

Sandia Scientists Create Custom-Made Catalysts

Some of Mother Nature's best molecules are slowly being surpassed by scientists in Sandia's Fuel Science Dept. 6211.

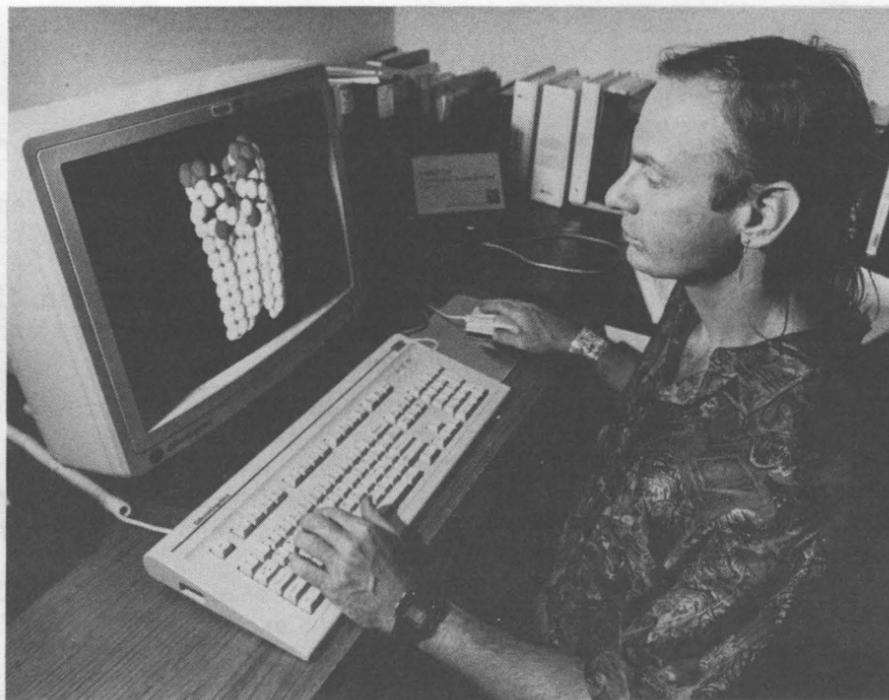
Synthetic compounds are nothing new to a world of plastics, superconductors, and designer drugs. But John Shelnett's work marks a step in a new direction by building catalysts — one atom at a time — to maximize specific reactions. Pharmaceutical chemists traditionally design drugs to fit into certain pocket-like sites on proteins, but John (6211) and his collaborators in several universities have turned that idea around.

"As far as I know, we're the only people who are using molecular modeling to design catalysts with pockets that fit given target molecules," says John.

The difference might not seem important, until you consider the nature of the catalyst. Catalysts facilitate chemical reactions without being used up by them, says John, similar to a sewing machine that joins fabric and thread without becoming a part of the clothing.

By combining computer-aided molecular modeling with experimental data and complex dynamics calculations, Sandia researchers have been able to design and evaluate catalysts before synthesizing them. As a result, John's group has developed catalysts that are several times more active than current commercial ones. The significance of their work, says John, lies in discovering the relationships between molecular structure and catalytic activity. This information can then be incorporated into future catalysts. According to John, there are very few

(Continued on Page Seven)



BUILDING BETTER MOLECULES — John Shelnett of Fuel Science Dept. 6211 uses computer-aided modeling to tailor-make catalysts that maximize specific reactions. Working with a computer, John can design and test potential molecules before they are synthesized in the lab. As a result, Sandia has developed catalysts that are several times more active than current commercially available ones. (Photo by Mark Poulsen)



LAB NEWS

VOL. 45, NO. 21

SANDIA NATIONAL LABORATORIES

OCTOBER 15, 1993

Orpheus in the Underworld

Can Sound Waves Fulfill Drillers' Dreams?

Sandians are reaching for a drilling-industry dream that dates back more than 50 years. This dream of people in the oil and gas, geothermal energy, and mining industries is called acoustic telemetry: the transmission of data from deep underground via sound waves traveling along drill pipe.

Such a technique would improve measure-

ment-while-drilling information rates by a hundredfold. Drillers could have real-time navigational information (the location and direction of the drill bit), temperature data, pressure readings, drill-bit diagnostic measurements, and data about formation properties, such as porosity and oil and gas saturation. This information would help improve drilling

(Continued on Page Six)



WHERE THOUSANDS WALK, someone has to keep the shine on the floor. Thanks to Phillip Rivera of Custodial Services Dept. 7615, the floor at Sandia's main entrance in Bldg. 800 gleams as brightly as the sky outside. (Photo by Randy Montoya)

Dismantlement Field Office Opens

Three Nuclear Weapons Labs Move In Together

With the ceremonial snipping of a pair of big yellow scissors through a blue ribbon, the Tri-Laboratory Project Office at DOE's Pantex Plant near Amarillo, Texas, officially opened for business Sept. 29.

The new office, known as the Tri-Lab Office, brings together the nation's three nuclear weapons laboratories — Sandia, Lawrence Livermore, and Los Alamos — under one roof so weapons designers can more directly contribute to the nation's stockpile dismantlement efforts.

Seven laboratory representatives will inhabit the new office: two from Los Alamos (Darrell Schmidt and Cary Skidmore), three from Lawrence Livermore (Tom McGee, Nick Brazell, and Tony Vidlak), and two from Sandia (Bob Martin, 5407, and one person to be identified).

"You, the laboratories, know the contents of 'the bomb,'" said Steve Guidice, Assistant Manager for Operations and Weapons at DOE's Amarillo Area Office (AAO), during the Sept. 29 open house ceremony at the newly refurbished Tri-Lab office facility. "There isn't anyone else who can readily identify its hazards."

Less Production, More Disassembly

The ceremony was the culmination of an 11-month effort that began last October, when Bruce Twining, Manager of DOE's Albuquerque Operations, sent a letter to the three laboratory directors. To safely maintain, evaluate, retrofit, repair, and dismantle weapons by the thousands during the next decade, the letter said, the laboratories must play a "stronger, more direct and well-defined role in the nation's weapons operations."

Historically, the Pantex Plant has performed the final assembly of US nuclear weapons. Although stockpile surveillance, as well as

(Continued on Page Seven)

Sandians May Now Receive Share of Royalties — See Page Five

This & That

"The Good Boss" - That was the title of the verse on a memento that the Media Relations and Employee Communications departments presented to Herb Pitts (7100) several weeks ago just before we "transitioned" from him to our new boss.

Retired Public Relations Department Manager Jim Mitchell penned "The Good Boss," and I thought you might enjoy these excerpted lines that fit Herb well: The good boss:

Helps you when you need help,
Doesn't help you when you don't need help,
Doesn't let others help you when you don't need help,
Knows when to let others help you when you don't need help,
Can explain the difference between all of these.

* * *

Some Real Suck-ups - Our new boss is Jerry Langheim, Director of Public Relations and Communications Center 12600, one of the Martin Marietta folks who transferred here. I'm getting a bit irritated with some of my colleagues who are trying a bit too hard to impress him. I overheard one of them talking to Jerry, bragging that he could do a better job of polishing Jerry's car and raking his yard than I did. What nerve!

* * *

Overgrown Organization Numbers - I'm having trouble adjusting to these new five-digit organization numbers that some groups were assigned Oct. 1. I even have trouble remembering ours - Employee Communications Dept. 12660. Our organization numbering system might work as well if we take everyone in our respective departments, add their ages, divide by the number of space shuttle flights in the past year, multiply by the Credit Union account number of the newest employee, add the IQ of the manager, and use that as our organization number. Of course, we'd have to refigure and renumber every time someone left or joined us, but for some of us that wouldn't be much more often than we do now.

* * *

Editor, Heal Thyself! - "World class" may have become the most overused of the many buzzwords and buzz phrases. A recent issue of a communications newsletter poked some fun at the term, even advising, "Never attend a conference or workshop that has world class in its name." But in that same issue, only two pages later, was an announcement for the 46th Annual Conference of the Public Relations Society of America, titled, of course, "World Class Public Relations." I decided to skip it. Before you use "world class" to mean "outstanding," you might want to consider the state of the world. It could be better.

* * *

Bravery and Brains Go Together - For the third time in recent memory, my mail last week included a controversial item along with a note reading something like this: "I'll bet you're not 'brave' enough to print this." I usually don't even reply to such challenges, but it might be a good time to remind a few folks that there is a difference between bravery and stupidity, and I always try to keep that in mind.

* * *

Ready for a Restful Weekend - I may be partied out by tomorrow. Yesterday was National FRUMP Day, honoring average Frugal, Responsible, Unpretentious, Mature Persons. And today is National Grouch Day. •LP

Two Sandia Unions Ratify Contracts September 30

Members of the Office and Professional Employees International Union (OPEIU) and the Metal Trades Council voted Sept. 30 to accept three-year contracts with Sandia.

"We're pleased that the Sandia employees represented by the OPEIU and the Metal Trades Council have voted to accept these contracts," said Julian Sanchez, Manager of Labor Relations Dept. 3510 and the Labs' bargaining agent, after bargaining concluded. "The contracts offer wages and benefits competitive with those in comparable private industry and in other DOE facilities."

Economic provisions are identical in both contracts. They call for increases in both base pay and non-base pay over the life of the contract, although there will be no base-pay increases in the first year. The contracts also call for increases in meal allowances, shift premiums, and pension benefits.

Dependent Contributions Begin in '95

Sandia will continue to pay all of an employee's health care premiums, but Sandians will make contributions for dependent coverage beginning in January 1995. Employees covered by the contracts will pay \$17 a month if they have one dependent and \$28 if they have two or more.

The contracts call for increases in benefits in dental and vision coverage as well as increased coverage of certain preventive cancer screenings. The contracts also triple the maximum lifetime Medicare supplemental coverage.

Vacation provisions will remain the same as under previous contracts for current employees but will be reduced for employees hired after Sept. 30. This provision is consistent with vacation benefits for Sandia employees not represented by unions.

Each bargaining unit comprises about 650 employees. •

Take Note

The Albuquerque Bonsai Club is sponsoring a demonstration and workshop on Saturday, Oct. 16. Bonsai master Harold Sasaki will give a demonstration beginning at 9 a.m. at Yonemoto's Nursery (208 El Pueblo NW). The public is invited to attend the demonstration and to observe the 1-3:30 p.m. workshop where club members will work on their own projects. Admission to both is \$5. For details, call Roger Case (9249) on 299-4775.

* * *

Stanley Logan, chairman of the American Nuclear Society (ANS), Trinity Section, will give a slide presentation, "Nuclear Energy: Clean Energy for an Environmental Age," at an ANS dinner meeting on Friday, Oct. 22, at the Best Western High Mesa Inn in Santa Fe. The presentation gives an overview of the role of electric power in the US and the role of nuclear energy in supplying that electricity. A social gathering begins at 6:30 p.m., dinner is at 7 (dinner cost is \$19), and the program is at 8. Reservation deadline is noon on Tuesday, Oct. 19. For information and reservations, call 277-5431.

* * *

The annual Holiday Show sponsored by the Bernalillo County Extension Homemakers is scheduled for Saturday, Oct. 23, 10 a.m.-3 p.m. at the 4-H Center (1500 Menaul NW). The show features homemade crafts and baked goods. Proceeds from the show support local 4-H clubs. Admission is free. For more information, call the Bernalillo County Extension Office on 243-1386.

Fun & Games

Fun Run - The sixth annual Ryan's Run to support Ronald McDonald House will be held Saturday, Oct. 16, at Ronald McDonald House on the north campus of UNM. Ronald McDonald House is a home-away-from-home for families of seriously ill children receiving treatment at nearby hospitals. Registration forms for the run (and walk) are available from Kenneth Gwinn (1562) and from the Ronald McDonald House on 842-8960. For more information, call Diane Gwinn (Kenneth's wife) at UNM on 277-2849.

LAB NEWS

Published Fortnightly on Fridays by
Employee Communications Department 12660

SANDIA NATIONAL LABORATORIES
An Equal Opportunity Employer

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LIVERMORE, CALIFORNIA 94550
TONOPAH, NEVADA
NEVADA TEST SITE
AMARILLO, TEXAS

Sandia National Laboratories, a prime contractor to the US Department of Energy, is operated by Sandia Corporation, a wholly owned subsidiary of the Martin Marietta Corporation.

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MARTIN MARIETTA

President's Quarterly Dialogue Sessions Begin Next Week

Sandia President Al Narath will address all employees during quarterly dialogue sessions during the next two weeks. Particular topics will be the quality emphasis, transition, and Labs accomplishments. All employees are encouraged to attend.

California:

Sessions will be Thursday, Oct. 21, at 8:30 and 10 a.m. in the Sandia/California auditorium (Bldg. 904). Employees with last names beginning A-M should attend the 8:30 session; N-Z should attend the session at 10.

New Mexico:

Sessions will be in the Technology Transfer Center (Bldg. 825) at 8:30 a.m., 10 a.m., and 1 p.m. on Monday, Oct. 25 (sessions originally scheduled for Oct. 26 and announced in the Oct. 11 *Weekly Bulletin* have been cancelled). On Oct. 25, employees with last names beginning A-I should attend the 8:30 session; J-R the session at 10, and S-Z the session at 1.

At Combustion Research Facility**Burner Engineering Lab Fuels Research for Natural Gas Industry**

It could be a classified ad: "WANTED — gas-fired burners that stretch fuel and cut pollution."

Although it's not a real ad, the phrase expresses what researchers and manufacturers of gas-fired burners are aiming for. And at the Combustion Research Facility's newest lab, the Burner Engineering Research Laboratory (BERL), researchers can work at developing and testing designs for more-efficient natural gas burners that also reduce emissions.

The BERL provides industry, university, and independent researchers state-of-the-art conventional and laser diagnostic equipment to study air and fuel mixing, exhaust composition, and other aspects of combustion in a controlled environ-

Researchers not only measure combustion products, they also examine the processes that lead to pollution.

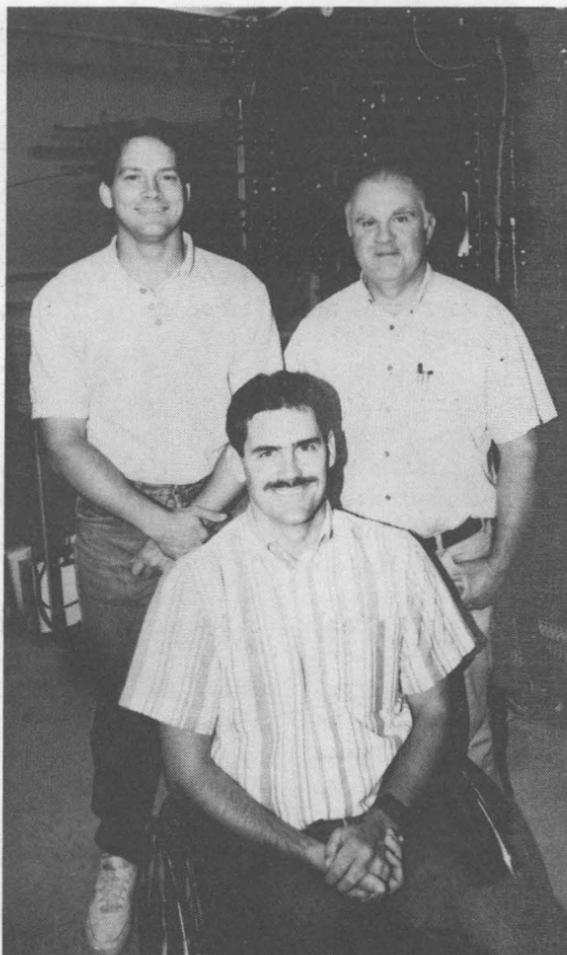
ment. Operational since October 1992, the \$3 million BERL is funded jointly by DOE and the Gas Research Institute, an independent, nonprofit scientific research organization of the natural gas industry.

