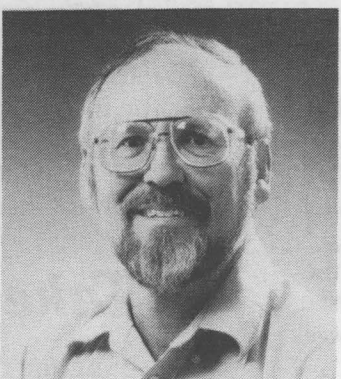
George Baldwin 15  
5341



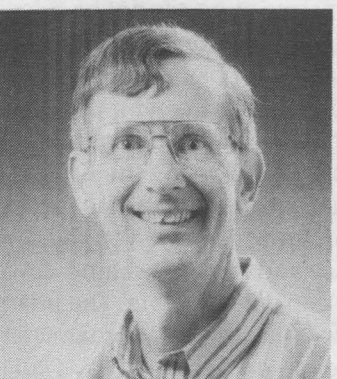
Craig Jones 35  
4603



Nancy Pruett 15  
5907



Jimmie Akins 15  
1486



Doug Brown 20  
4621

# Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads

## MISCELLANEOUS

SIMMONS CRIB, w/Sears mattress, \$65; baby walker, \$10; double stroller, \$50. Graf, 281-1533.

SW AIRLINES VOUCHER, fully transferable, travel must be completed by 7/14/96, \$250 OBO. Washburn, 839-9455.

MAN'S TOURING BIKE, Peugeot, 12-spd., like new, \$200; blue/white Colonial lamp, \$35; wicker chair, \$25. Levan, 293-0079.

TAILGATE, '88 Ford, for F150, blue & white, \$65 OBO. Miller, 292-5634.

CRIB, wood, brass wheels, w/new coil mattress, \$125; 3 comforter/bumper sets, \$10-25. Archuleta, 836-5524.

GAS STOVE, Kenmore, pilotless ignition, full-size self-cleaning oven, excellent condition, \$100 OBO. Marquez, 899-2408.

MICROWAVE/CONVECTION OVEN, w/all extras, needs thermostat, \$100; 1 cord firewood, \$40. Mackoy, 281-8606.

AQUARIUM, new, 55-gallon, custom stand/canopy, underground filtration system, 2 powerhead pumps, many extras. Kirby, 821-3938, leave message.

PC CD-ROM GAMES, Wolf, Voyeur, Commando, helicopter simulation, \$20 ea.; Wing Commander 3, \$30. Gilkey, 294-4790.

FOUR TIRES, Sport King, 30x9.5x15, all-terrain steel radial, 7/32 to 9/32 tread, \$40. Beer, 262-9873.

AKC BASSET PUPPIES, born May 8, top quality, taking deposits, parents on site. Robinson, 865-7787.

ROOM, w/bath for rent, all utilities, Four Hills, mature, neat, & nonsmoking a must, \$350/mo. Young, 298-8623.

WOMAN'S PGA GOLF CLUBS: 1, 3, 5 woods, pw, 3 9-irons, Ping putter, bag, mint condition, \$250 OBO. Kesti, 821-9208.

FREE CATS to good home, 3-1/2-yr.-old dark gray male, 1-1/2-yr.-old white/gray female, both sterile & declawed. Wilde, 281-7027.

TAPPAN ELECTRIC RANGE; Heathkit color console TV; 42-in.-round coffee table; all good condition. Peabody, 296-6239.

ALTO SAXOPHONE, student Vito sax, gold w/silver keys, new pads, complete w/mouthpiece, unused reeds, black case, \$300. Aguilar, 238-0567.

LEVELING BLOCKS, 3-step for RVs, also have 3-in. blocks, \$5 ea. Hayes, 299-1200.

GRAVITY RIDER, \$75; twin mattress & box spring (like new), \$75. Oldham, 856-7694.

MAN'S HIKING BOOTS, 8-1/2, Vasque, Sundowner, worn twice, too small, \$125. Osburn, 298-0354.

FREE BATHTUB, 5-ft., cast-iron, right-hand drain, enamel-covered, you haul away. Levin, 856-1885.

NORDICTRACK PRO, over 1 yr. old, electronic monitor w/heart-rate option, excellent condition, \$400. Thomas, 262-0171.

