

Revolutionary auto airbag unveiled in Washington

Novel design is 60 percent lighter and smaller

By Julie Clausen

Media Relations Dept. 12621

Representatives from Sandia and Precision Fabrics Group Inc. (PFG) unveiled a revolutionary new automobile airbag to the news media June 27 at a news conference at the National Press Club in Washington.

The Precision Technology Airbag, which has less than half the packed volume and weight of existing airbags, promises to result in safer cars because automakers will be able more easily to equip vehicles with airbags without sacrificing valuable interior space. Other advantages are that it inflates faster upon impact and is designed not to cause the abrasions that can result from conventional airbags.

"As we stand before you this morning, we're here to jointly announce the development of a family of revolutionary automotive airbags," PFG Chief Executive Officer Lanty Smith said to about 15 reporters, including representatives from CNN, CBS, and ABC Radio News. "The basic design has been developed with the knowledge gained through the computer modeling and the simulation capability at Sandia."

Smith and Sandia VP for Laboratory Development Paul Robinson (4000) made the announcement, describing how the collaboration not only produced an improved airbag but

also gave Sandia researchers new insight and knowledge that could be applied to parachutes.

"They've gotten enormous insights into fabrics and stress patterns within those fabrics. I think the parachutes of the future are also going to be considerably different," Paul said. He also highlighted the dual benefit aspect of the project in testimony later the same day concerning technology transfer presented before a joint meeting of the House subcommittees on technology and basic research (see "Sandia cites tech transfer successes before Congress" on page 8).

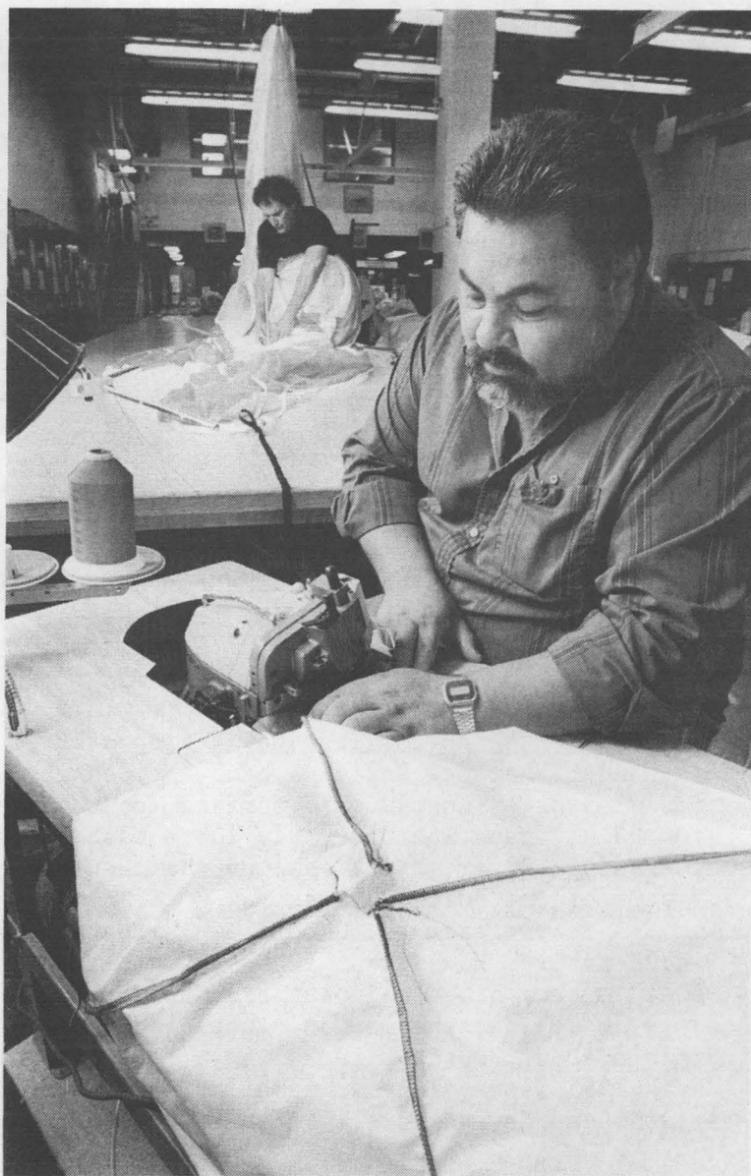
Airbags unchanged since '70s

PFG, the world's leading and largest producer of fabrics for military parachutes, approached Sandia for help about five years ago, before today's commonly used process of cooperative research and development agreements (CRADAs) even existed. The company recognized that current auto airbag designs were suboptimal but didn't have the necessary technical expertise and facilities to improve them.