The BERL focuses on industrial and commercial natural-gas burners that create steam in utility boilers and generate heat for oil refining, glass fabrication, metallurgy, and other manufacturing processes.

"We can essentially simulate all the conditions these burners would expect to see," says BERL staffer Neal Fornaciari of Combustion Applications Dept. 8362. "I think we can help manufacturers improve efficiencies and reduce emissions."

Emissions Regs Get Stiffer

Complying with increasingly stringent emission regulations challenges burner manufacturers. With the lab's diagnostic equipment, researchers not only measure the concentrations of combustion products, but also examine the processes that lead



IN FRONT OF an industrial-size test furnace, Neal Fornaciari (8362, center) is flanked by Bob Sanford (left) and Lloyd Claytor, both on-site contractors from Energy and Environmental Research Corporation.

to pollutant emissions.

The two-story lab has an octagonal furnace located in a former machine shop, with the lab area and control room upstairs and a mechanical room downstairs. About five feet tall and 42 inches in inside diameter, the furnace accommodates burners of various designs with firing rates from 100,000 to 3 million Btu (British thermal units) per hour.

Four types of interchangeable wall panels increase the versatility of the facility. Refractory-lined and water-cooled panels allow for changeable boundary conditions. Large windows permit access for optical diagnostics, and small ports allow access by conventional probes. Air preheat, flue gas recirculation, and steam injection also allow simulating a wide range of burner operating conditions.

Sandia provides the laser diagnostics, lab space, utilities, and local supervision; Energy and Environmental Research Corporation and the University of California, Irvine Combustion Laboratory, operate the furnace and conventional diagnostics. Stack emissions of CO, CO₂, O₂, NO_x, and unburned hydrocarbons are constantly monitored by conventional gas analyzers. Users can position suction pyrometers and water-cooled gas sampling probes at any location in the furnace.

Can Scan Flame at Burner

Laser diagnostics include laser Doppler velocimetry for measuring fluid velocities, planar Mie scattering for visualizing mixing, and laser-induced fluorescence imaging of combustion species. A special traversing mechanism moves laser diagnostic equipment around the furnace horizontally, while the furnace moves vertically, allowing a complete scan of the flame.

"The mission of the facility is to provide industry with another tool to meet more stringent environmental standards," Neal explains. "The researchers have a fundamental understanding of combustion, and designers can direct that knowledge to help meet industry needs."

The BERL is part of the Combustion Research Facility, which opened in 1980 in response to the energy crisis of the 1970s. With the purpose of reducing energy consumption and preserving the environment, the CRF conducts fundamental and applied research and development in combustion science and technology in collaboration with scientists and engineers from industry, university, and government laboratories throughout the world. ●

Stay Ready for Ideas

Editor's Note: Here are some suggestions we thought busy Sandians might find helpful. (Reprinted by permission.)

Nobody knows where ideas come from, but if they're not quickly written down, even the best idea may be lost. Be prepared when lightning strikes:

Pause for brief notes. A few words jotted on a napkin at a luncheon or a staff meeting can help you recreate the idea when you have more time to develop it. Don't wait too long before going back to your notes, though, or you may not be able to decipher your scribbling.

Always keep paper nearby. Carry a small notebook in your briefcase, purse, or back pocket. Plant a pad of paper near your bed.

Use waiting time. Waiting for appointments or meetings, standing in line at the bank, getting ready to order lunch — use these times constructively. Think over a problem or plan a new project.

Make it a habit. Give yourself 10-15 minutes a day, same time, same place, to think things over. Record your ideas and decisions, and make lists to follow up. Let colleagues and employees know you're not to be disturbed.

Look for ideas when you read. Books and articles may help you generate creative ideas. Keep a journal handy, or make a note in the margin.



**SANDIA
CALIFORNIA NEWS**



THE NEW Martin Marietta/Sandia flag was unveiled Oct. 1 by VP John Crawford (8000, left) and Martin Marietta's Bert Westwood, who that day became VP for Research and Exploratory Technology 1000. The transition ceremony took place on the Sandia/California computing center patio and included remarks from John, Bert, DOE site manager John Andrews, and Martin Marietta transition officer John Hogan. Asked to do the honors of raising the new flag were Sandia/California's longest tenured employee (with 42 years service) Matt Connors (8523) and newest employee Leslee Peeters (8642), who began her job Sept. 27.



Sandia President Al Narath (left) and DOE Albuquerque Operations Manager Bruce Twining put their signatures on the new contract.

A Day That Was About the Future

Several hundred Sandians gathered in front of Bldg. 800 on Oct. 1 for a flag-raising and contract-signing ceremony to mark Martin Marietta's assumption of the DOE contract to manage and operate the Labs. As the ceremony began, Gene Ives (5200) sang the national anthem and a Naval Junior ROTC Color Guard from Highland High School hoisted the US flag. The flag was sent by Senator Jeff Bingaman and had flown over the US Capitol.

Sandia President Al Narath said, "Today we close a chapter in Sandia's history. We've come to the end of a 44-year period under AT&T management . . . But today is not about the past, today is about the future . . . I'm confident that Martin Marietta will fully support the strategic vision we have developed."

DOE Albuquerque Operations Manager Bruce Twining said, "We in DOE have great respect for the 44 years of service that AT&T has provided to the country in operating Sandia . . . There are many things that have to be attended to in a transition like this, and the folks who have worked on that have done a superb job . . . We all have great expectations about the future, and we look toward Martin Marietta's continuing the tradition of exceptional service to the nation."

The two speakers then ceremonially signed the new contract, and the new flag was hoisted.

Also at the ceremony were DOE/Kirtland Area Office Manager Kathy Carlson, DOE/AL Deputy Manager Jim Culpepper, and new Sandia Executive VP Jim Tegnalia.

A flag-raising ceremony at Sandia/California was held at the same time (see page three).



As Security Police Officer Ruben Garcia (7435) hoists the new flag, he is watched by (from left) Sandia President Al Narath, Executive VP Jim Tegnalia, DOE Albuquerque Operations Manager Bruce Twining, Albuquerque Operations Deputy Manager Jim Culpepper, and DOE Kirtland Area Office Manager Kathy Carlson.



At the end of the ceremony, Al and Jim trade quips — and talk about the future.

First Night Launch for System

STARS Gives Glowing Performance in Pacific Midnight

A midnight launch from the Labs' Kauai Test Facility heralded a perfect 18-minute missile flight — and months of analysis to digest the mass of data collected during the flight.

The Aug. 25 launch of a Strategic Target System (STARS) missile was the second of the series, and the first night launch. The test was performed at night because it involved airborne and ground-based optical sensors that needed to operate in the dark, says Eric Schindwolf, Manager of Large Rocket Systems Project Dept. 2725 and STARS program manager.

The flight carried two payloads that capped five-year development programs in the US and United Kingdom. The payloads were carried on the same flight because the UK hardware was a decoy, intended to mimic the performance of the American experiment, Eric explains. Thus they had to fly on the same mission and follow the same trajectory for a valid comparison.

The US experimental vehicle deliberately damaged itself by detonating an explosive charge during descent, to blow away part of the heat shield and determine how the damage would affect its survival or demise.

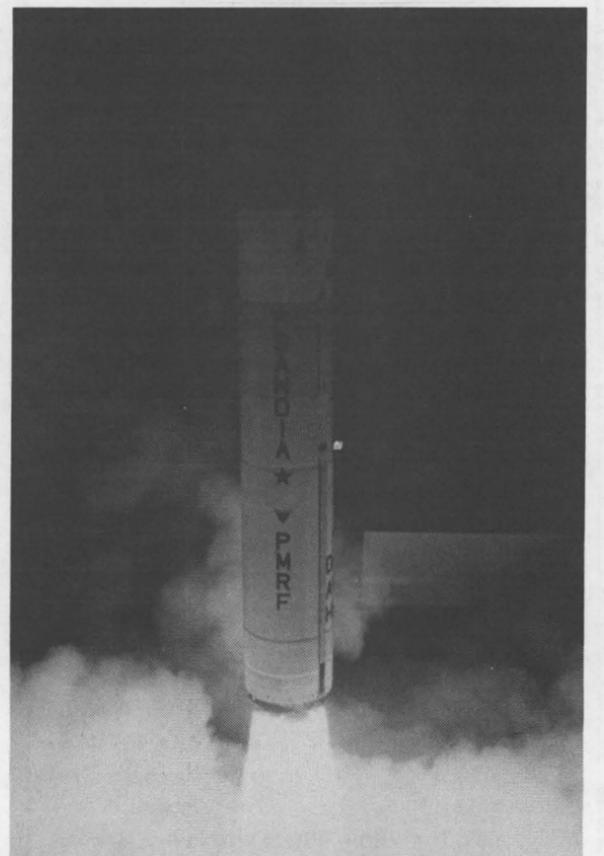
The experiments gathered basic data for the US Ballistic Missile Defense Office (successor to the Strategic Defense Initiative Office). The data could later be used in developing missile defense technology.

The launch team found the midnight fireworks

to be spectacular. Connie Myers of Range and Small Rocket Systems Dept. 2723, who was on nearby Makaha Ridge to provide time-lapse photo coverage, says, "The rocket plume lit the entire valley like it was day. You could see the shoreline, the Nohili dunes, and the face of the eastern ridge." Stationed with Connie was British team member Anthony Silcock of Hunting Engineering, Ltd., who says, "We could even see the third stage burn" — more than 1,000 miles away.

Diana Helgesen of Photometrics and Optics Dept. 2752 was responsible for photometrics coverage of the launch and at first feared she had "underestimated the intensity of the light." In the end, her fears were unfounded — one of her photos appears on this page.

Other Sandians with key roles in the test included lead missile engineer Margaret Weber (2725), who was confident enough to schedule a post-launch bonfire for 1:30 a.m.; Eric Reece, Manager of Interceptor Targets and Lethality Dept. 9817, who had programmatic responsibility for developing the US payload; and Neill Benton (9817), project leader for the US payload. Piggybacking on the flight was an experiment to test the use of Global Positioning System satellites for ballistic missiles, developed by Earl Creel of Navigation Guidance and Control System Dept. 9132 and Al Watts, Assistant Director for Navigation Guidance and Control 9101.



FROM A CLOUD of light, a STARS missile lifts into the Hawaiian darkness for a successful 18-minute flight to Kwajalein.

(Photo by Diana Helgesen, 2752)

A More Aggressive Commercialization Strategy

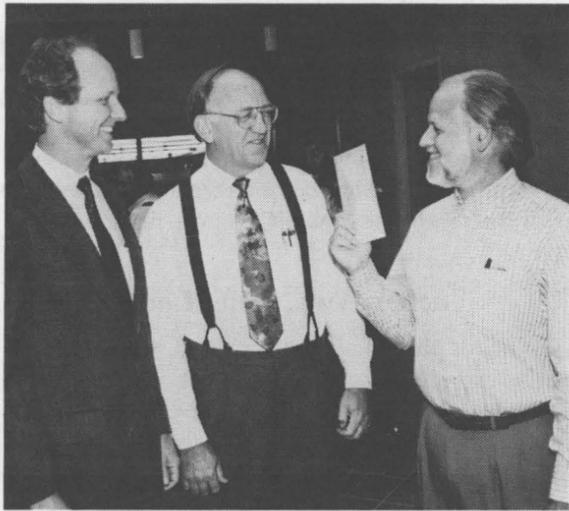
Tech Transfer Begins 'Sharing the Wealth' with Inventors

For decades the scientific community has lived by the slogan "publish or perish," rewarding scientists when their research breakthroughs appear in technical journals.

As Sandia increasingly turns its attention to the technology needs of US industry, however, "publish or perish" may no longer be the best incentive for Labs researchers to push the limits of human understanding, says Warren Siemens, Director of Technology Transfer and Commercialization Center 4200.

A new program initiated by the Labs' tech transfer program allows a Sandia inventor to "share the wealth" gained from the sale and marketing of Sandia-owned intellectual property. The purpose is to encourage Sandians to "patent first, then publish."

During a Sept. 28 kick-off ceremony for the



ROYALTY RECIPIENT Barry Hess (right, 8715), one of several Sandians recently awarded the first round of royalty checks distributed as part of the Labs' new royalty sharing program, thanks Mike Dyer (left), Director of California Technology Transfer Center 8800, and Warren Siemens, Director of Technology Transfer and Commercialization Center 4200. Barry's cash-earning development is XPLOT, an X-windows-based XY plotting software package for Sun workstations.

program, several Sandians received royalty checks for technologies developed as part of their work at Sandia. The checks ranged from \$250 to roughly \$2,000. (See "Seven Technologies Earn Research Royalties.")

"Intellectual property is the cornerstone of Sandia's technology commercialization effort," says Warren. "Sharing the royalties with inventors will provide Sandia researchers a greater incentive to seek patents and copyrights on their inventions."

Patent First, Then Publish

While publication is still a good indication of how well we're doing, he says, patenting, copyrighting, and licensing are taking on increasing importance at Sandia. "Intellectual property is like real property — you need a legal instrument to sell or lease it," he says.

By simply publishing the results of Labs research, he says, Sandia forfeits the rights to any technologies resulting from that research. Publishing before patenting or copyrighting also reduces the market value of that technology — once it's published, any private firm, large or small, foreign or domestic, can legally market a technology. And as we know, he says, technologies are not as valuable to a company if its competitors have the same access to it.

That doesn't mean Sandia always licenses technologies exclusively to one company, he says. Other licensing options include selling the rights to different applications of the technology to several different companies, giving one company (especially a smaller, start-up firm) a head start in marketing a technology, or licensing a technology to a limited number of companies.

Warren says the program is all part of a new aggressive strategy for Labs technology transfer and commercialization. "We want to accelerate the development of Sandia's intellectual property portfolio," he says.

Currently, Sandia has about 30 licenses with private industry on technologies owned by Sandia. In all, Sandia owns roughly 55 patents, 80 patents pending, and 175 copyrights, according to figures

How Royalties Are Shared

Royalties gained from the sale or lease of a technology license or the subsequent marketing of intellectual property owned by Sandia are distributed as follows:

- 20 percent goes to the researcher (or researchers) whose name appears on the patent application or copyright, up to a maximum of \$100,000 per year.
- 10 percent goes to the person or people who, in the opinion of the primary researcher(s), contributed significantly to the development of the technology; or to the inventor(s) of a classified technology that contributed to the development of the marketed technology. (About two percent goes to the patenting and licensing agents who researched the technology and wrote the patent application.)
- 50 percent goes to the originating division, to be earmarked for research and development.
- 20 percent goes to the originating department, to be earmarked for research and development.

provided by Intellectual Property Development Dept. 11510.

Got an Invention? Here's How

While he realizes patenting a new technology requires a lot of paperwork on the part of the researcher, Warren hopes the opportunity to benefit individually from the commercial success of an invention will encourage more Sandians to call the patent office.

Here's how the Sandia patent process works: A Sandia researcher develops a technology and recognizes its commercial potential. He or she then calls Sandia's Patent and Licensing Office 11500 and files an invention disclosure.

Sandia formally evaluates the technology's market potential. If it shows commercial promise, Sandia files for a patent. Once a patent application is submitted to the US Patent Office, the researcher is free to publish the research, and Sandia can begin licensing the rights to private companies. In most cases, after a period of time (usually less than two years), a patent is granted.