DRYER, Maytag LD7500, 3 yrs. old, electric, \$350 OBO; washer, Kenmore/80, good condition, \$50 OBO. Tadios, 299-6874.

WATERBED, queen-size, complete, semi-waveless mattress, \$25. Brown, 298-8447.

KITCHEN, complete china, matching glassware, silverware, pots/pans, utensils, 1 yr., excellent condition, \$850 new, sacrifice \$300 OBO. Cox, 298-5800.

GARAGE/ESTATE SALE, Sat., June 22, 9 a.m.-5 p.m., variety of items, 504 Tomasita NE, across from Tomasita Elementary School. Barbera, 275-2562.

OAK & POPLAR LUMBER, rough cut, 2 x 6 x 8, \$8.50 per board (oak), \$7.50 (poplar). Devejian, 899-9420, leave message.

BABY STUFF: crib w/mattress, \$100; high chair, \$25; swing/basinet, \$25; baby carrier, \$10; playpen, \$35. Martinez, 821-7467.

SHOTGUN-SHELL RELOADER, MEC 600 Jr., \$50. Stromberg, 299-8591.

MICROWAVE OVEN, LOGIK programmable electronic model, 650-watt power output, turntable style, black, 2 yrs. old, w/manual, \$50. Klein, 797-2407.

STORM DOOR, left-handed, good condition, free. Creel, 292-4867, ask for Patsy.

BIRDS: 1 Nanday Conure & 1 dusky-headed Conure, w/cages, \$100 ea. or \$150 for all. Hebron, 291-9639, ask for Becky.

WEDDING DRESS, Jessica McClintock, halter-style, beaded top/silk skirt, tea length, size 10, \$175. Blackburn, 296-6029.

PROM/FORMAL DRESSES, all colors & styles. Tanuz, 839-9328, ask for Shannon.

PUSH MOWER, reel-type, Sears, working condition, \$25. Leisher, 281-5258.

TWO LP TURNTABLES, free; record albums, 3 decades, wide variety, \$2 ea. or \$1 ea. for all. Cocain, 281-2282.

REFRIGERATOR, Hotpoint, self-defrosting, working, harvest gold, icemaker, \$100 OBO. Bارسis/Vandewart, 293-5347 or 298-4741.

BMX, need to sell, \$30; Koho hockey stick, new, \$10; ramp, large, \$10, you haul it. Bordlemay, 883-4926.

TONE BANK KEYBOARD, ct. 700, Casio, 61-key electric, w/stand, Sustain pedal, 100 sound banks, 100 beat banks, \$275. Allen, 298-9833.

DROP-LEAF DINING TABLE, Ethan Allen, \$225; desk, \$150; 12-in. lapidary cutting saw, \$300; 6-in. trim saw, \$75. Navratil, 293-5527.

FREEZER, upright, 16-cu.-ft., time-tested reliability, \$85 FOB. Reed, 884-4505.

CRYPTS, two inside floor-level, Chester French Memorial Mausoleum, \$1,500 under current mausoleum price. Faw, 299-7360.

RIMS W/TIRES, for '63 Chev., \$30; woman's bicycle, 26-in., 10-spd., new, \$35; automobile speed control. Harstad, 298-6551.

POWER TOOLS: table saw, grinder, disk sander, all-mounted router, electric drill, power cords, ladder. Burch, 857-0654.

ARABIAN GELDING, 19 yrs., 14.1 hands, \$2,000; Arabian mare, 12 yrs., 14.1 hands, experienced rider, \$2,200; 15-in. suede-seat saddle, \$400. Rider, 281-1121.

SUPER NINTENDO, w/9 games, \$250; Sony AM/FM dual-cassette & CD player, \$100; all excellent condition. Anderson, 897-2772.

GARAGE SALE, June 21-22, 9 a.m.-4 p.m., upright vacuum, household items, toys, 9500 Avenida De La Luna NE. Marrs, 821-5144.

GIUITAR EQUIPMENT, ADA, MP-1 pre-amp; Microfet power amp; MC-1 Midi controller; Digitech DSP 128, w/rack, \$575 OBO. Dodge, 271-9691.

TILLER, Poulan Pro, 5-hp, chain drive, rear tine, power reverse, just tuned, little useage, \$500. Smith, 865-7261.

AUTOMOBILE GREASE GUN, shop manuals for '70 Ford & '72 Plymouth. Moss, 298-2643.