"Essentially those designs have been the same since the airbag was initiated in the early 1970s," Smith said.

"Those design deficiencies, in turn, drive or require the use of what we would call 'over-engineered' fabrics,

(Continued on page 7)



CHUTES TO BAGS — Dan Luna of Fluid/Structure Interactions Dept. 1516 sews together a prototype of a revolutionary new airbag developed by Precision Fabrics Group Inc. and Sandia. Richard Brazeal (background), also of Dept. 1516, works on a parachute. The airbag design draws on Sandia's expertise in advanced parachute systems. (Photo by Randy Montoya)

Dismantle DOE? Narath urges caution before energy and power subcommittee

One of the many new pressures on DOE and the national laboratories this year is an effort by a group of first-year Congressmen to do away with DOE altogether. Testifying at a recent House Energy and Power subcommittee hearing on proposals to dismantle the DOE, Sandia President Al Narath urged great caution with all such proposals and offered a variety of reasons to keep DOE intact.

According to news reports, the June 21 hearing — at which the freshman Republican group responsible for the anti-DOE initiative was also invited to make its case — was marked by stiff opposition to the idea from Republicans and Democrats. The next day a House-Senate conference committee approved a 1996 budget resolution that made no call for abolishing DOE, so the freshman legislators presumably will need to find another route to press their initiative.

"For all the criticisms directed at the DOE, the Department still maintains what are widely regarded collectively as the best scientific and engineering laboratories in the federal

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Sandia LabNews

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Sandia National Laboratories

Moving explosives testing indoors: New facility can handle big blasts

New Mexico dignitaries, DOE sponsors attend July 6 dedication

By John German

Lab News Staff

From its facade, Sandia's new Explosive Components Facility (ECF) southeast of Area 1 looks rather like an attractive-but-ordinary office building.

But step inside, past the ornamental tiered ceiling and expansive glass skylight in the lobby, and beyond the front offices with their stacked-block window patterning, and the motif changes.

Windowless mouse-maze hallways wend past vaulted steel "blast doors." Coded locks

keep watch at doorways, demanding identification from would-be entrants. Reinforced-concrete and brick walls stand attentive, daring.

Put it all together, and Bldg. 905's architectural elements suggest a most unlikely paradox: high explosives testing . . . indoors.

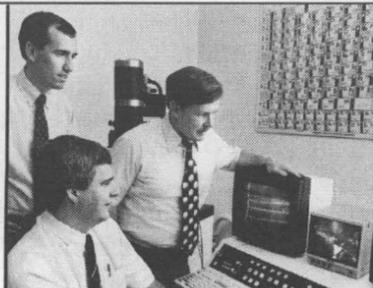
Philosophical departure

Lloyd Bonzon, Manager of Explosives Projects and Diagnostics Dept. 2554, says the new facility replaces outdoor explosives testing facilities in Area 2, which has been home to Sandia's explosive components program since the

(Continued on page 4)

California researchers help model aluminum on atomic scale 3

Technique for detecting tiny IC cracks earns an R&D 100 Award 5



6 The MLS job-classification structure is getting a facelift

8 Sandia execs tout technology transfer successes in Washington

This & That

Will DOE survive? - Recent news reports indicate that the Department of Energy may survive proposals to dismantle it. House and Senate budget conferees decided several weeks ago not to recommend eliminating DOE, but some members of Congress continue to propose dismantlement. Sandia President Al Narath offered some of his thoughts about this to the US House Committee on Commerce Subcommittee on Energy and Power on June 21. Although that was a couple of weeks ago, it was past the deadline for our June 23 issue. We thought you might still want to read what Al had to say. A summary of his testimony starts on page 1.

Although Al stopped short of making a specific recommendation about whether DOE should survive and continue managing the national labs, he did point out many of DOE's and the labs' substantial contributions and some of the expected drawbacks if DOE were to be dismantled.

Al also prepared testimony for a House Science Committee (joint subcommittees on Technology and Basic Research) hearing last week, about technology transfer (see page 8); Laboratory Development VP Paul Robinson actually delivered that testimony for Al, who had a scheduling conflict.

Boston beanheads lose New Mexico - Is it any wonder that New Mexicans have an identity crisis? Stories continue to surface about how some US citizens, particularly those east of the Mississippi River, don't realize that New Mexico is part of the United States.

A recent example came to our attention from Sandia retiree Howard Romme. A Boston friend of Howard's sent him a clipping from the *Boston Globe*, which ran the map at right along with an article about "Border crackdown in El Paso" in a March 1995 issue. The map maker not only lost New Mexico but also moved Arizona and Nevada to fill the void.