Scientists Trained as Patent Agents

Some of the national laboratories have been sharing royalties with inventors for years. Sandia never adopted the practice because it was thought royalty sharing might tempt researchers to hoard credit for research developments and, consequently, break down teamwork. Warren says the new Sandia program is designed to provide rewards to inventors, contributors, and their management. (See "How the Wealth Is Shared.")

Also as part of the royalty sharing program, several members of the Labs technical staff will be redeployed as patent agents. Sandia's patent office is now hiring at least six Labs scientists who will be trained and certified to research and write patent applications.

Warren says the new royalty sharing program was developed during the past year by the Intellectual Property Working Group. "I want to personally thank them for doing an excellent job," he says.

If you have a research development that you think might have patent potential, please call Patent and Licensing Office 11500. If you are contacted by industry or think a technology has immediate licensing potential, please call Technology Transfer on 271-7888. ●JG

Seven Technologies Earn Research Royalties

During two separate ceremonies at Sandia/New Mexico and Sandia/California recently, several Sandians received the first set of royalty checks distributed as part of the Labs' new royalty sharing program. Seven royalty-earning technologies and the names of the recipients appear below.

The checks, ranging from \$250 to roughly \$2,000, represent percentages of royalties collected by Sandia during FY92. Another round of checks is expected to be distributed in early 1994 for royalties collected during FY93, according to Vic Chavez (4212), licensing coordinator for the new program.

- Low density microcellular foam — A polypropylene foam with a small cell size and open-cell morphology, this material could have applications as an electret microcellular filter for gaseous media and as an absorbent. Recipients: James Aubert, Edward Russick (both 1815), Roger Clough (1811), John Curro (1702), Carlos Quintana (6211).

- XPLOT software — XPLOT is an X-windows-based, user-friendly XY plotting package for Sun workstations that allows the user to drag and drop a file icon into a plot window to create XY plots of multi-column ASCII data files. Recipient: Barry Hess (8715).

- Beacon data acquisition and display system (BDADS) — BDADS is a system for

transmitting aircraft beacon information received by a secondary surveillance radar through a telephone line to a remote display. Recipients: Billy Black (9531), David Skogmo (9538).

- SolarTrak control system — SolarTrak is a user-friendly tracking system that controls how solar mirror and dish arrays follow the sun. It improves tracking accuracy, autonomy, reliability, and economy. Recipients: James Dudley (6224), Alexander Maish (6213).

- Borehole seismic receiver — The motor-driven clamp mechanism for a borehole seismic receiver has applications in the petroleum, logging, and geotechnical industries. Recipients: Bruce Engler, Gerard Sleaf (both 6114).

- Mesh generation software — This suite of integrated software packages improves on conventional methods of performing mesh generation for computer-modeling and manufacturing applications. Recipients: Johnny Biffle, Teddy Blacker, Ray Meyers, William Bohnhoff (all 1425), Tony Edwards, Randall Lober (both 2861).

- Semiconductor bridge (SCB) — SCB is a very low-energy microelectronic igniter that can ignite low-sensitivity explosive materials. It could be used in automotive air bag triggers. Recipients: Robert Bickes (2513), Alfred Schwarz (ret.).



(Continued from Page One)

Drillers' Dreams

performance and reduce production costs.

"Conceptually, the problem looks easy," says Doug Drumheller, a member of Geothermal Research Dept. 6111 and principal investigator at Sandia's recently developed surface facility. "But there are a number of serious obstacles." After several years of experiments with scale models, Doug helped develop a new surface drill-string facility at Sandia/New Mexico's Tech Area 3. He named it Orpheus Range, an allusion to Greek and Roman myths in which the hero enters the underworld playing music to appease the demons.

Among those working with Doug at Orpheus are Doug Scott (6111), Steve Knudsen (contractor),

and Mike Selph (9312).

One goal of the Sandia work is to help develop hardware leading to a commercial telemetry system. The basic idea of acoustic telemetry is to produce sound waves at the bottom of a well and allow them to travel up the drill pipe. At the surface, data can be extracted from the sound waves.

The Sandia researchers are using Orpheus Range to test various sizes of drill pipe, drill rod, and sound transmission hardware. Using specially designed transducers, they measure how sound travels along the drill pipe. To create a commercial system, this information about the acoustic properties of the drill string is needed for designing sending and receiving hardware that will work in an actual drill hole.

Another problem under study is how to convert electricity available at the bottom of the wellbore into sound waves.

A Clear Signal?

Because a possibly miles-long steel drill string carries the sound for acoustic telemetry, differences in the thickness and shape of pipe walls, introduced in manufacturing, cause sound waves to mix, creating signal loss. Adding to the difficulties, Doug Drumheller explains, are pipe joints at 30-foot intervals. The joints block whole groups of frequencies while letting others pass through. Echoes from irregularities in the drill string also confuse the telemetry process. This effect is similar to speaking over a bad telephone line and hearing multiple echoes.

To investigate effects such as these, Orpheus Range can handle up to 1,500 feet of drill pipe, joined and resting horizontally on mounting stands next to an instrumentation building. Computer workstations permit real-time signal processing for 20 channels with a capacity of four million samples per second. Much of this equipment was designed for the high-fidelity music industry. "The frequencies that we're interested in happen to be in the same range," Doug explains.

The acoustic telemetry project at Sandia, funded

Why Sound Waves, And Not Electricity?

Acoustic telemetry isn't the only way to transmit information up a wellbore, but it is the most promising. Alternative approaches include electromagnetic telemetry and hard wiring. But electromagnetic telemetry has been only marginally successful, and hard wiring requires redesigning the drill pipe, not a popular idea in the drilling industry. An existing commercial method, known as "mud pulse," constricts drilling fluid with a downhole valve to send a series of pulses — like dots and dashes in Morse code — that tell about the bit location. The system communicates only about one data bit per second.

by DOE's Geothermal Technology Division, is producing advances after years of short-term studies by many private companies weren't able to make much progress. Sandia holds three patents on acoustic telemetry systems (two more applications are in process) and has current research agreements with Baker-Hughes INTEQ, an oil-field services company.

Inches Wide, Miles Long

One important plus, discovered while looking at the myriad of problems, is the high level of agreement between theoretical predictions of drill string response and actual field tests. "In engineering parlance, this is a highly idealized system," says Doug.

"A drill string is five inches wide and miles long, which reduces the mathematics as close to one dimension as you can get. The experimental and field-test results are easy to predict, and the

"A drill string is five inches wide and miles long, which reduces the mathematics as close to one dimension as you can get."

quality and quantity of the predictions are borne out to the point that if I see a five or 10 percent discrepancy, I worry that something's wrong," he says.

Though Orpheus Range can't simulate noise from the drilling environment, it can be used to learn how sound behavior differs between surface measurements and in-well experiments. In the future, specially designed transducers, calibrated at Orpheus Range to make in-well noise measurements, will help advance understanding of this complex problem area.

Current efforts center on developing a mobile vehicle for collecting data in connection with a fall experiment at DOE's Long Valley Exploratory Well, near Mammoth Lakes, Calif. "We want to transmit an encoded signal up 7,000 feet of drill string," says Doug. Orpheus Range will be used to calibrate the data acquisition equipment and downhole hardware before the Long Valley experiment.

The original Orpheus may have been mythical, but the payoff of his namesake could be very real.

•WKeener(12630)

Retirement Open House

The Labs is holding an open house in honor of retiree **Mabel Hurley** (7151) in the Area 1 Cafeteria (Bldg. 861) on Thursday, Oct. 28, 2-4 p.m. Refreshments will be served. Friends and acquaintances are invited.



ORPHEUS RANGE — Doug Drumheller (6111) checks an accelerometer used to measure motion along 1,500 feet of steel drilling pipe at Orpheus Range in Tech Area 3. The horizontally mounted pipe at the range is being used for a number of drilling projects, including efforts to improve transmission of data by sound waves from deep within a well. (Photo by Randy Montoya)

Sonic Drilling, Underground 'Pictures'

In addition to acoustic telemetry, Orpheus Range offers possibilities for other drilling research. One application already examined at Sandia is improvement of a technique called sonic drilling, or drilling enhanced by pipe vibration. Jack Wise (6111) is principal investigator for that project.

Developed commercially by Water Development Corp. of Woodland, Calif., sonic drilling has many environmental advantages and is being used by Sandia to study landfills and other hazardous sites. The Orpheus facility can be used to measure forces and motions in the drill pipe to better understand the technique

and to examine improvements.

Another application is in the use of the drill string and drill bit as a source of seismic energy to produce a picture of underground formations around the drill hole. To improve these images, the vibrations from the drill string need to be better understood.

"The facility will help us better understand the physics of acoustic waves in drill strings, develop computer codes to model the physics, and ultimately develop prototypes for critical hardware elements needed in these systems," says Doug Drumheller (6111).

(Continued from Page One)

Tri-Lab Office

modifications to some existing weapons, is now being performed at the plant, most of Pantex's work today is dismantlement of older (pre-1980s) weapons.

Disassembling a weapon is a formidable task, says Bob. A single weapon might take five days to three weeks to dismantle. A B61, for instance, contains roughly 6,000 individual parts. Each part must be carefully removed, cataloged, segregated, and disposed of as hazardous, radioactive, or non-hazardous waste. Some parts are re-used in weapons. Some are destroyed or disfigured because they are classified.

A major responsibility of the new office will be to help the laboratories review and approve written procedures for dismantling each weapon type. From telling the disassembly line worker which wrench to use when removing bolt A, to specifying how to prepare part Z for disposal, each procedure has to be specific, exact, and verified.

Nuts and Bolts of Dismantlement

Paul Longmire (5407), Sandia's Dismantlement Program Manager, says the Tri-Lab office will give the Labs a greater presence at Pantex during the next few decades as the national labs are given more lead-laboratory responsibilities as part of Complex 21, DOE's weapons complex of

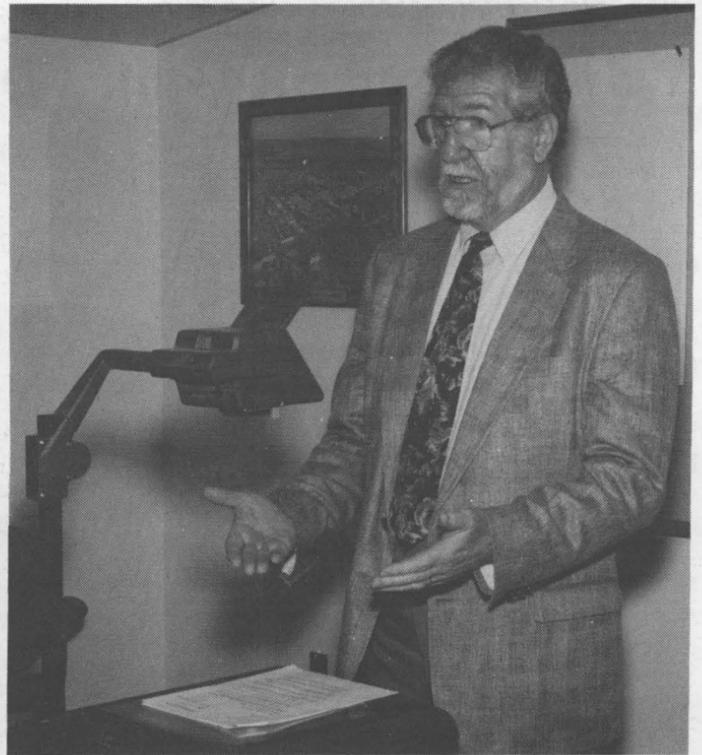
tomorrow.

"This office allows us to be more directly involved in establishing the processes that will guide weapon assembly and disassembly during the next few decades," he says. "For now, it also provides quicker sign-offs on formal procedures and speeds up the resolution of problems that arise during dismantlement work."

But, says Bob, it's important to note that the Tri-Lab office is not an oversight group. "We are here simply to provide technical support to the weapons designers back at the laboratories who are reviewing and approving dismantlement procedures," he says.

Guidice says it's DOE's ultimate goal to provide a seamless nuclear weapon process that specifies procedures all the way from design to disposal of weapons. "The technical knowledge that went into (weapon) production is going to lead to safety of (dismantlement) operations in the next decade," he said. "The role of this office is to question whether we are doing the right things . . . to get down to the nuts and bolts of nuclear weapon dismantlement, [and to] encourage continuous improvement in safety."

For more information about the Tri-Lab office, contact Bob Martin on 806-477-3079. ●JG



"WEAPON DESIGNERS need to roll up their sleeves and work with production line workers to really understand what's going on at Pantex. The three design laboratories are here to see how (dismantlement) is done, so they can continue to help 'design' the nation's dismantlement procedures." — Gene Ives, Director of Defense Programs Sector Weapon Development Center 5200, during a Sept. 29 ribbon-cutting ceremony at DOE's Pantex Plant.

(Continued from Page One)

Design-a-Molecule

molecules they have designed that chemists haven't been able to make.

"It's really that aspect," says John, "the actual design of molecules, that is our primary emphasis."

Once a potentially useful catalyst has been designed, it must be synthesized, characterized, and tested in an actual catalytic reaction. Past this, the molecule is modified to make it even more active. The techniques being used to design catalysts are generating all sorts of interesting catalytic materials that can be applied to many different areas, says John, from molecular computers and refuelable batteries to CO₂ conversion reactions and solar-driven chemical detoxification.

No End to the Applications

One of the best examples of catalytic potential can be found in Alaska. Methane gas, abundant in the northern slopes of Alaska, is useless to the rest of the US because it can't be transported economically through the liquids-only Alaskan pipeline. If methane were converted to liquid methanol, however, it could be sent through the pipeline and sold as fuel. For this to be commercially viable, the reaction requires a highly active catalyst that will selectively pair methane with molecular oxygen (O₂) to create methanol.

The catalysts currently under design at Sandia for the methanol project consist of an iron porphyrin (a molecule similar to the heme molecule of hemoglobin, which gives blood its red color) that initiates the reaction and a protein that generates the cavity where molecules will react. John's group has discovered that the more electron-withdrawing (attracts electrons from other molecules) a catalyst is, the more active it seems to become.

"We know what makes the catalyst more active, and we're progressively moving towards higher and higher levels of activity," says John. "It's almost a routine procedure."

Sandia's "routine procedure" has worked well not only for methane conversion projects, but also for photocatalysts being developed to improve Sandia's solar-powered detoxification process. It's being applied to electro-catalysts for use in refuelable hydrogen or methanol batteries to power electric car motors, and for converting CO₂ into a

useful fuel or feedstock that could be used in other reactions.

One of Sandia's new projects involves developing a detergent porphyrin that will expose a binding site for a protein. Once a protein attaches to the binding site, an electron is transferred to the porphyrin and passes through a thin film to an electrode. The result is a biosensor for proteins. In a similar application, light energy causes an electron to be transferred across the film and sensed at an electrode, creating a light-activated electrical switch.

"The reaction is like a molecular switch," says John. "It could potentially be applied to molecular computers and switching devices."

As if their design work weren't challenge enough, John and Sandia's Parallel Computational

Sciences Dept. 1421 are also developing their own molecular models and quantum mechanics codes for massively parallel computers. Use of the massively parallel computers would allow Sandia to run dynamics calculations on reactions that haven't been achieved on regular mainframe computers. A complete cycle of a reaction, says John, would give the researchers an idea of how long the substrate is bound — an event that would take scientists another step towards understanding of the laws that govern catalytic reactions.