TOASTER OVEN, Proctor Silex, good condition, \$10 OBO. Ludwig, 856-5111.

COMPUTER DESK, O'Sullivan, w/hutch, 27" x 47", \$20. Jeske, 899-2216.

EIGHT ANTIQUE DINING ROOM CHAIRS, \$25 ea.; cedar chest, \$100; Baldwin organ, paid \$4,000, asking \$2,500. Anderson, 293-5387.

FIRM FLEX RESISTANCE EXERCISER, w/video, \$50 OBO. Hannum, 296-2095.

OSCILLOSCOPE, Eico Model 460, DC-wide band, \$40; Heathkit Model AD-1013 audio oscilloscope, \$40; both excellent condition. Linker, 296-5888.

HARDWARE for making a composter from 55-gal. barrel, free. Hall, 298-8617.

KENNEL (cage), for large dog, \$35; Keystone wheels, Toyota/Nissan, 4WD, \$80; bedroom lamps, \$35 ea. Manzanares, 296-3828.

CHROME FIFTH-WHEEL TAILGATE for F-Series Ford, flush Delta truckbed tool box, fifth-wheel stabilizing tripod. Whiting, 864-6285.

## TRANSPORTATION

'93 CHEV. CAVALIER RS, 4-dr., V6, AT, AC, PW, PL, ABS, AM/FM cassette, low miles, \$6,600. Kuzsmaul, 291-0933.

'85 CHEV., 3/4-ton, AT, AC, 350 engine, freshly painted, excellent condition. \$4,800. Sanchez, 293-7246.

'79 CHEV. C30, 1-ton pickup, long bed, 2WD, 454 V8, AT, new tires, \$2,600 OBO. Eldred, 865-1406.

'90 CHRYSLER LEBARON, convertible, V6, AT, AC, cruise, PW, PL, white, below book, \$5,600 OBO. Wilson, 865-1406.

'93 TOYOTA DX, X-cab, red, AT, AC, AM/FM, bedliner, anti-theft, low mileage, excellent condition. Sanchez, 873-2058.

'89 MAZDA MPV, 4WD, well maintained, original owner, loaded, 120K miles, \$8,400 OBO. Sleefe, 281-4103.

'70 CHEVELLE SS 396, must see to appreciate, \$8,500. Prevender, 296-8586.

'74 CORVETTE, T-top, custom paint, excellent condition, 79K actual miles, \$12,000. Peryman, 281-3020.

**DEADLINE: Friday noon before week of publication unless changed by holiday. MAIL to Dept. 12622, 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). Questions? Call Nancy at 844-7522. 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.

'90 NISSAN AXCESS MINIVAN, 2 sliding rear doors, 45K miles, \$7,700. Hartley, 292-7437.

'88 DODGE COLT DL, 4-dr., 5-spd., AC, AM/FM cassette, new clutch, tires, T-belt & front brakes, \$2,150. El, 891-5732.

'90 HONDA ACCORD EX, 4-dr., 5-spd., charcoal, sunroof, all power, cruise, tint, 77K miles, excellent condition, \$9,000 OBO. Sullivan, 881-0880.

'93 MAZDA B2600i LE, extra cab, 4x4 pickup, 5-spd., bedliner, 39K miles, new tires, excellent condition, \$13,500. Nelson, 828-2755.

'94 DUCATI 900SS SP, jet kit, K&N, CF slip-ons, lots more, 7,700 miles, perfect condition, \$8,300. Curtis, 281-8364.

'87 HONDA PRELUDE, 2.0 Si, 5-spd., loaded, 105K miles, red, excellent condition, 1 owner, \$5,200 OBO. Ellis, 275-1609.

'91 HONDA CIVIC, 1.5L, PB, AC, AM/FM tape, 84K miles, new clutch, timing belt, brakes, \$4,950. Taylor, 275-5925.

'79 JEEP WAGONEER, 360 V8, 4WD, AT, AC, PS, anti-lock PB, tilt, 157K miles, runs well, needs rear-engine seal, \$1,250. Dupree, 294-1835.

'79 MERCEDES 240D, looks good, rebuilt engine & transmission, new tires, \$3,500. Brooks, 255-7551.