Some welcome! - Now here's a real mixed message. I saw it recently on a huge sign in front of a large, old motel in Phoenix:

"WELCOME!
Closed"

New retirement plan proposed - Something tells me I'd have great difficulty selling this to our Benefits group, but I've long had an idea for a unique retirement plan: Being just a tad over 50 years old, I think I'd like to retire right now (with full retirement benefits, of course) until I'm 65. I'll try hard to have one heck of a good time between now and then while (I hope) my health remains good, then I'll come back to Sandia and work until I'm 80 or until I drop dead at my desk - maybe while drafting my final "This & That" column.

While retired, I'll spend most of my money at New Mexico's golf courses, keeping the economy strong and the taxes flowing. This plan should also help the ailing Social Security system because I'll "unretire" about the time it will be hard hit by retiring baby boomers. Good for me, good for the state, and good for the country! How could they turn me down?
- Larry Perrine (845-8511, MS 0129)

Supervisory appointments

ARMANDO CASTORENA to Corporate Ombuds (12711) at Sandia/New Mexico.

Armando joined Sandia in 1990 as an EEO/AA investigator in the Equal Employment Opportunity and Affirmative Action Department. He chaired the Hispanic Leadership and Outreach Committee from 1990 to 1992, and initiated and implemented the Manos hands-on science and technology program for middle school students while in that position. He was Sandia's Affirmative Action Plan Coordinator for plan years 1992 and 1993 and was the Internal Compliance Review project leader.



Armando Castorena

He transferred to the Compensation and Job Evaluation Department, where he was coordinator of the performance management system for represented employees, project team leader of ADA (Americans with Disabilities Act) Risk Assessment Project, and project leader of the annual EEO Protected Group Compensation Analyses.

Armando has a BBA in business administration and an MBA from the University of Texas at El Paso. He has completed the Society for Human Resource Management requirements for designation as a Senior Professional in Human Resources. He is a Certified Compensation Professional (American Compensation Association) and a member of the Ombudsman Association. Before coming to Sandia, he worked for the University of Texas at El Paso, the City of El Paso, and Reed's Photo and Video.

HUGH JONES to Manager of Accelerated Procurement System/Government Sources of Supply (APS/GSS) Dept. 10221.

Hugh joined Sandia's Purchasing organization in 1969 as a Sandia contracting representative. He joined Education and Training in 1976 and was a course representative and developed technical in-house educational programs. In 1978, he joined Personnel and worked with the



Hugh Jones

Equal Opportunity and Affirmative Action program, where he offered career counseling and was a recruiter.

In 1979 he transferred to the DOE Light Water Reactor Safety Research and Development Program as program administrator. He returned to Purchasing in 1983 as a Sandia contracting representative. In 1984, he was promoted to administrative assistant for Research Div. 1000. He returned to Purchasing and Materials Management Department in 1987. From 1993 until his promotion, he was team leader in Purchasing and Materials Management (APS/JIT). He received the Purchasing Center's Augustus McCrae Quality Award in 1994 for his work on the Photovoltaic Concentrator Initiative.

Hugh has a BS from the University of Arkansas and is continuing advanced studies in management information systems at the College of Santa Fe. He earned a certificate in AT&T/Sandia campus recruiting. He has held offices with the Albuquerque Chapter of the National Association of Black Accountants. Before coming to Sandia, Hugh worked for the University of Arkansas, the Bernalillo County Indian Hospital, UNM School of Medicine, and the City of Albuquerque.

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LOCKHEED MARTIN



Web hot sites

Alphabet soup - Whether you suffer from "acronymphobia" or "acronymphomania," the Acronym and Abbreviation Server at <http://curia.ucc.ie/info/net/acronyms/acro.html> can help. Either type the letters of an acronym or abbreviation you need to spell out, type keywords of an existing acronym, or add your own initialism to the database.

Solar system tour - Take an interactive planetary trip aboard <http://www.c3.lanl.gov/~cjhamil/SolarSystem/homepage.html>, where you'll find full-color planet photographs and animations, planet and moon statistics, a history of space travel, info about comets and asteroids, and spacecraft data.

Web Hot Sites can be practical, educational, even a little fun, as long as they pertain in some way to Sandia work. To submit your favorite Web site, send e-mail to John German (jdgerma@sandia.gov), or call 844-5199. Make sure to include an accurate http address for each submission.

Sandians apply atomic calculations to alloy modeling

Alcoa joins forces with Sandia to predict aluminum properties

By Nancy Garcia

California Reporter

There is strength in numbers when it comes to aluminum, which becomes harder if other elements are included when the metal is melted. These elements can form microscopic inclusions or precipitates.

How these inclusions influence the alloy's properties during processing is not easy for manufacturers to predict. But researchers at Sandia/California have joined forces with Alcoa, Inc. to model the formation of these precipitates.