"In trying to build better synthetic catalysts," says John, "we've actually learned how natural electron-transfer catalysts work. That's probably our greatest advance. You can design new catalysts, but unless you understand how they work, you can't really improve them." ●



NEW CAMPUS RECRUITMENT PROGRAM — Development of a new campus recruitment program was recently completed by Staff Employment and Personnel Policy Dept. 3531. Manager Marv Torneby says the program includes new recruitment literature, displays, advertisements, and recruiter training. Development and implementation was a team effort involving experienced campus recruiters, 7100 Center employees, and recruiting coordinators and staff. Pictured here are Linda Bay-Chu (right, 3611) practicing her interviewing techniques on UNM student Dwayne Scholer (left), who played the role of an interviewee. Other participants are (from left) Mark Jacobus (4114), Larry Stevenson (5147), and AT&T employee Marjorie Deakin.

Hispanic Heritage Month Colloquium

Sandians Talk About What Success Really Means

Editor's Note: As part of the Labs' observation of Hispanic Heritage Month (Sept. 15-Oct. 15), the Hispanic Leadership and Outreach Committee (HLOC) sponsored a colloquium at Sandia/New Mexico in which seven Sandians talked about "Taking Responsibility for Your Own Success." HLOC chair Diane Nakos of Equal Employment Opportunity and Affirmative Action Dept. 3611 originated the topic and panel-discussion format. Maxine Koester, Div. 7000 Personnel Representative and HLOC member, planned and coordinated the colloquium. HLOC is an initiative managed by Diversity Leadership Center 3600.

The LAB NEWS also asked Laura Santos (8642), a member of the Hispanic Leadership Committee at Sandia/California, to contribute her thoughts about the topic of the colloquium.

Following are selections from what these eight Sandians said.

Gloria Chavez, Manager of ES&H Coordination Dept. 7002: Like others here, I have changed my view on success throughout my life. Initially I was very goal-oriented, I wanted to get a job and have a career and be able to have a house and a car and things I didn't have growing up. Then as I grew older and gained some of those things, I recognized other values more.

The greatest influence on my view of success was my grandfather. I think he was a successful man. He went through third grade, with a teacher who had been through fifth grade. My grandfather was a shepherd, then a rancher, then a miner — he did a lot of things. He made sure that his children took the next step, and that they recognized the value of education. In that way, he was very successful in raising his children.

A good tool for success is to think ahead, 20 years into the future, and try to look back. "Did I accomplish what I wanted? Am I happy?" That is, is what I'm doing now going to be important to me 20 years from now?

You can take responsibility for your own success by setting goals, interviewing successful people that you admire and getting advice or "mentoring" from them, and reviewing and modifying your goals and plans as you grow and life circumstances change. The most important values to achieve success include persistence (don't give up) and maintaining your own integrity in the process. Be creative and seek out opportunities to gain experience by volunteer work that improves skills in areas such as public speaking or any area where you need improvement.

Terri Giron-Gordon of Material and Document Accountability Dept. 7442: A year ago, I would have told you that my idea of success was getting ahead at work, doing it quickly, and never turning down an assignment. After the birth of my daughter, my life changed dramatically. I now measure success in terms of how well I balance work and family life. Finding the right balance is something I'm struggling with, because I realize I can't do everything I used to do. At the same time, I've never been happier.

As far as taking responsibility for my own success, I'm a risk-taker who has never hesitated to let my management know my ideas and suggestions, or that I'm ready for a different assignment. I have worked under Julian Sanchez [3510], Ralph Bonner [3500], and Dick Shepardson [10400], who have been supportive of my style, understood my frustrations, and provided me with challenging opportunities. I have also worked on many teams (most recently, the joint union/management performance management team) that produced successful results.

I have had my share of obstacles, which I have overcome by not developing an "oh, well, there's nothing I can do about it" attitude. In terms of how



OTHER PANELISTS listen as Terri Giron-Gordon (7442) talks about what success means to her as a Hispanic and a Sandian. Seen with Terri are (from left) Robert LaFarge (1551), Nestor Ortiz (6400), and Rochelle Lari (2000). Other panelists were Gloria Chavez (7002), Manny Ontiveros (7155), and Gilbert Herrera (1308). The colloquium, titled "Taking Responsibility for Your Own Success," gave panelists a chance to answer questions such as how they define success, who had the greatest effect on their success, and the relationship of education to success at Sandia.

to align oneself to be successful in Sandia's current culture, I think individuals who are truly flexible and open-minded will succeed.

Robert LaFarge of Flight Dynamics Dept. 1551: When I ask how I myself measure success, the first thing that comes to mind is family. If I can take care of my family and provide a good home, I feel I'm doing pretty well.

Another thing for personal satisfaction is being able to use the talents that make me unique. If I feel good getting up and going to work every morning — at least psychologically if not always physically — that's a measure of success.

The people most responsible for my success were my parents. They taught me early to believe in myself. They never stressed education directly to me, yet I don't think I could have gotten to college without their support and their encouragement to accept responsibility. Education provides the basic tools for you to do a job, but beyond that it's experience that teaches you how to use those tools. And by tools I don't mean just technical tools, but people tools as well.

In taking responsibility for your own success, the hardest thing to do is learning how to accept criticism — to know which criticism is valid and which isn't. Sometimes you have to stick to your guns.

Rochelle Lari, Personnel Representative for Division 2000: In my current job, people come in daily and ask me questions like "How can I be successful? How can I move up?" I've discovered that success isn't necessarily being moved up. An issue at Sandia is that people who are technically outstanding are promoted by being moved into management jobs, and sometimes they fail. I think that what we've got to do — and what I've tried to do — is really look at my own values, what's important to me, what I'm good at, what I enjoy doing. Success is not based on being the best, but on doing your best.

When I was hired at Sandia, I thought, "By the time I retire, do I still want to be what I am now?" One way I measure success is by the goals I set, on a daily basis, a weekly basis, five or 10 years from now, or when I retire. When I reach a goal, I can feel good about it.

On the question of taking responsibility for your success, there are several things I tell people who attend the "Packaging Yourself" workshop that I give periodically. They include the importance of participating on teams, communicating positively with your boss, and always having a customer focus. It's also important to get as much varied experience as possible and to get a mentor who is competent and who you can trust.

Manny Ontiveros, Manager of Art Dept.

7155: To me, the most significant areas of success are family, personal life, and control of work content and work schedule. If you feel your family's well-being is a priority in your life and that you are supportive, that is my definition of success in a family environment. If you like coming to work, I think you have a high degree of personal satisfaction in your job. Do you like what you do and how you do it? That would be an indication that you have control of your work content and work schedule.

My greatest satisfaction is when I feel I have contributed to the success of someone at Sandia. In the Art Department, that's important, because we exist to perform that type of service. If we can do that, we're doing a good job at Sandia.

To take responsibility for my own success, I have stayed aware of opportunities, acquired necessary skills, pursued difficult assignments, and demanded of myself that I succeed. Obstacles have included fear of failure, time commitments vs. quality-driven processes, corporate "politics," and a culture traditionally based on rugged individualism instead of collaboration. I adapted to circumstances, found enjoyment in my work, and maintained a strong desire to learn in overcoming these obstacles.

Nestor Ortiz, Director of Nuclear Energy Technology Center 6400: I agree with the saying that success is a journey, not a destination. Every time I've said I wanted to reach something, when I got close to it, I realized that I wanted to reach further. My first measure of success was to have a bachelors degree in engineering. But when I was getting close to it, I realized I really wanted more. I think that people, when they get old enough, should be able to look back at their journey and say, "I accomplished what I wanted."

Like most of the people here, I would say that my parents had the most influence in shaping my views. The values they gave me, in responsibility, integrity, ethics, are number one in terms of success. But I also look back and see professors and friends who helped. People helping people, such as through the outreach committees we have here, are very important. Dealing with people of diverse cultures and skills, trying to help people, working in teams, and having excellent managers as role models are what have helped me at Sandia.

Planning ahead and developing a road map to reach goals in areas such as your career development, family life, and role in the community are very important in reaching success. A commitment to improve your capabilities and skills continuously is also essential.

Gilbert Herrera, Manager of Electronic Packaging Programs Dept. 1308: Success is tough
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Wired for the Future**Words May Be Same, Way They Arrive Will Be Different**

A behind-the-scenes project under way at Sandia/New Mexico reaches an important milestone one week from today when the last of the Labs' phones are transferred to a new "switch."

Bob Dougherty, Manager of Communications Programs Dept. 1906, says he hopes the massive rewiring-reconnecting job will be finished by Friday, Oct. 22. If it is, service on 844-prefix phone numbers will be transferred to the new Sandia switch, completing the move of Sandia and DOE phone service from the Air Force to Sandia.

"We plan to cut over at midnight," says Bob. "When everyone returns to work on Monday, Oct. 25, the system will be up and running. There should be no noticeable effect on existing telephone service."

The new service will make voice-mail available to all Sandians, including those with an 844-prefix. Other functions, says Bob, will become available through replacement of existing telephones with new, much more versatile instruments.

Our Own Customer Service

Bob says those involved in the project are particularly pleased with situating customer service operations within Sandia. Before the change, Labs phone service was provided by the Air Force. The change — shrinking the customer base and putting service on new state-of-the-art equipment — will greatly improve reaction time, he says.

The new capabilities and services will be highlighted during an open house being planned for November.

Following are questions and answers explaining the new service.

How is the telephone service going to be different, and when?

We are making radical changes in the communications business at Sandia. We are "regressing" to the kind of service that AT&T used to provide — a single entity responsible for satisfying a complete segment of needs. We are building toward a business element structured to provide quick response to customer requirements. You will come to know our new customer service staff, and you won't have to know all of the things that are being lined up behind them. The list includes major

infrastructure modernization, staffing changes, restructuring, and new process implementations. It may take longer than a year to get some things working, but you will notice significant changes this fall.

What is going on now with telephone service? I have been told there can't be any changes until November.

We are about to move all of the telephone numbers with 844 prefixes from the Air Force switch to the Sandia switch. We need to coordinate the change of the software in the switches with the change in wiring to the new destinations. In addition, US West and the Federal Telephone Sys-



MICHAEL CROCKER, a US West employee, splices wires that will enable the Sandia telephone switch to connect its customers. The sight of 4,200 pairs of tiny wires might be overwhelming for most, but Crocker knows exactly where to connect every wire.

tem (FTS) are accomplishing matching changes. It is desirable to hold some things constant while all of this is going on, otherwise we will end up in a giant scramble when we throw the big switch. Please be patient: It will all be over in a month.

What is a telephone freeze? We seem to be having a lot of them; how long is this going to go on?

Moving an active telephone switch from one location to another without disrupting service has been a challenge, and one of the prices has been to have stable periods — freezes — in the switch data base while hardware is being moved. A freeze is just a period during which the only changes we can make are those that don't affect the switch software. For example: We can move your telephone set from one desk to another because that doesn't affect your telephone number, but we can't give you new service or change your phone number because that would involve changes in the software. After the current freeze is over (this month), you will not be aware of telephone switch freezes because future changes will be accomplished without interruption of service.

What is the Air Force doing about our phone service? It takes months to get a phone.

Sandia is now doing all of its own adds, moves, and changes of telephone equipment. The handover from the Air Force came with a backlog that is being addressed, but we are limited in what we can do until all of our numbers are serviced out of our own switch. As we proceed, the processes we are implementing should provide a noticeable improvement in response time.

Are all of our phones going to be replaced when the new switch is put in service?

Not initially. The switch will assume service on telephones as they are. Our project will eventually replace most analog telephones with Integrated Services Digital Network (ISDN) instruments that provide digital voice/data capability.

What is an ISDN telephone?

It's a digital instrument that processes traffic from any source of digital input, including voice, data, and video.

Where do I call now for telephone service?

We now respond to all trouble reports for voice and data services at phone number 844-8017. Our newly placed customer service crew will respond to requests for all communication services — voice, data, network, etc. — on 845-8509 (fax 844-4173).

Will everyone be moved to the 845 prefix so we can be on the new switch?

No. The Sandia switch is picking up the 844 prefix, so those numbers will offer the same service that is currently provided only on 845 numbers. Our switch will serve nearly 20,000 numbers, so both prefixes will need to be utilized.

How do I find someone's phone number when the Sandia Directory is wrong?

We have assumed the responsibility for the Sandia locator position as a part of the new telephone system. That phone number is 844-5678. In the future, people with ISDN phones will be able to "ask the phone" for numbers by using the key pad and the liquid crystal display on the phone.

When can I get Sandia voice mail?

All telephones served by the Sandia switch will be enabled for Sandia voice mail service. Enrollment will be available for everyone after the first of November.

Why should I use Sandia voice mail? My answering machine is paid for and works fine for me, so why can't I continue to use it?

The advantages of being on a corporate answering service are significant to both the caller and the absent recipient of a call. You probably will choose to use voice mail when you discover what it can mean to you. In addition, personal machines are not the preferred solution of DOE, which permits their use only if they do not have a

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to quantify, because it's entangled with one's own values. One must consider professional and personal criteria when defining success. However, when assessing success at Sandia, I believe that each of us must consider that our own role is important, whether it's as a nuclear weapon scientist or in the mail room. As long as you do your own job efficiently, with conviction, and with a quality mindset, then I think you should be viewed as a success.

Education is the key to success at Sandia. But remember that all experiences, in and out of school, provide educational value potentially beneficial to one's career. My two years at West Point — the only school I attended and didn't graduate — probably provided the greatest value to my career of all the universities I attended. Although I didn't learn electrical engineering there, I learned the true meaning of teamwork, much about the military, and, most important, how to interact with non-Hispanics. Don't downplay the importance of non-academic educational experiences.

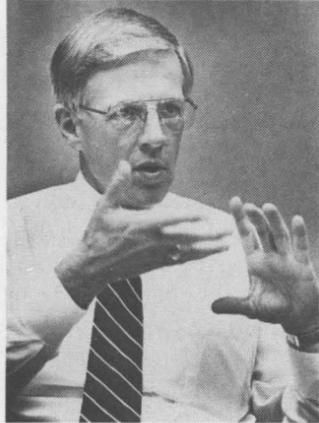
Success requires defining one's personal view of success — goals — followed by a relentless pursuit — action. Achieving success requires taking personal responsibility for the actions that lead to success. Those who expect others to be accountable for their own success, or blame others for their lack of success, will never be successful.

Laura Santos of Environmental Protection Dept. 8642 and member of the Hispanic Leadership Committee at Sandia/California: As a Hispanic woman, I can easily measure success (on one level) simply by looking at how I compare to the population of other Hispanic women in America. I had many advantages over others, but it was still a struggle to beat the odds and complete a quality education and establish a satisfying technical career. I feel like one of the luckiest people in the world to have had those opportunities and to have been able to take advantage of them. I am acutely aware of how the quality of my life has been affected by my educational achievements. I have choices, in both my personal life and my career, that I would not otherwise have. Also, I feel confident in my ability to make positive contributions to the Sandia mission on a variety of fronts.

In those college days, I struggled a great deal with what success would mean to me. I knew that success would be different for me than it was for my parents, but I really had no idea what my choices were. There was a lack of role models, and I had difficulty relating to many of my affluent classmates. A summer job at the Environmental Protection Agency had a major impact on me. It helped me form a personal vision through which I could set goals for myself. Once I had clear direction, I was able to make appropriate choices and put my life on track. ●CS

Offers 'Prescription' for Future Health**Lee Bray Now AT&T Liaison Executive**

Former Executive VP Lee Bray is no longer a Sandia official, but he will remain at the Labs for six months to a year as AT&T liaison executive under a "windup agreement" between AT&T and DOE. The arrangement will ensure that matters pertaining to AT&T's contract to manage Sandia, which officially expired Sept. 30, are concluded properly.