'92 SATURN, 4-cyl., mileage 59,575; '95 Chev. Tahoe, mileage 14,895; bids through 6/25/96, until 4 p.m., shown Mon.-Fri., right to refuse bids, subject to prior sale, as is. SLFCU, 237-7382.

'84 PLYMOUTH VOYAGER, 23K miles, seats 7, AC, loaded, like new, tan, \$6,000. Re, 298-0290.

'91 FORD PICKUP XL Lariat, V8, F-150, low mileage, excellent condition, Richards, 883-0932, ask for Milton.

Note to ad submitters: Because of the July 4 holiday, the next issue of the *Lab News*, dated Friday, July 5, may not reach mail stops until Monday, July 8.

'77 FIAT-124 SPYDER, convertible, new roof, runs great, looks great, \$2,450. Ahr, 275-7630, ask for Pat.

'84 TOYOTA CELICA GT, AC, 5-spd., alarm, CD, new transmission, clutch, U-joints, shocks, struts, radiator, \$3,300 OBO. Witek, 296-5198.

'87 NISSAN SENTRA, 5-spd., red, 2-dr., very reliable, tint, CD stereo, good tires, 120K miles, \$1,500. Fagan, 877-7878.

'85 CHEV., custom deluxe, 3/4-ton, AT, AC, 350 engine, freshly painted, excellent condition, \$4,800. Sanchez, 293-7246.

'89 JAGUAR VANDAN PLAS, sandstone, garage-kept, showroom condition, 53K miles. Tapia, 269-8300, leave message.

'61 MG MAGNETTE, classic MG sedan, good shape, daily driver, 1,800 MGB engine, \$2,500 OBO. Flounders, (510) 204-9665.

'92 TOYOTA PREVIA VAN, dual AC, cruise, airbag, tinted, 22K miles, excellent condition & price. Liang, 821-1569.

'94 CHEV. CAMARO Z28, teal, 22K miles, 6-spd., manual transmission, fully loaded, CD changer, warranty, 1 owner, \$16,000. Milligan, 292-1038.

'93 SUBARU LEGACY WAGON, 5-spd., 23K miles, PW, PL, AC, stereo, excellent except dimpled by hail, \$1,000 below book at \$12,000. Berman, 296-5640.

'91 DODGE RAM 150, 1/2-ton, w/shell, 4WD, 318 V8, PB, PS, AC, 33.5K miles, \$9,750 OBO. Hole, 888-0283.

'87 HARLEY FLHTC, 15K miles, great shape. Schrader, 298-4154.

'88 ACURA INTEGRA, Special Edition, 5-spd., AC, AM/FM stereo cassette, PW, cruise, sunroof, 75K, white, \$6,900. Swanback, 294-5850.

'75 PLYMOUTH VALIANT CUSTOM, AT, AC, PS, PB, 4-dr., slant 6, 74K miles, new battery, reliable, \$950. Rezac, 281-1816.

'93 HYUNDAI SONATA GLS, 4-dr. sedan, V6, tan, theft-proof stereo cassette, AC, new tires, \$10,900. Garcia, 857-9171.

'86 TOYOTA LAND CRUISER, 4WD, 93K miles, excellent condition, clean, AC, PS, never wrecked, \$9,000. Walsh, 869-0250.

'93 JEEP GRAND CHEROKEE LAREDO, all power, 46K miles, 6-cyl., \$17,500 OBO, extended warranty available. Gonzales, 266-3412.

'89 FORD BRONCO, 4x4, 76K miles, white exterior, receiver hitch, 1 owner, good condition, \$8,000 OBO. Spates, 345-7611.

'94 MERCURY SABLE GS, 3.8 V6, loaded, low miles, excellent condition, priced below book, \$12,200. Hart, 292-5110.

'85 CUTLASS CIERRA, fully loaded, low miles, less than 65K, like new, \$4,400. Clingan, 296-7444 or 269-3448.

'93 ESCORT LX WAGON, 5-spd., white, AC, 42K miles, AM/FM, luggage rack, below book at \$7,500. Hatch, 281-0543.

## RECREATIONAL

TRAVEL TRAILER, 19-1/2 ft., self-contained, AC, new awning/tires, \$4,500; camper shell, fully insulated, fits full-size pickup w/long bed, \$700. Tafoya, 298-6208.

POP-UP CAMPER/TRAILER, Jayco Jayflight 8, sink, stove, icebox, sleeps 8, real good condition, \$1,700. Martin, 296-8154.