Lee Bray

Lee, a 34-year AT&T employee, came to Sandia as Executive VP in 1984. For the past year and several months, he has also served as the Labs' transition executive, working to ensure a smooth transition of the Sandia management contract from AT&T to the new contractor. AT&T announced May 5, 1992, that it did not choose to renew its no-profit/no-fee contract with DOE to manage and operate Sandia. Martin Marietta was selected by DOE on July 26 to succeed AT&T and took over its duties Oct. 1.

Working with DOE and AT&T Auditors

The LAB NEWS visited with Lee on Oct. 1 — just after he relinquished his Sandia duties and on the day he began his new duties as AT&T liaison executive. Lee will be working closely with DOE and with AT&T auditors to ensure that any loose ends get tied and that both parties satisfy all financial and contractual obligations. He will also help ensure that AT&T's intellectual property rights are handled properly.

Sandians who have questions pertaining to AT&T intellectual property rights should contact Patent and Licensing Dept. 11250. Pointing to the AT&T badge that he donned that morning, Lee explained, "It's important for Sandians to remember I speak now for AT&T, not for Sandia."

Lee says he is extremely proud of the Labs' current stature and maturity, and he reiterates what members of the previous board of directors said in

"Critical national challenges are a prerequisite to exceptional service in the national interest."

the Sept. 17 LAB NEWS — that AT&T is proud of the Labs and what Sandians accomplished under AT&T management.

"Sandia is well positioned for even greater success in the future. It's great to have the feeling that the organization is capable of sustaining and even improving upon its success.

"I believe there are three fundamental elements that are keys to Sandia's future success," Lee continues. "The first is people. Sandia has the ability to attract and retain the best talent, and it must maintain that ability. Human resource policy and practices and the work environment should be designed with that as the objective.

"Second, the Labs must have missions that employees feel are critical to the nation. Critical national challenges are a prerequisite to exceptional service in the national interest. Without that, Sandians could turn into 'sleepwalkers,' just going through the motions, and the contribution to the nation would be mediocre at best.

"Third," says Lee, "it is essential that Sandia

form harmonious alliances with DOE. Sandia management and staff need to work together with DOE to develop more confidence in each other's abilities and to ensure that these abilities are complementary and not overlapping."

The first two elements are essential, says Lee. One of them without the other won't work, and the third is extremely important for the sake of efficiency and continuous improvement.

"If I could write a 'prescription' to ensure the future health of Sandia, it would include all three elements," he says. "Sandia needs to maintain an adequate intake of all three to remain healthy."

Lee moved to a different office this week, in Bldg. 802, Rm. 1327, but his phone number remains 844-4673. Although he no longer has an official Sandia organization number, for the sake of convenience he will continue to use organization number 30 as his mail stop number. ●LP

ECP Is You . . . Sharing**ECP Campaign Is Next Week**

Employee Contribution Plan (ECP) campaign meetings, where you can meet and hear from representatives of various United Way agencies and receive information about contributing, will be held next week in the Technology Transfer Center (Bldg. 825). Information about the redesigned contribution cards and donor option plan will be available at the meetings. (See Oct. 1 LAB NEWS for the schedule.)

Sandians have a history of generous giving. Last year, Sandians pledged \$1,561,779 to United Way agencies and other health and human service agencies through the Donor Option Plan. Pledges totaled \$1,523,087 in 1991, \$1,497,202 in 1990, \$1,374,089 in 1989, and \$1,283,977 in 1988.

Your gifts mean a lot to people in need. Last year, with your support, United Way of Central New Mexico was able to help one out of three people living in Bernalillo, Sandoval, Torrance, and Valencia counties. If you need some type of social services help for yourself or someone you know and you don't know who to call, call United Way's InfoLine on 247-3671, 8 a.m.-5 p.m., Monday-Friday. Information ranges from where to go for rent assistance to how to get specialized counseling and support services. InfoLine also helps you find out about where to donate clothing, food, and other tangible items.

When signing your pledge cards, please consider that by contributing through ECP, you are enabling United Way agencies to help troubled individuals, youth, and families in crisis; help people gain economic independence; help the frail elderly, homeless, and disaster victims; help strengthen families; and help provide health education and social development skills. ●JC

Rust in Peace, 'Little Joule'

In our "This Month in the Past" column last month, we noted that Paul Stickler (now retired in Albuquerque) and his electric car — the "Little Joule" were featured in the LAB NEWS 30 years ago. We also asked Paul to let us know how long the car lasted. He called to say the answer depends on which parts you're talking about.

Unfortunately, he says, the car didn't make it past the summer of '63. The '55 Renault that he converted into an electric vehicle used six golf cart batteries. When Paul and his family returned from

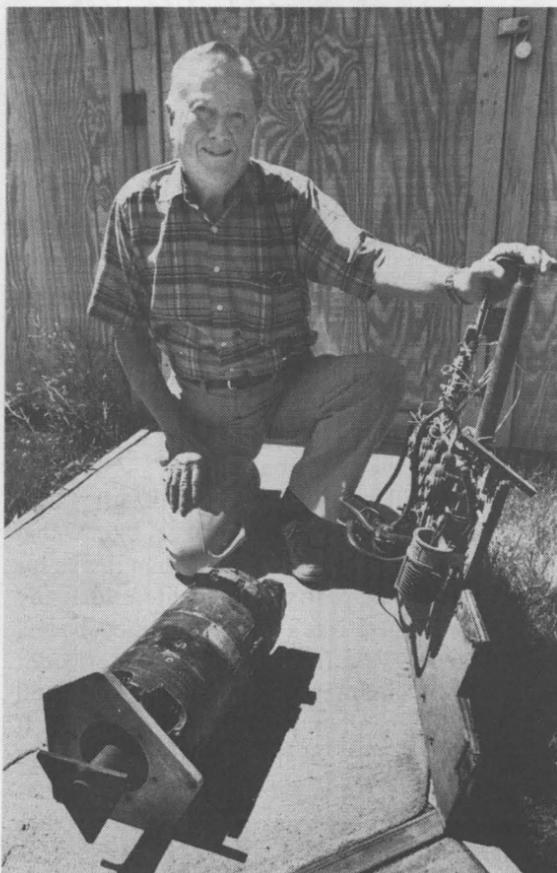
a long summer vacation in '63, he discovered that someone had stolen the batteries.

Although Paul intended to replace the batteries, he never did. Thinking that he might, though, he even towed the car to Texas when he transferred to the Pantex plant in Amarillo.

However, when it became evident that he wasn't going to get it fixed up, he sold the body to a salvage yard in Groom, Texas. But all is not lost. Paul still has the old electric motor and controller in his storage shed. ●LP



PAUL STICKLER (now retired) in 1963 photo above showed the "Little Joule's" power plant soon after he converted the car into an electric vehicle. It could go 17 miles and up to 40 mph. In photo at right, he shows the electric motor and controller he used in the "Little Joule" and that he keeps today.

**Welcome**

Albuquerque — David Castillo (7572), Wu-Ching Cheng (6622), James Eanes (10218), Linda Lovato (3612), Larry Millington (7433), Carla Neumann (2564), Patricia Nitschke (10504), Bonnie Townsend (3531), James Whatley (7814); Other New Mexico — Thomas Atwood (1236), Janis Trone (6305), Carla Widerkehr (7811).

Elsewhere: California — Randall Wilson (2121); Colorado — Regina Deola (7575); Germany — Robert Waters (6622); Maryland — David Kravitz (1423); Virginia — Gretchen Jordan (6904).

New Mail-stop System Planned for 1994**More Efficient Mail Service Is Goal of Special Task Force**

A six-person Sandia Mail Services Task Force is working to identify hang-ups and problems in Sandia/New Mexico's mail delivery service and to come up with solutions.

In the meantime, all Sandians are being asked to do several things to help ensure timely mail delivery:

- To speed interoffice mail, put the current

organization number on it, then in parentheses the old organization number IF the group changed numbers on Oct. 1, and finally the building number.

- Ask outside mailers of obvious "junk mail" to remove you from their mailing lists.
- Notify regular correspondents about your new organization number and ask them to begin

using it as soon as possible.

- When practical, request that journals, catalogs, and other similar work-related mail be sent to your home address.

Special Sandia "change of address" cards are available for the last three actions. Form SA 7150-C(11-89) can be obtained from secretaries or ordered from the Just-in-Time catalog.

Barbara Hoffman of Program Management Office 7601, project leader of the task force, says the group has already identified what's probably the biggest problem, and one that is not easy to solve: an increased work load and a more complex environment. There are now 26 employees on the Mail Services team. These employees have to serve more remote sites than before, and they have experienced more organization changes, with an increased volume of mail.

Several Actions Planned

"We're considering a number of actions to help remedy the problem," says Barbara. "Some actions are planned soon, and some will take longer, but with the cooperation of all Sandians, we're very hopeful they will lead to a fast, reliable mail service."

Among actions that are planned or being considered:

- An automatic mail sorting/counting machine capable of reading bar-coded mail is scheduled to be delivered late this month. The sorting machine cannot handle all types of mail, but numerous applications are anticipated.

- Special bar-coding software to allow Sandia secretaries and other employees to code mail for the automatic machine is being considered.

- The task force is planning a mail-stop system that will go into effect in January 1994. This means that organization numbers could come and go, but employees will keep the same mail-stop number as long as they do not move to a different location (see Oct. 18 *Weekly Bulletin* for details).

- Some restrictions may be placed on internal bulk mailings. Currently, there are few restrictions as long as the mailing is work-related; any Sandia organization that wants to print and distribute flyers through the internal mail may do so, but it may become necessary to place reasonable limits on such mailings.

- Cluster boxes are planned where appropriate. Some facilities would have secure mailboxes located near building entrances.

Barbara says Sandians who have special concerns or suggestions are welcome to contact her on 845-8690, or any other member of the Mail Services Task Force. Other members are Johnny Ayala (7613-2 Team Supervisor), Ellen Evans (7601), Elveta Bishop (7601), Irene Gonzales (7613), and Bert Langford (7611). ●LP

Sandia News Briefs**Up-and-Coming Albuquerque Community Leaders Tour Sandia**

About 40 members of Leadership Albuquerque, a Chamber of Commerce program to familiarize up-and-coming community leaders with issues affecting the Albuquerque community, toured several facilities at Sandia/New Mexico Wednesday, Sept. 28. As part of the tour, the future local leaders saw Particle Beam Fusion Accelerator (PBFA) II and Sandia's virtual reality and robotics labs.

Participants were also scheduled for a luncheon briefing by Jerry Langheim, Director of Public Relations and Communications 12600, about Martin Marietta Corp. and the future of Sandia. Lynne Rathjen (7201) is a member of this year's Leadership Albuquerque. A similar, second tour is scheduled for Oct. 26.

AlliedSignal/Kansas City Achieves CFC Elimination Goal

Sandia helped celebrate a milestone in chlorofluorocarbon (CFC) elimination at AlliedSignal/Kansas City Division (AS/KCD) Sept. 29. Gay Dybwad (2411), chairman of Sandia's CFC Elimination Coordination Group, and Adra Baca (6625) represented Sandia at the celebration, which marked AS/KCD's 96-percent reduction in use of ozone-depleting chemicals for cleaning components, circuits, housings, and assemblies. Reduction goals were set in a 1990 three-party agreement that committed DOE, Sandia, and AS/KCD to work together to find qualified alternatives to CFCs and CHCs (chlorohydrocarbons).

CRADAs for Developing New Microelectronics Materials and Processes

Sandia and Motorola, Inc., have signed two cooperative research and development agreements (CRADAs) to develop new, state-of-the-art materials and safer, more efficient materials-growth processes for compound semiconductor materials.

The first CRADA focuses on precompetitive research into novel high-speed, low-power-consumption semiconductors for digital microelectronics. Two types of materials will be explored, one based on aluminum nitride, the other on a combination of gallium antimonide and indium arsenide.

The second CRADA will advance the technology underlying metal-organic vapor-phase epitaxy (MOVPE), an advanced process that can make nearly perfect compound semiconductors. Potential markets for MOVPE-made materials include high-performance integrated circuits in computing applications and high-performance signal-processing circuits in communications devices.

Sandia and Ditch Witch Explore Horizontal Drilling

Sandia researchers and Oklahoma-based Ditch Witch are applying directional drilling technology used by utility companies and the oil and gas industry to help monitor and clean up hazardous waste sites. The new technology drills wells horizontally using hydraulic thrust systems, which do not require the addition of drilling fluids to the well. The approach can be used for testing for seeps beneath landfills, for radon under buildings, or for seepage from storage tanks, according to Robert Wemple (6111) of the Sandia Environmental Drilling group. After more than two years of cooperation, prototype machinery for environmental sites has been constructed and is now being evaluated. The two organizations have successfully demonstrated their concept in tests and at two actual environmental remediation sites.

Sandia Hosts Tech Transfer Workshop and Materials Symposium

A workshop on ceramics and glass technology transfer opportunities with the national laboratories will be held at the Albuquerque Hyatt Regency on Monday, Oct. 25. The workshop is in conjunction with the Fifth Annual Symposium on Ceramics and Advanced Materials on Tuesday, Oct. 26. Both events are cosponsored by the New Mexico Sections of the American Ceramic Society and the Materials Research Society. For more information, call Richard Brow (1845) on 845-8047, Joe Cesarano (1841) on 272-7620, or Jill Glass (1845) on 845-8050.

DOE to Hold Regional Tech Transfer Meeting in Albuquerque

Members of the public who have worked with or are interested in working with DOE scientists are invited to attend regional "partnership" meetings, plus a national meeting in Washington, sponsored by DOE. The meetings are intended to obtain feedback on DOE's initiatives to share technology with business, academia, and state and local government. Senior department officials, operations office managers, laboratory directors, and senior technology transfer managers will participate. A regional meeting will be held in Albuquerque on Wednesday, Oct. 27. Contact DOE's Jim Anderson on 845-4978 for information. The National DOE Partners' Feedback Conference will be held in Washington on Tuesday, Nov. 9. Contact Molly Birely, DOE Office of Technology Utilization, on 202-586-4518.

DOE Observing Energy Awareness Month in October

"Energy — New Choices for a Changing World" is the theme of DOE's October Energy Awareness Month observation, which emphasizes the importance of energy to the economic prosperity and future of the United States. DOE is offering related information to the public. To obtain a publication titled Energy Information Sheets, write to National Energy Information Center, EI-231, Energy Information Administration, Forrestal Building, Washington, DC 20585. For conservation and renewable energy information, write to Conservation and Renewable Energy Inquiry and Referral Service, PO Box 3048, Merrifield, VA 22116. For more information about Energy Awareness Month, contact Energy Awareness Month, Public Information Office (PA-5), US Department of Energy, Washington, DC 20585.

Send potential Sandia News Briefs to LAB NEWS, Dept. 12660.

Fun & Games

Walking — Still going strong, custodian Ursula Besse (7615) won first place for the ninth consecutive year in the 5K walk in the Duke City Marathon Sept. 12. This year, she participated in the 62-64 age group. She has also represented Sandia in the 1993 Corporate Cup spring competition, also placing first in the 5K walk event for her age group.

Sailing — Bill Horton (DOE ret.) has an opening for two more people on a hands-on sailing trip he is leading from St. Lucia to Grenada Nov. 13-22. Bill and his mate take along four more persons per trip in a series of sailing trips they are making in the Caribbean this fall. These are not money-making trips; Bill loves to sail and charges just enough to meet expenses. Many of his fellow sailors over the years have been Sandians. For information, call Bill on 883-7504.

What Do You Think?

Improving the Labs to Keep Challenging Work Flowing Our Way

"What Do You Think?" features employee responses to questions posed by the LAB NEWS. Some responses have been lightly edited and condensed to meet our maximum word limit.

The current question: "When Martin Marietta Chief Executive Officer Norm Augustine spoke here, he said he thinks Sandia is 'not broken' and therefore doesn't need major fixes. That's nice to hear, but we also think Sandians want to improve the Labs and make us better able to compete for increasingly scarce funds. In your opinion, what is the one, most important thing Sandia could do to keep challenging work flowing our way?"

Parts of Sandia seem to have become obsessed with rigid interpretation of DOE regulations. Every Sandia organization must focus on performing today's projects in a timely, cost-effective manner while meeting the intent of DOE regulations. We must operate in a boundaryless fashion where requests for support are answered with "here is how we can help," not "you can't do that." Challenging work will not flow our way if we cannot perform the work we have.

Chris Cameron (6215)

I believe that it will be essential to further our integrated understanding of our business. This means having a view of our operations that integrates project and financial management approaches into an overall knowledge base that facilitates decision-making. Such understanding will enable funding projects that maintain a high probability of success at each development milestone. It will also facilitate development of new business lines for our future.

Sharon Trauth (2864)

Overhaul the financial system to provide for real-time financial data on all transactions along the lines of a modern business environment. All costs associated with performing work should be easily accessible.

Larry Azevedo (1041)

The Next Question

What Do You Think?

Here's the next question: **What person has had the biggest influence in your professional life? In what way?**

We'll be calling some Sandians and asking you personally to respond to the question. If you agree, we'll fax you a one-page answer sheet (with guidelines) that you can complete and fax back to us. Other employees are also welcome to respond — not just the folks we call. If you'd like to respond, please call us for a form on 844-7841 or 844-7522.

I believe the current climate requires more alliances with industry to identify relevant projects, build constituencies, and add funding resources. Sandia could encourage this alignment with industry by restructuring our purchasing system to be more responsive to the needs of requesters. Our current system is understaffed, is driven primarily by DOE auditors, and increasingly reflects the DOE bureaucracy. Our procedures and time required to place a contract are major impediments to expanding industry alliances.

James Dunn (6111)

Norman Augustine was overly generous when he said Sandia was "not broken." The current program development system is very much broken. It is almost completely populated by DM2s (i.e., department managers from before the restructuring) who were placed there not so much for their marketing skills, but rather as placeholders. These positions need to be freed up for people who will seek out the new challenges for Sandia. The current holders of these positions need to get to work or get out.

Name withheld by request

Act like Sandia is your personal business. For each of us, this means answer the telephone courteously, with the name of your organization and your own name. And, whatever it takes, stick with your customers — inside Sandia or outside — until they are satisfied. Never say "That's not my job." For management, this means establish internal business practices and infrastructures to handle those customers professionally, efficiently, and with respect for their needs. Show your people how to!

Arlan Andrews (2902)

The one thing that Sandia can do is to improve our marketing role. Sam Varnado and his folks in Work for Others Program Development and the Technology Transfer folks are making impressive strides, but there is one area where Martin Marietta can really give us an additional boost. With the application of Martin Marietta's experience in marketing and its emphasis on quality and "mission success," combined with the Labs' technical abilities and services, Sandia will have to grow to keep up with the increasing demand!

Michael Blackledge (326)

Sandia isn't broken, but it surely could use some maintenance. The many new mindless regulations affect all of us. They rob time, enthusiasm, and drain empowerment. Worst of all, they destroy our productivity. The challenge is greater than ever. Few are empowered to respond. We must turn the mindless into meaningful. We must focus on producing again as we have in the past. "Exceptional service in the national interest" must be today's product if we want that opportunity tomorrow.

John Portlock (5901)

We need to be one integrated company. We need better coordination of plans and programs rather than small planning groups in various sectors working independently on similar issues. Combine resources. Corporate strategies and goals need to be well defined and understandable, and they need to be reflected in sector, center, and department strategies and goals. They then need to be implemented and monitored to stay in focus. This effort must be pushed by the vice presidents, who are also talking to each other.

Wayne Burton (7904)

Reduce manpower loading to 2-2.5. At more than 3, we are only competitive with the other national labs and certainly not with universities and most industrial labs.

Barney Doyle (1111)

TLC Invites You to Wear a Red Ribbon Oct. 23-31

The Total Life Concept (TLC) program invites Sandians to observe Red Ribbon Week Oct. 23-31, showing their support for a drug-free America by wearing a red ribbon (or something else red) and attending activities and programs in their community. For a special celebration, enjoy the Red Ribbon Parade and Family Fun Day at Kirtland AFB. The parade begins at 10 a.m. on Saturday, Oct. 23, starting at Silver and San Mateo, proceeding along San Mateo to Gibson, turning right onto Gibson, and then left into the Truman gate. After the parade, there will be music, storytellers, information, food, military displays, and other family activities inside KAFB near the Truman gate.

Congratulations

To Loretta and Grant (2345) Sander, a daughter, Stephanie Morgan, Sept. 30.



DISMANTLEMENT MASTER LIST — For two weeks last month (Sept. 13-24), Sandia hosted weapons engineers from production and design agencies across the US nuclear weapons complex. Called the "Stockpile Dismantlement Data Base (SDDB) Data Entry Marathon," the event responded to a Navy request for information from DOE for some 500 weapons parts found in Navy storage facilities that are scheduled to be moved or disposed of. The marathon, during which the visitors entered into the SDDB all relevant disposition information about the Navy weapons parts, also helped bring weapons engineers and designers up to speed in using the new data base. Here, SDDB data coordinator Ruth Burger (5115, center) helps Dave Jordan (left) and Dan Coleman, both of AlliedSignal, enter information into the data base. SDDB, installed at all of the nation's design and production agencies, is expected to help those agencies characterize, dismantle, segregate, and dispose of nuclear weapons and weapons parts. It contains information ranging from the materials characterization of a weapon part to possible hazards and disposal methods for each part.

(Continued from Page Nine)

Wired for Future

remote access capability.

Who will get ISDN phones and when?

ISDN will become the company standard for a large segment of business, primarily because the entire lab will have access to the network needed for ISDN service. The next year will see extensive deployment within Sandia. People who need both voice and data capabilities will have priority over those who want only voice features.

How will we be trained for use of the ISDN equipment with data features?

Training will be scheduled to go along with set distribution, and desk reference material has been prepared. A demonstration/training facility is being installed in Bldg. 880.

We use an STU III (classified) phone; will it work with ISDN?

There is no ISDN STU at this time. Until one comes along, the STU sets will need to have analog line service. The use of an STU as the only instrument will not remain as attractive as it has been when the utility of the ISDN is considered. You might need to consider two instruments.

Our department really needs the capabilities of ISDN in order to handle the special telephone traffic we have. How can we get on an early list for ISDN installations?

Submit a request and describe the nature of your need.

What happens to the ISDN telephones when there is a power failure?

If the instrument — which is really a sort of computer — is powered from a standard electrical outlet, it will not work during a power outage. Because most of the information necessary to operate the instrument is stored in the switch, the set functionality will be restored along with power. Where sufficient wiring is available, such as in rewired buildings, a battery backup that will sustain operation for a few hours will be installed at a main distribution point.

How do those of us at off-site locations take part in all of this?

Extensions of site services to locations off-site could be accomplished several ways, none of which is currently attractive because of cost. We are leasing lines for network connections, but ISDN service is not currently "portable" from our switch.

How much will it cost us to get a telephone through Sandia? We have been buying our own phones, and we prefer to continue that. The phones provided in the past have been real antiques.

The telephone business, as currently conducted at Sandia, includes the instrument as part of the company-furnished utility. Individual purchase of telephone instruments will no longer be required, so give your fledgling telephone company service an opportunity to satisfy your requirements.

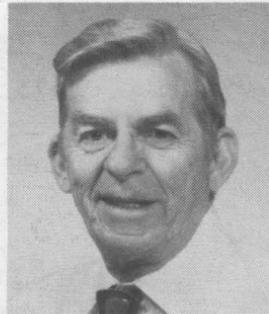
What is happening to the building wiring program?

The largest project in the communications infrastructure program is the installation of sufficient wiring to enable us to conduct our business. Bldgs. 836 and 891 are undergoing complete renovation now, and several other buildings are being improved in increments. The project is on a funding constraint schedule that has been widely disseminated, but if you have not seen any of that information, call 845-8621 and ask for it.

I have heard that the "IRN" will be the backbone for Labs communications. What is the IRN?

There are two classes of unclassified computing assets at Sandia. One is used by the community that requires unencumbered access from outside the Labs, referred to as the "open" network. The other includes corporate assets that must be "restricted" from external access. It is called the internal restricted network — the IRN — in New Mexico and the restricted access network in

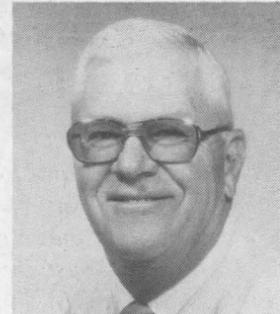
Recent Retirees



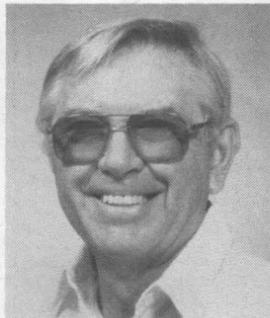
Bill Burns
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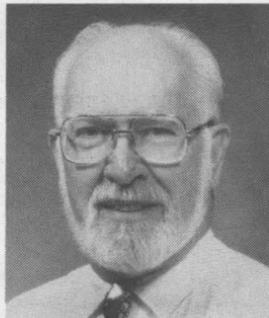
Joe Keiner
361 36



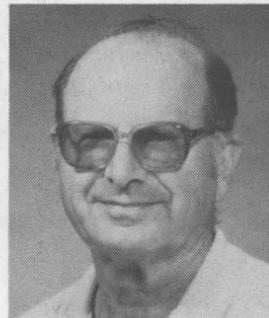
Frank Muller
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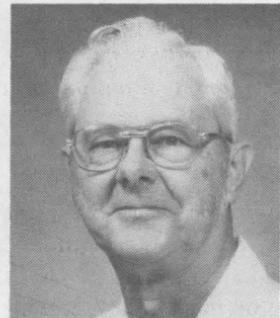
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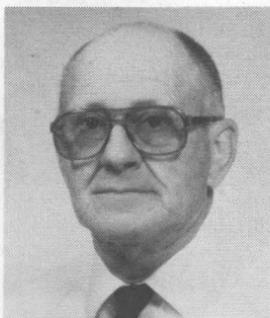
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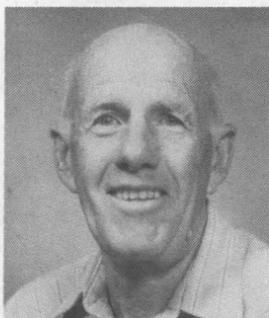
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Frank Rebarchik
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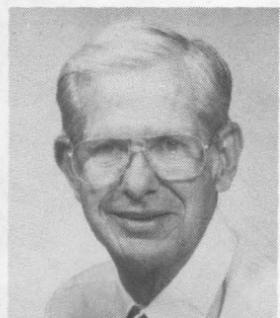
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Delmar Gronseth
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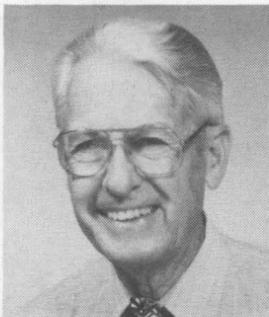
Ermelindo Marquez
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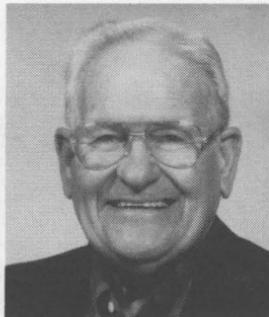
Stan Reynolds
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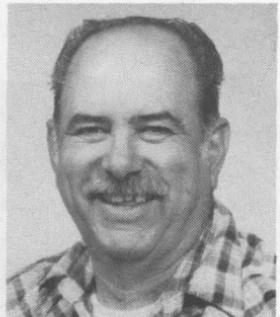
Leslie Anderson
9214 34



Eugene Emerson
7028 38



Howard Stuart
5512 38



Fidel Gabaldon
7614 27

California. Most of the internal business assets at Sandia are located in the restricted access category.

I am interested in a "work at home" capability that would require unclassified access to our department workstation computer-aided engineering tools. How can the Sandia communications organization help? Have you heard of telecommuting?

Telecommuting is already being piloted in California, where the local telephone company is equipped to support ISDN services. US West is preparing to support this sort of service, probably within a year, to many neighborhoods in Albuquerque. We are interested in working with potential customers to develop this environment for Sandia in Albuquerque, so let us know what you need and we'll try to make it happen. There are exciting opportunities looming out there!

Some of us in the remote areas have lousy phone lines. What does the new phone service mean to us?

As soon as we get the newness of our business under control, we will address this part of our set of challenges. The first thing we will be able to do is to restore serviceability to some of what is in disrepair. In the long run, we need to install switching equipment and replace nonserviceable wiring. Our present funding rate will enable us to address half of the Albuquerque needs over five years. We will need to arrange funding to be able to get at the remote area issues in the reasonable future.

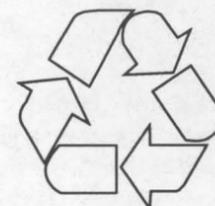
How can I find out what is going on in the

communications business? It seems like a big dark secret.

All centers have been asked to provide a contact person who can interact with Org. 1900 as much as necessary to remain informed. That person receives information as often as weekly. We will be happy to identify your contact person. In addition, we welcome questions and help in making improvements. Please call 845-850 or fax 844-4173.

Where is the communication program at Sandia going? What are its goals and objectives?