'79 COACHMAN MOTORHOME, 23-ft., low mileage, 15-amp generator, roof air, sleeps 6, rear bath, \$7,995 OBO. Sifford, 869-3982.

CANOE, Coleman, 17-ft., w/paddles, like new, cost new \$750, asking \$400. Barnett, 281-9056.

CENTURION PRO-TOUR BICYCLE, good shape (needs tuning), many accessories, \$250. Goff, 266-3057.

HOBBIE CAT ACCESSORIES, main sail, jib & tack. Bullock, 286-1910.

'83 SPINDRIFT DAY SAILER, 17-ft., 1/2-hp Johnson, w/trailer, w/Coast Guard equipment, very good condition, \$2,500. Bertsch, 292-3462.

TWO DALLAS COWBOYS PRE-SEASON TICKETS, at Texas Stadium, Monday, Aug. 12, vs. New England, Section 5, Row 21, \$30 ea. Hernandez, 296-8498.

COMPOUND BOW, 40#, Pearson, 6 arrows, quiver, mech. sights, great "starter" pkg. Jackson, 293-0262.

'91 HARLEY-DAVIDSON FXRS, immaculate condition, two-tone blue, custom extras, only 9K miles, \$14,900. Wiseley, 298-3195.

RALEIGH MOUNTAIN BIKE, 16.5 in., Rock Shox, high-end components, ridden 3 times, \$450 OBO. Bowman, 299-4324.

'89 RV, Jamboree Searcher, 27-ft., approx. 19K miles, full-size bed, nice kitchen & bath, like new, excellent condition, \$18,500. Roseth, 856-6964.

'91 KAWASAKI VOYAGER XII, great value, touring motorcycle, many features, always garaged, 23K miles, \$5,800. Shannon, 281-3038.

BICYCLE, Peugeot Sport 12, 10-spd., 27-in. wheels, 21-in. frame, good condition, \$45. Durkee, 255-4211.

'82 FORD MOTORHOME, 24-ft., Class C, Onan/gen, microwave, new tires/batteries, 33K miles, sleeps 6, excellent condition, \$12,750. Lusader, 298-3469.

'76 VW RABBIT, 4-spd., runs great, \$750. Walther, 299-7560, call after 6/22.

ATB BIKE, 26-in., 10-spd., chrome wheels, red color, brand new, never used, \$55 OBO. Freyermuth, 299-2053.

'95 JAYCO EAGLE-8 TENT TRAILER, gas stove, electric/water hookups, icebox, canopy, below book, \$3,850. Sterling, 281-4668.

GIRL'S BIKE, 20-in. Schwinn, 5-spd., \$50. Rector, 286-1217.

## REAL ESTATE

2-BDR. SKI CONDO, near Purgatory, 1,310 sq. ft., furnished, 2 baths, excellent construction, great rental history, \$99,500. Moore, 764-8489.

3-BDR. HOME, 2,600 sq. ft., 2 wooded acres, east mountains, custom solar, 2-1/2 baths, library, TV room, bdr. suite, views, cul-de-sac, \$249,900. Wright, 281-1181.

3-BDR. HOME, 2 miles to Eubank gate, 1-3/4 baths, 2-car garage, living room, family room, hardwood floors, fruit trees, garden, \$125,000. Seigal, 256-3770.

4-BDR. CEDAR CREST HOME, 1/2 acre, 1,800 sq. ft., water system, new light & plumbing fixtures, new parquet floor, new roof, \$145,000. Mahmud, 281-0221.

4-BDR. ASHCRAFT HOME, 2-1/2 baths, LR/DR, den, security system, hot water heat, excellent location, 2,400 sq. ft., \$190,000. Olona, 268-3604.

2-BDR. TOWNHOUSE, 1,465 sq. ft., 1-1/2 baths, fireplace, 2-car garage, patio, clubhouse, pool, tennis, \$109,900. Warner, 293-7401.

4-BDR. CUSTOM HOME, east mountain, 2,900 sq. ft., 3 baths, huge kitchen, 5 acres, horse facilities, decks, extras, \$255,000. Wolf, 281-0287.

2-3 BDR. TOWNHOUSE, near Ladera Golf Course, 1,428 sq. ft., 3 yrs. old, 2-1/4 baths, many upgrades, \$116,900. Stuhlmann, 839-7079.