Org. 1900 has a goal of becoming a critical element in the development of the National Information Infrastructure. We will do this in part by making Sandia a showcase in the application of technology that releases the Sandia staff to perform without communication infrastructure constraints. Our success will be measured by what Sandia is able to do, not by the attributes of the infrastructure that we are able to put in place. ●



This newspaper can be recycled with Sandia office paper

MILEPOSTS

LAB NEWS

October 1993



Bob Thompson
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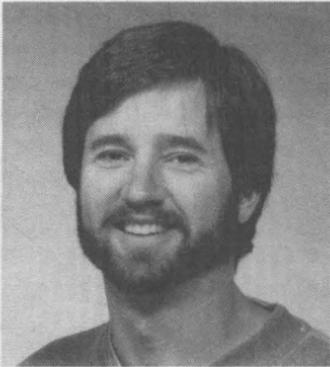
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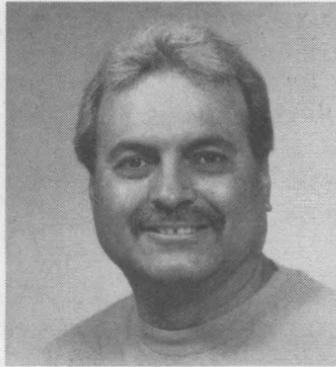
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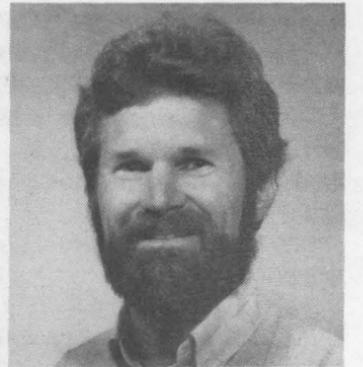
Albert Disch
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Tom Plut
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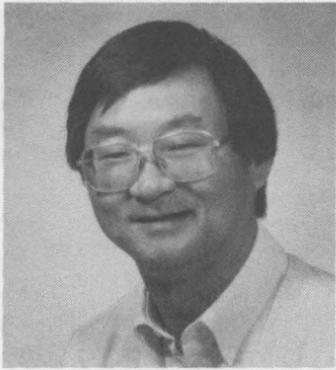
Daniel Baca
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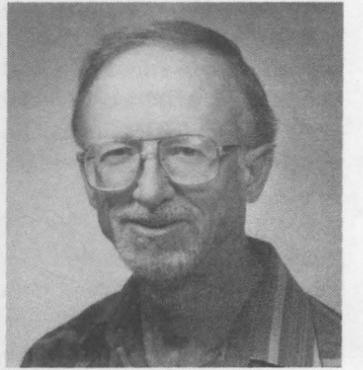
Paul Dressendorfer
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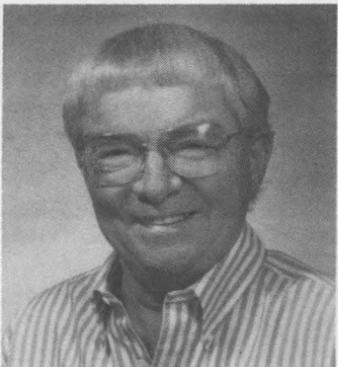
Thomas Hobart
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Er-Ping Chen
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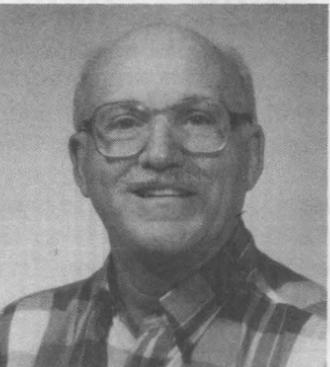
Clifford Mendel
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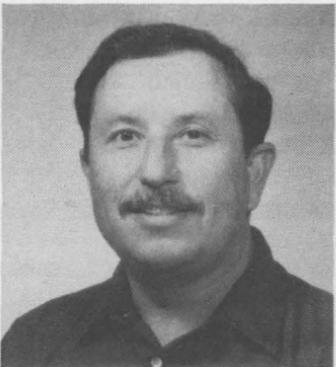
John Frazier
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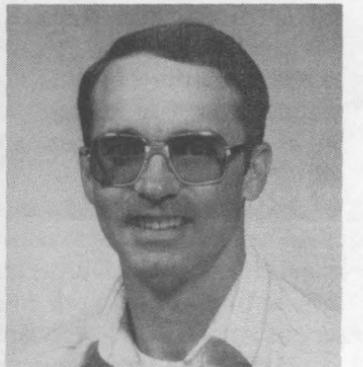
Donna Mitchell
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James Bergey
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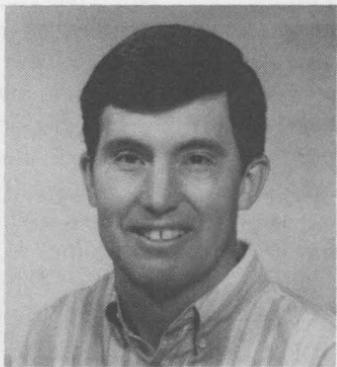
Christopher Chavez
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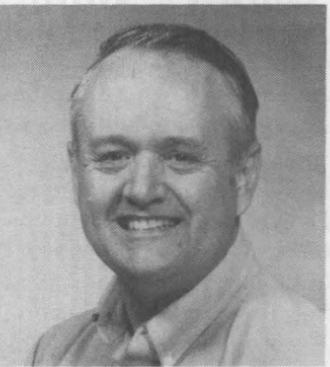
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Jim Wolcott
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David Seidel
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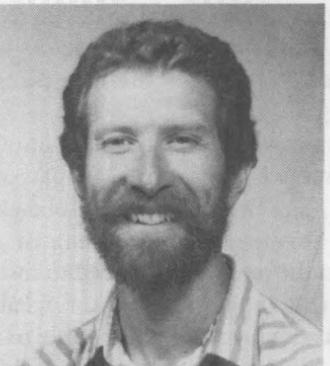
Sam Wallace
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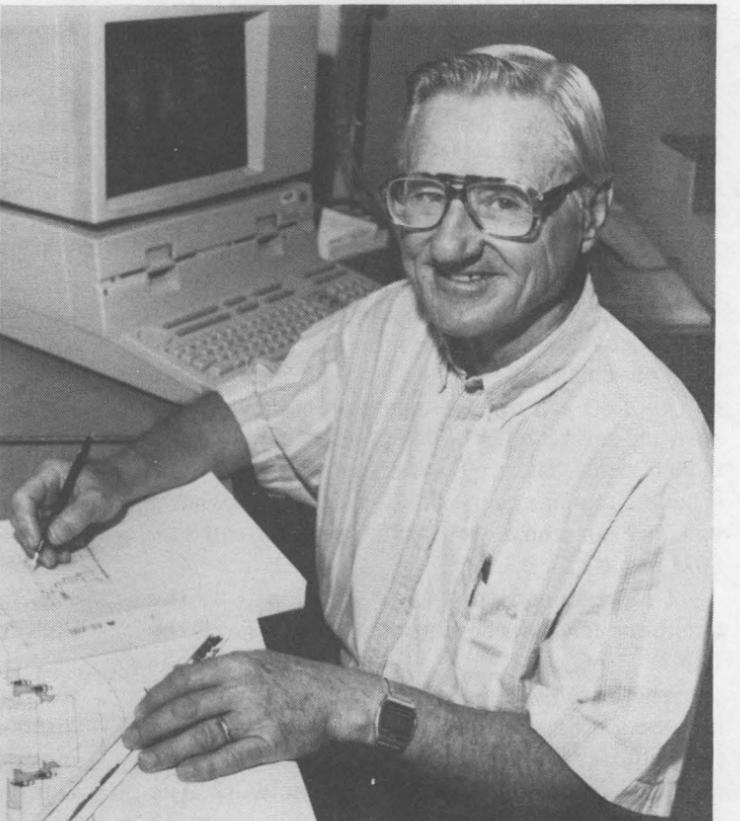
Eliseo Martinez
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Sharon Bremer
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David Rogers
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James Kannolt
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Transition Council Activities Wind Down with Awards

Sandia's Transition Council and Transition Program Office (33), the organizations that planned and executed the Labs' transition from AT&T to Martin Marietta, ended their work recently with presentation of awards at a Coronado Club "thank you" reception. Everyone involved in Council or Program Office activities during the year-long transition planning process received a memento of the project.

In addition, former Executive Vice President and Transition Executive Lee Bray handed out one team and three individual awards for excellence. Individual awards went to Ed Gullick (3531) for

"development and execution of the Transition Project Plan for the Sandia Recruiting Process"; Danny Brown (3511) for "exemplary leadership in the development and implementation of the Transition Project Plan for Human Resources Processes and Benefits"; and Roger Lizut (6904) for "exemplary leadership in the development and implementation of the Transition Program Plan."

The Sandia Corporation Savings Plan Team was cited for "demonstration of all the attributes of good project management methods, and excellence in managing the transition of the Sandia Savings Plan." Team members were Sheila Carr (3512);

Mark Biggs, Jane Farris, Charles Mika, and Rebecca Spires (3542); Debra Babb (3543); Joe Rivera (3544); Raymond Shaum (10003); Bill Mertens (10321); Louis Aguirre, Charles Cote, and Carol Johnson (10325); Rena Skeets (10502); Jim Hilts (10505); and Larry Greher (11200).

Sympathy

To Cal Jaeger (9521) on the death of his father in Phoenix, Sept. 11.

To John Lanoue (2514) on the death of his father in Albuquerque, Sept. 29.

UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS

Deadline: Friday noon before week of publication unless changed by holiday. Mail to Dept. 12660 or fax to 844-0645.

Ad Rules

1. Limit 20 words, including last name and home phone (the LAB NEWS will edit longer ads).
2. Include organization and full name with each ad submission.
3. Submit each ad in writing. No phone-ins.
4. Use 8 1/2 by 11-inch paper.
5. Use separate sheet for each ad category.
6. Type or print ads legibly; use only accepted abbreviations.
7. One ad per category per issue.
8. No more than two insertions of same "for sale" or "wanted" item.
9. No "for rent" ads except for employees on temporary assignment.
10. No commercial ads.
11. For active and retired Sandians and DOE employees.
12. Housing listed for sale is available for occupancy without regard to race, creed, color, or national origin.
13. "Work wanted" ads limited to student-aged children of employees.

MISCELLANEOUS

TIRE CHAINS, 14-in., two pair; camper tie-downs; Subaru bra; used built-ins: dishwasher, electric stove, double porcelain kitchen sink, cheap. McAllister, 281-5188.

SOFA, earthtones, 7-ft., excellent condition, \$250; oak coffee table, Autumn Wood, \$225; Marcy exercise bike, \$75. Dowdican, 822-9693.

ELECTRIC HEATER, De Longhi, portable, oil-filled, in original box, w/instruction booklet, \$25; chrome closet-extender rod. Wagner, 823-9323.

SNOW BLOWER UNIT, 42-in., on 16-hp Allis-Chalmers garden tractor, hydrostatic drive, includes 42 mower, chains, \$1,950. Whitley, 293-6094.

WOMAN'S WATCH, 14K gold, Seiko, \$100; mahogany grandfather clock, "Ridgeway," \$1,000; cocktail ring, sapphire, w/diamonds, 14K gold, \$350. Sobel, 281-8792.

RADIAL TIRES, high performance: two Pirelli P6 105/60R1482H, \$30; two Suimitromo P185/60R1482H M&S, \$60. Cropp, 296-1877.

COUCH & LOVESEAT, southwest design, light brown, good condition, \$150 for both. Langlois, 275-2108 evenings.

DOGS, black Labradors, two purebred males, 2-year-old neutered, 1-1/2-yr.-old not neutered, good with children, free. Delnick, 294-4670.

CAMERA, Asahi Pentax, lenses, tele-extender, flash, filters, and other extras, best offer. Alderson, 293-5112.

SHINGLES, three-tab, 7 bundles, brown; Kirby vacuum; stationary sander; air compressor; sewing machine; camper clampers; motorcycle bumper rack. Reuter, 884-8347.

MIKITA CHOP SAW, 10-in., \$150; McCulloch chain saw, 18-in., \$150. Hertel, 345-1088.

FISHER STEREO SPEAKERS, two, w/cabinet, (components stolen, don't need speakers without a stereo system). Carpenter 294-1372.

WOODBURNING STOVE, Grizzly, airtight, will heat 2,000 sq. ft., \$300. Brockman, 869-7106.

GO-KART, Pontiac Gran Prix fiberglass body, 5-hp, B&S engine, run less than 10 hours, like new, \$600 OBO. Hoffman, 294-4167.

LAPTOP COMPUTER, Leading Edge D/LT386SX, 1MB RAM, 40MB HD, 1.44 MB floppy, backlit, EGA/VGA, serial, parallel, DOS 5.0, GW BASIC, case, \$850. Nunez, 884-3623.

CHAIN SAW, Remington, 14-in., \$50; paint sprayer, w/compressor, \$35; aluminum screen door, 30-in., \$10. Denish, 256-1559.

SKI RACK, New Dovre, \$50 OBO; bar stool, \$10 OBO; American Plastic bricks, like Legos, \$10 OBO; houseplants. Dixon, 298-5617.

BED, king-size, air mattress, side rails, triple dresser w/mirror, nightstand, very good condition, \$575. Silva, 867-4152.

GOLD WATCH, Lady Hamilton, w/baguette diamonds, beautiful, unusual, appraised at \$4,300, must sell, \$1,200 OBO. Johnson, 884-1728.

LAWN MOWER, Black & Decker, electric, w/grass catcher, new, \$90. Duncan, 281-8792.

FLORAL COUCH, \$120; Kenmore water softener, \$100; southwestern pool-table light, \$150; oak bedroom set, \$200. Peña, 898-2388.

WORD PROCESSOR, System III, w/Olympia ES105 printer, excellent condition, w/instructions, \$175. Sparks, 880-0324.

BOOTH SPACE still available for Arts & Crafts Fair, Sat. Nov. 13, fundraiser for Chelwood Elementary. Kellogg, 299-3737.

ROWING MACHINE, DP Body Tone 300, good condition, \$35. Schelby, 268-8928.

MOVING SALE: sofas, chairs, mower, folding tables, IBM typewriter, refrigerator, bookcases, fur jackets, sewing machine in desk, 8601 Hannett. Fjelseth, 296-2257.

HARD DRIVE SET, 85MB, \$145; CD ROM drive, \$150; SVGA display driver card, w/video output, \$175. Hale, 298-1545.

DINING TABLE, w/six chairs, dark pine, \$300 OBO; sofa bed, \$150 OBO. Estes, 294-9055 after 5 p.m. or on weekends.

ELECTRIC TROLLING MOTOR, TurboPower Minkota, 5-spd., 30-lb. thrust, used 6 hours, \$225; GE color TV, 19-in., excellent condition, \$100. Crego, 292-0266.

SOFA, burnt-orange velvet, nice and comfortable, \$100 OBO. Anderson, 296-3352.

COMFORTER, queen-size, w/bed skirt, light blue, excellent condition, \$30. Ask for Mary. Mohagheghi, 271-0724.

SOFA, and matching loveseat, excellent condition, 3 yrs. old, \$500 OBO. Sheldon, 293-0467.

BINOCULARS, Swarovski SL, 7 x 42, poro prism design, super sharp, must see. Ask for Adam. Jimenez, 296-9256.

MOVING SALE: table, chairs, washer, dryer, decorative items, bookcase. Crumley, 299-5293.

ORGAN, Lowery Heritage, two 61-key manuals, 18 pedals, digital recording, 3 yrs. old, new cost \$19,000, sell \$12,000. Smith, 299-6873.

SOFA SLEEPER, Broyhill, queen-size, w/matching swivel rocker, plaid pattern. Linnerooth, 299-6558.

CONVERTIBLE CRIB/TWIN BED, includes mattresses and chest, \$250 OBO. Ghanbari, 883-3819.

CROSS-COUNTRY SKIS & POLES, two pair, Asnes TL, 205cm & 210cm, \$50/ea.; ski boots, men's size 10, women's size 8-1/2, \$10/ea. Filter, 823-1232.

COMPACT DISC PLAYER, w/remote control, single-disc, \$80. Miles, 296-2169.

STONEWARE, service for four, \$20; flatware, \$10; B&W TV, 13-in., \$20; woman's boots, size 6, \$50/ea. Quintana, 822-9566.

WATERBED, king-size, oak headboard, w/nightstands, complete w/6-drawer pedestal and oak side rails, \$475 OBO. Korbin, 821-8461.

COUCH & LOVESEAT, cream, brown, and gold; down sofa; round game table, w/four chairs. Landrum, 237-9196.

MISCELLANEOUS: ski, baseball, soccer, and exercise equipment; youth scooters; down jacket; couch, office desk; baby playpen. Reif, 299-4243.

MINOLTA SRT101, 35mm, 58mm, 135mm, 300mm lenses; camera body, needs repair; assorted accessories. Excellent condition, will sell separately. Dybwad, 296-9047.