3-BDR. HOME, 1,960 sq. ft., LR/DR, family room, study/4th bdr., 2-1/4 baths, 2 fireplaces, 1000 Espanola NE, \$139,900. Winowich, 255-2611.

3-BDR. BRICK PATIO HOME, 2-baths, jetted-tub, gas fireplace, 2-car garage, 4 yrs., NE Heights, immaculate, 1,165 sq. ft., \$121,500. Caskey, 298-6428.

3-BDR. HOME, Sandia Park, 2,300 sq. ft., 2-1/2 baths, 2-car garage, covered patios, 2 yrs. old, kiva FP, fenced backyard, views, \$214,950. Salazar, 281-0560.

## WANTED

FULL-SIZE BED w/or without headboard. Graham, 890-2748.

PERSONS GOING TO SALEM OREGON, July 22-26, would like to caravan w/someone, single woman w/conversion van. Beck, 294-4591.

ROOMMATE, nice 3-bdr. home, Los Lunas area, \$250/mo. + 1/2 utilities, male/female. Smith, 866-4067.

CARPOOL, from Las Maravillas/Pasitos area, work hours 7:30 a.m.-5 p.m., Monday-Thursday (9/80 schedule). Vigil, 865-6187.

NEW MEMBERS for Sandia/DOE Singles, social gatherings, w/free swim & refreshments, July 18, 4-10 p.m. White, 255-9586.

LADY who called on cherry pitter, call again, have another one. Bazar, 898-1467.

CARTOP LUGGAGE CARRIER, enclosed & lockable. Skogmo, 292-9773.

USED PROPANE TANK, 500-gallon or larger. Brooks, 281-9498.

CHILD'S SWINGSET/PLAYGYM, wooden, w/or without eagle's nest, rings, slide. Heald, 281-7885.

TRANSCRIPTION MACHINE, Dictaphone or other model, dual tape preferred, will consider any. Rosales, 837-1644.

## LOST & FOUND

FOUND: Black Lab/mix puppy, 9 mos., gentle disposition, free to good home. Restrepo, 822-9419.

FOUND: Calculator, near Area II. Starks, 845-3096.

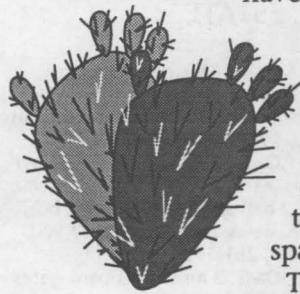
LOST: Dark sunglasses (non-prescription), w/brown/black plastic frames, Technology Transfer Center about 4-6 weeks ago. Stude, 844-2650.

FOUND: Bicycle pump, inside gate near Medical Bldg. on June 6. Kuehn, 292-7852.

## Everyone's favorite cactus (well, part of it) finds new home in front of Bldg. 800

In our last episode, the 30-year-old cactus appeared to be headed for the great blooming desert in the sky.

The giant prickly pear cactus, planted on a whim behind Bldg. 800 in the late 1960s, was the subject of a photo and brief feature in the June 7 *Lab News*. When word came down that the cactus stood in the way of a Power Systems Modernization (PSM) junction box and would



have to go, it sparked a grass-roots "Save the Cactus" campaign. Several Sandians, including *Lab News* Editor Ken Frazier, called PSM coordinators, asking them to spare the cactus.

The *Lab News* was promised it would be saved.

When we went to press last issue, however, the pitiful, broken remains of what appeared to be the entire cactus were heaped in the back of a dump truck, which appeared to be "gettin' out of Dodge" with the corpus delecti as discreetly as possible.

This is the rest of the story . . .

Yes, the truck was carrying substantial pieces of the cactus away, but it turns out a small piece — maybe 1.5 to 2 feet in diameter — of it was saved and transplanted to a new spot in the triangular landscaped area between Bldg. 800 and Wyoming Blvd.

Here's what happened, as recounted by Sandia landscape gardener J.R. Lujan of Building Maintenance Dept. 7874.

"We never had a job to transplant such a

large cactus," J.R. says. "We didn't know exactly how to go about it, so we called our consultant [a certified arborist associated with the University of New Mexico]. He told us what we had to do — we had to trim it way back.

"When we tried that, the cactus just started to fall apart; we found out it's really a very fragile plant."