SHOTGUN, Sears Ted Williams, 12-gauge, checked stock, vent rib; PSE Jet Flight Express cam bow. Both excellent. Gunkel, 255-9667.

RIFLE, Remington 721, 300 H&H magnum, 4-power scope, dies included, \$375; air conditioner, 11,000-Btu, \$125. Schowers, 822-8494.

SNOW TIRES, four, mounted on new steel rims, fit Toyota trucks, new, \$550. Loving, 281-7808 evenings or weekends.

COMPUTER, 8088, 20MB HD, monitor, \$250; Citizen 120D printer, \$90; woman's golf clubs, 2 through 9 irons, \$65. Maloney, 299-4330.

CAMPER, fits full-size truck, fully self-contained, good shape, \$1,000 OBO. Schafer, 296-0017.

DOG, Rottweiler, 6-yr.-old female, spayed, recent shots, free to good home. Parker, 884-7215.

SOFA, 81-in., pillowed, w/matching multi-colored rocker/recliner, like new, \$500 for both. Benjamin, 294-3228.

INSTANT FACE PLACE SYSTEM, Casi Ultimate, pictures on mugs, buttons, key chains, etc.; Teac A-1500 tape deck. Brooks, 299-1884.

WOMAN'S SHEEPSKIN JACKET, Overland, size 4 petite, new \$695, asking \$350. Babcock, 299-3121, leave message.

SOFA, 92-in., like new \$50; steel/sash windows, four, various sizes; hi-speed trailer tires, three, w/wheels, 5.7" x 8", \$10/ea. Houghton, 299-3386.

MOVING BOXES, wardrobe size, \$5/ea.; mirror/art size, \$2/ea. Garcia, 298-9554.

CAMERA, Minolta Freedom, 200mm, 105l, \$85; Coleman generator, 1600-watt, low noise muffler, 3 hours use, \$225. Fleming, 293-9421.

SOCCER SHOES, Adidas, size 7-1/2, excellent condition, \$80 new, sell for \$25; soccer referee uniform, small, new, \$20. Biffle, 293-7043.

CONICAL FIREPLACE, free-standing, you pick up, \$50. Lewis, 268-5025.

DOGS, Labradors, AKC-registered, excellent bloodlines, great with kids, must sell, \$50. Apodaca, 828-0885.

TRANSPORTATION

BICYCLE, 25-in., Schwinn Tempo, model below Paramount, Shimano 105, Mavic wheels, HP600 tires, great road bike, perfect shape, \$260. McAllister, 281-5188.

'87 TOYOTA TERCEL, AC, AT, AM/FM cassette, cruise, new brake pads and timing belt, \$3,000. Pound, 899-9128.

'73 SIGHTSEER II MOTORHOME, Class A, 4KW generator, new roof air, new refrigerator, \$5,500. Beck, 821-5229.

BICYCLE, Vitus Carbone 3, 51cm carbon fiber frame, Campagnolo Athena group, ridden 400 miles, \$800 OBO. Ryba, 292-4873.

'90 PLYMOUTH SUNDANCE, blue, 40K miles, tinted windows, bra, new tires, \$4,800. Snyder, 237-1065.

'90 PONTIAC 6000LE, 4-dr., V6, AT, AC, PB, PS, AM/FM cassette, 56K miles, blue metallic, great condition, \$6,500. Stevenson, 299-3510.

'79 GMC CABALLERO, El Camino, 76K miles, 305 V8, PS, PB, AC, excellent condition, \$2,900 OBO. Hole, 255-1444.

'87 T-BIRD TURBO, white, low miles, all power, AT, ABS, new brakes front and rear, \$5,000 OBO. Geer, 265-2094.

'82 BALBOA SAILBOAT, shoal draft keel, roller furling jib, jiffy reef main, head, galley, E-Z loader trailer, many extras. Rodacy, 293-2668.

'67 COUGAR, motor/transmission overhauled, new rear-end, excellent tires, new paint, \$2,995; '74 FORD F350, w/camper, like new, \$4,500. Ukena, 275-7275.

'74 SUBURBAN, 3/4-ton, 4WD, needs lots of work, \$1,000. Johnstone, 898-5165.

'82 PONTIAC BONNEVILLE, \$1,500 OBO or trade for 486 computer, w/200 MB HD. Case, 299-4775 evenings.

'77 DODGE PICKUP, heavy-duty, 318 V8, 4-spd., PB, short wheel base, good condition, \$1,800. Woods, 281-0477.

'79 CAMARO Z-28, 350 V8, AT, PS, T-tops, factory AC, 73K original miles, runs great, \$4,200 OBO. Ask for Larry. Johnson, 884-1728.

'68 CHEV. PICKUP, 3/4-ton, AC, 4-spd., radio, 60K miles, original owner, \$1,800. Rosborough, 865-8490.

'82 YAMAHA SECA 650, 4-cyl., shaft drive, 5K miles, one owner, all original, excellent condition, \$1,800. Mac Cosbe, 281-0775.

WOMAN'S BICYCLE, Schwinn Varsity, 10-spd., excellent condition but needs new innertubes, \$25. Henderson, 281-8271.

BICYCLE, 10-spd. Reif, 299-4243.

'82 MAZDA PICKUP, 5-spd., AC, AM/FM cassette, w/fiberglass shell, \$1,400 OBO. Lesperance, 281-7399.

'74 MGB, convertible, low miles, excellent condition, \$3,850. Wilson, 237-2013.

'90 TOYOTA CELICA GT, loaded, low miles, \$11,000 OBO. Gilmour, 836-4007.

BICYCLE, 10-spd. Schwinn. Crumley, 299-5293.

'88 TOYOTA 4-RUNNER SR-5, V6, 4WD, cruise, AM/FM stereo cassette, mag wheels, sunroof, 5-spd. manual, 80K miles, \$12,500. Loving, 281-7808 evenings or weekends.

'85 VOLVO 245 GLT SW, loaded, AT, only 83K miles, \$5,900 OBO. Schafer, 296-0017.

'90 HONDA ACCORD EX, 2-dr., AT, white, cassette, loaded, 27K miles, excellent condition, \$13,500. Sobel, 281-8792.

'90 JEEP CHEROKEE LAREDO, 4.0L engine, AM/FM cassette, power seats and windows, off-road and towing packages. Brooks, 299-1884.

'85 PACE ARROW, 33-ft., queen (island) bed, fully loaded, many extras and additions, clean, low mileage, \$25,500. Bear, 881-7128.

'67 MUSTANG COUPE, 289 V8, AT, 140K original miles, second owner, \$4,600. Fleming, 293-9421.

'90 NISSAN STANZA XE, 4-dr., 17K miles, AT, AC, AM/FM cassette, cruise, excellent condition. Anderson, 275-9362.

REAL ESTATE

9.86-ACRES, Edgewood area, in piñon and juniper, water to lot, electricity to neighbor's lot, \$45,000. McAllister, 281-5188.

3-BDR. HOME, Rio Rancho, corner lot, new auto sprinklers, double garage, Jamestown model, new in 1987, presently rented, \$78,500. Sparks, 880-0324.

10-ACRES, Taos, \$30,000 per acre, will split into two pieces. Gonzales, 836-4539.

2-BDR. TOWNHOME, 2 baths, 2-car garage, skylights, hot tub, gazebo, shed, Taylor Ranch, \$81,500. Kelly, 897-1838.

3-BDR. HOME, Academy Acres, pitched roof, upgraded kitchen, living room, family room, fireplace, 2-car garage, 1-3/4 baths, \$101,300. Korbin, 821-8461.

WANTED

CAMPING EQUIPMENT, especially tents, for Boy Scout troop, donations would be wonderful, reasonable prices also considered. Cocain, 275-9505.

ANTIQUES: milk bottles, bricks, or auto license plates. Gerwin, 881-0028.

HOUSESITTING POSITION, professional couple, from mid-October through June, community and Lab references upon request. Hickox, 822-1331 or 828-0552.

PHOTOVOLTAIC PANELS, in good working condition, for use in recreational vehicle battery-charging system. Gugliotta, 255-5998.

DANCE PARTNER, male, for west-coast swing lessons and practice. Anderson, 296-3352.

PARTS, for go-carts and minibikes, old and cheap, for mid-schooler's project. Hine, 299-9062.

LOST & FOUND

FOUND: Earring, w/beads, in the parking lot east of Bldg. 880, on Tues., Sept. 28. Webb, 844-8372.

FOUND: Woman's watch, in Bldg. 20245. Jackson, 845-8483.

Coronado Club Activities**Congrats to New Board Members**

SEVERAL DEDICATED C-CLUBBERS make up the board of directors. Congratulations to newly elected board members Anna Bachicha-Reynolds (DOE/AL) and Fred Sexton (1332), as well as re-elected members Harold Barnett (Sandia retiree) and Janice Bauer (12820).

OKTOBERFEST — Tonight, Oct. 15, brings a touch of oom-pah-pah to the Club, as Die Polka Schlingels provide the music and Rudy's Schuhplattler Dancers add Austrian and German folk dancing. The menu will add to the atmosphere: sauerbraten (German pot roast), schweineschlegel (roast ham, Black Forest style), bratwurst and knockwurst (German sausage), hot German potato salad or sauerkraut, and a full salad bar — all you can eat for \$7.95. Reservations required — call them in on 265-6791 right now!

KIDS' BINGO COMING — Next Friday, Oct. 22, is Kids' Bingo. Every kid (12 and under) playing bingo gets a free hot dog and soft drink, and of course there will be lots of prizes to win. Cartoons and a movie start at 5 p.m. The buffet line also opens at that time. Bingo starts at 7 p.m.

REMEMBER, the Club is offering some special incentives for new members this month — two extra months free if you join for a year, plus a chance to draw a nice prize from the prize bowl. Here are a few reasons to join the Club: access to the pool and patio, dinner dances, Sunday brunches, events for children, discounts on lunches, discount movie tickets, Sandia Peak Tram passes, swim and tennis lessons, and free notary service. Sign up at the Club Monday through Friday, 8 a.m. to 4 p.m. For more information, call 265-6791.

Feed Back

Q: As a permanently disabled employee, I use and appreciate the handicapped parking made available to me within the tech areas. However, much of the time the few available designated spaces are taken by employees with temporary medical access. These employees should be instructed when they receive their access that they should first use unmarked available spaces, then spaces marked for medical, and only as a last resort, spaces marked for the handicapped.

Since I am restricted to a wheelchair, I need the extra space to get into and out of my car which is afforded to me by the larger handicapped spaces. If I use a smaller unmarked space, or one marked for medical, typically someone will park right next to me and I will not be able to get into my car. I have also had to leave notes on people's vehicles asking that they do not block or park on wheelchair ramps. I do get aggravated when I see someone with no discernible handicap parking in one of these spaces — no wheelchair, no crutches, not even a limp.

I appreciate any action you can take on this problem.

A: I fully agree with your comments. When you are given temporary permission to park in a medically assigned space, you are not authorized to

use the oversized handicap spaces unless you, the driver, are using a wheelchair.

Spaces marked "Medical" are specifically assigned for temporary disabilities. A permit from Medical is required and must be posted in your vehicle. Keep in mind that your vehicle is subject to search entering or leaving a tech area.

As an employee, you should report any misuse of handicapped spaces to your supervisor or to security on 844-4338. An able-bodied driver parking in a medical or handicap space is subject to disciplinary action. Blocking access to a ramp is also a violation.

Neil Hartwigen (7900)

Q: Tech Area 1 looks like a bicycle graveyard. Is there anything that can be done to clean up the many years' accumulation of abandoned bikes?

Another annoying aspect of this problem is that over time, these derelict bikes fill the bike racks (since they never are used), leaving no place for those of us who ride to put our bikes.

A: Thank you for the suggestion to clean up the many years' accumulation of abandoned bikes. We have a "clean up" program that started Oct. 1 that includes 12 sections and an administrator for each section. Frank Comiskey (7616) is the coordinator of the program, and he will include a statement to each of the 12 section administrators to clean up abandoned bikes.

Frank will assist the 12 section administrators by implementing a procedure that includes placing a notice on bikes. If the notice is not removed in a reasonable period of time, the bike will be sent to Reapplication.

Bob Eldredge (7616)

Q: What is happening with our mail delivery? In Tech Area 1, we never know whether we'll get delivery once a day, twice a day, or not at all. There have been several days recently when we got no delivery at all.

A: The Sandia Mail Center processes are undergoing significant changes to improve customer service, and Sandians are asked to bear with us during these next few hectic months. (Editor's Note: See related article on page eleven.)

Tech Area 1, like all other Sandia/New Mexico areas, currently has once-a-day mail delivery. We are examining our processes now to find ways of reinstating twice-a-day deliveries. It is unusual, but, I'm sorry to say, there have been instances where an organization received no mail on a regular workday.

In the near future, a Mail Center hotline will be established to give quick feedback to Sandians calling to inquire about a mail delivery problem.

Richard Romero (7613)

Medical Corner**Learning to Be a Better Parent**

By Arlene Price, 3335

Parents face one of the most difficult challenges in life: raising physically and psychologically healthy children and helping them become responsible adults. What more difficult and demanding job is there? Yet parents receive little or no training for this great challenge, except perhaps the vicarious learning they do in their own families as they grow up.

Unfortunately, one of the most potentially satisfying relationships in life — between parents and children — often creates hard feelings. Although parents appreciate what they have learned from their own families about parenting, they still feel a need to know more, to create higher-quality relationships.

Parenting does involve skill, just as any other job does. Experience has shown that parents can learn new ways to improve their parenting skills, and that they can apply these skills.

In honor of National Family Health/Safety Month, Preventive Medicine and Employee Assistance Dept. 3335 is sponsoring a program titled "Parenting Adolescents and Children." The guest speaker is child psychologist Tom Carey. He will review 10 ways you can improve the quality of your relationship with your adolescents and younger children. He says that at the end of 30 days, if you can carry out these suggestions, you will see an improvement in how you get along with your children.

Carey's talk will be Wednesday, Oct. 20, from noon to 1 p.m. at the Technology Transfer Center (Bldg. 825). Spouses are welcome. For further information, contact Arlene Price on 845-8729.



CLAIRE GALLIPOLI, Administrative Assistant, Legal Div. 11000, was recently named a Fellow of the National Contract Management Association (NCMA). Fellowships are limited to "those few who have made significant and outstanding contributions to the field of contract management." Only about 1,700 of NCMA's 23,000 members are fellows. Claire came to Sandia in 1989 from Phillips Laboratory. She was a member of Purchasing's Administrative Program Office 7202 until her recent move to the legal offices. Claire is a Certified Professional Contracts Manager, has been a member of NCMA for eight years, and has served as an officer and chaired several committees in the 210-member Albuquerque chapter of NCMA.

Waste Minimization Group Seeks Maximum Effort on Logo Design

Members of the Waste Minimization Steering Committee are looking for Sandians with an artistic inclination to help design a logo signifying the Labs' Waste Minimization and Pollution Prevention program.

If you have an idea that seems appropriate, says Merri Lewis of Waste Minimization Programs Support Office 6606, send her a picture or design — or several pictures or designs — by Monday, Nov. 1.

For each entry, your name will go into a drawing. Five names will be drawn on Friday, Nov. 5, and each person whose name is drawn will receive a prize. Prizes will be items that are made from recycled materials or that replace disposable items, and are imprinted with the new logo.

Merri says multiple entries are encouraged, from employees and contractors at all sites.

Entries should be mailed to Merri, or faxed to her on 844-0244. Questions should be telephoned to Merri on 844-6523 or to Sally Raubfogel of Environmental Protection Dept. 8642 (at Sandia/California) on 510-294-2341.