When Plan A didn't work, J.R. and his colleagues tried Plan B.

"We decided to try and dig it out with a backhoe, but when we did that, it really started to come apart. We tried our best to do it, but it turned out to be not an easy thing to do.

"We transplanted a part of the cactus; the biggest piece we could save, and we gave it some TLC; hopefully, it's gonna make it — cactus are pretty hardy little guys.

"I want everyone to know we tried our best; we always do because our work [landscaping] is always out front, in the spotlight. In our work, we always have Monday-morning gardeners telling us what we should have done."

Roy Crumley (10232), who was responsible for the original planting back in the '60s and was the subject of the *Lab News* photo/feature, was philosophical about the fate of "his" cactus. In an e-mail note to one of the "Save the-Cactus" campaigners, Roy wrote:

"Jackie, it looks like the cactus has been cut back down to its original size when it was planted. Maybe in another 30 years, when the cactus is again six feet or so in diameter, perhaps someone else responsible for its continuance will gain fame and notoriety and have their picture taken with it. Thank you for letting me know. Roy C." — *Bill Murphy*

## Coronado Club

June 20, 27 — Thursday bingo night. Card sales and buffet start at 5 p.m., early birds' bingo at 6:45 p.m.

June 21 — Kids' bingo. Buffet from 5-8 p.m. Cartoons, movies, and bingo, 7-9 p.m. Free hot dog and soft drink for all kids playing bingo. Cost of a bingo packet is \$2.50.

June 23 — Sunday brunch buffet, 10 a.m.-2 p.m. \$6.95 all-you-can-eat buffet. Kids 3-12, \$1, under 3 free. Music by Bob Weiler, 1-4 p.m.

June 28 — Patio BBQ buffet. A la carte buffet 5-9 p.m. Pool open 'til 9 p.m. Music and dancing on the patio 7-11 p.m. Music by Together.

July 4 — Fourth of July BBQ buffet. A la carte buffet 11 a.m.-6 p.m. Pool open 'til 9 p.m. Children's games 1-5 p.m. Music by the Dukes of Albuquerque Orchestra, noon-2 p.m.; Music by Coyote Moon, 2-6 p.m.

July 12 — "Western Night" dinner/dance. \$7.95 all-you-can-eat buffet, 6-9 p.m. Music by Isleta Poorboys, 7-11 p.m.

## Coronado Club seeks new board members

In September 1996, a new Board of Directors will be elected. The Club is currently recruiting for three open positions. Candidates must be current DOE/Sandia employees having a Coronado Club membership. If interested, please contact the Board of Directors at 265-6791.

## Sandia News Briefs

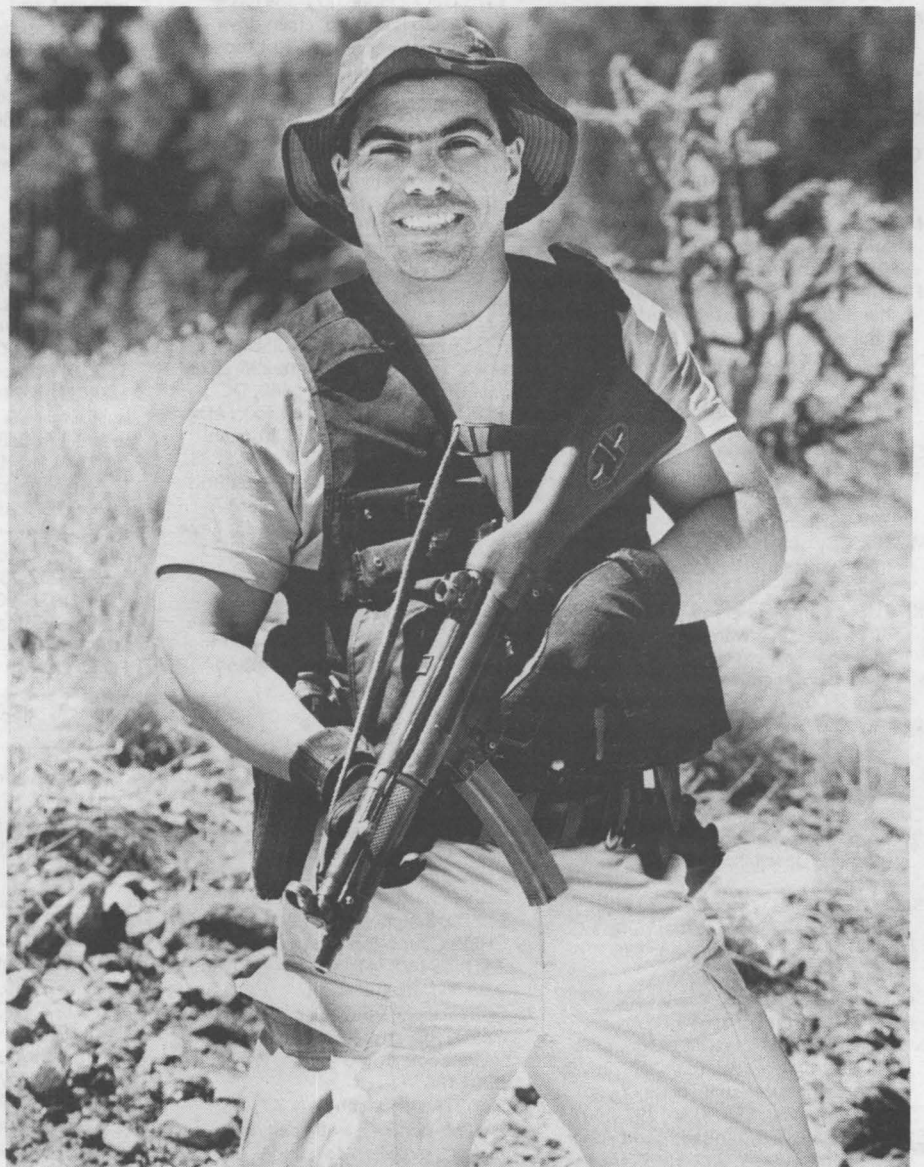
### Visual Communications Department continues to rack up honors

Sandia's Visual Communications Dept. 12614 walked away with four awards during the Association of Visual Communicators 37th Annual International CINDY (Cinema in Industry) Competition. The department also earned significant recognition during the 17th annual national Telly Awards. Of the 2,300 videos entered in the CINDYs, 15 percent were recognized with Honorable Mention, Bronze, Silver, or Gold CINDY awards. Sandia won a Silver CINDY for "Retrofitting and Redesigning Sandia's Shielded Lift Truck" and a Gold CINDY for "The Revolutionary Precision Technology Airbag." Both were in the category "Business, Industry, and Government" under the subheading "Technical Information Report/Scientific Research." Less than 12 percent of the 750 interactive products entered in the competition received an award. "Sandia National Laboratories 1995-1996 Corporate Overview CD-ROM" won a Bronze award. The CD was a collaboration between Sandia's Interactive Media Dept. 12616 and Visual Communications Dept. 12614. At the Telly awards, about 15 percent of the 9,000 entries achieved finalist status earning a Bronze award, and less than 10 percent were recognized as Gold award winners. Department 12614's video "Robotics Safety" won a Gold Telly award in the Safety category. In addition, four videos were selected as finalists: "Sandia's Community Relations" in the Recruitment category; "One Life to Give (Lockout-Tagout Training)" in the Safety category; "The Revolutionary Precision Technology Airbag" and "Massively Parallel Computing at DOE's National Laboratories" in the Government Relations category.

### Sandians help the homeless with penny donations

This was the first year Sandia participated in Sunwest Bank's annual Pennies for the Homeless drive. Sunwest sponsors the drive for Albuquerque Public Schools (APS), and the money goes to homeless shelters in Albuquerque. As part of the project, APS students visit shelters in Albuquerque to get a first-hand look at the life of homeless persons. The students then determine which shelters will receive the donations. Collected in the 1996 drive was \$13,762.91; Sandians gave more than 33,000 pennies, or about \$336.

Send potential Sandia News Briefs to Lab News, Dept. 12640, MS 0165, fax 844-0645.



(MARKS)MAN OF THE YEAR — Mark Madrid (7435) was recently named Security Police Officer of the year for 1995. Mark, a member of the famed Sandia Special Response Team - South Force, has been with Sandia for five years; most of that time with the South Force. The SPO of the year is selected from the current group of officers of the quarter and is chosen for his or her demonstrated leadership, consistency, and job habits. (Photo by Randy Montoya)