Working with a test alloy containing a small amount of the rare element scandium, a team led by Bill Wolfer, Manager of Computational Materials Science Dept. 8341, has built up computer simulation tools, moving from the atomic level up to a general description of the alloy's microstructure as it can be seen through an electron microscope.

Bill compares their computer codes to a spreadsheet whose blanks can be filled in with qualities that describe a particular metal or alloy. These codes may be used for more commercially important aluminum alloys, or other metals, such as steel. The advantage of precise computer modeling, he says, is that it can eventually save time and expense along the

10-year development path that most new materials take from concept to certification for a certain use.

The work evolved from a collaboration between Stephen Foiles of Dept. 8341 and Alcoa scientists following two workshops that DOE asked Sandia to sponsor for industry and academia. Two years ago, the collaboration was formalized in a cooperative research and development agreement (CRADA).

The project is intended to improve process control during processing of aluminum alloys and the manufacture of semifinished aluminum products. Bill explains that each time metal is heated, cooled, and rolled, internal microstructures that give the alloy strength are changed. The precipitates form from the added elements that interact with the aluminum to create intermetallic compounds. Without these precipitates, the metal would be very soft, like aluminum foil. Computer codes developed through the CRADA will predict how the microstructure evolves at each step of the process. "One designs the manufacturing process," Bill says, "such that one obtains the right distribution of these little inclusions."

Much of the work has been carried out by Dept. 8341's Mark Asta. Mark and Stephen started from "first principle" electronic structure calculations. Using a variety of computa-

tional tools for different levels of scale, they have tried to accurately and numerically predict properties that would be expected from different numbers and sizes of precipitates. Each precipitate contains thousands of atoms.

The use of computers to simulate material behavior at the atomic level was originally developed at the California site to understand gases in metals as part of the mission to create gas transfer systems for warheads, Bill says. Now, that approach has "tremendous tech-

nological value" for other areas of science and engineering.

Before current computational tools and massive computer power were available, simulations relied on simpler approximations, and new material development required many trial-and-error tests.

Subatomic art and science

"It's a science and art to build up tools all the way from the subatomic level of electrons," Bill says. "It requires some skill to know what you can leave out and what you have to include. We are trained to use mathematics to describe in very distinct terms the laws of nature as they govern the properties of materials, and we have the talent of putting something in mathematical language."

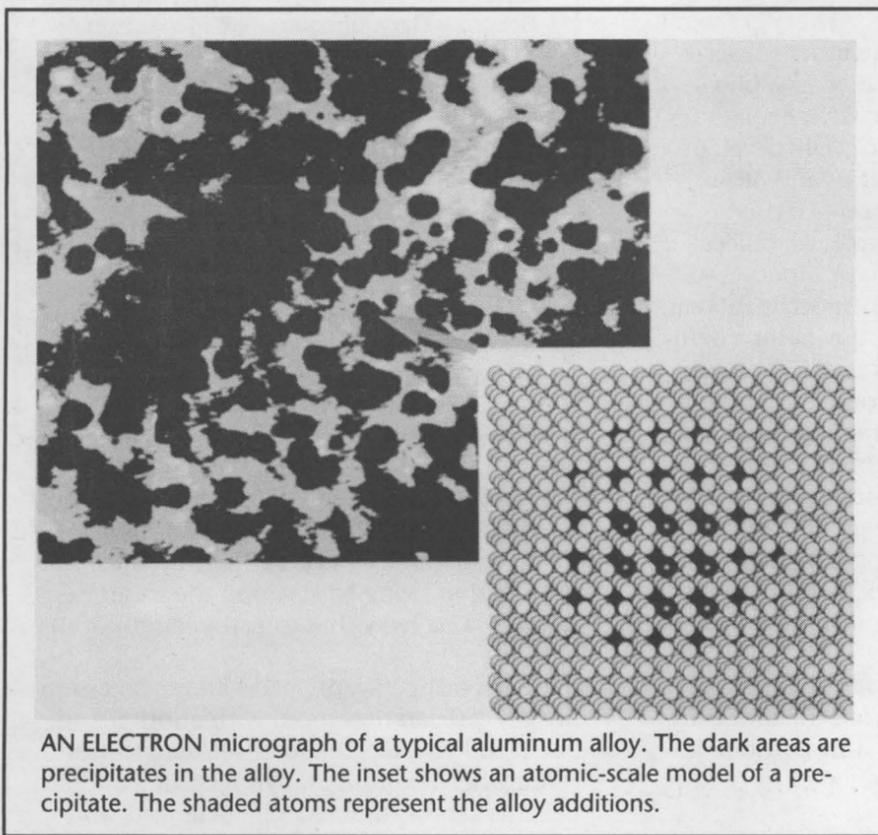
The \$2.56 million CRADA costs are divided evenly between Alcoa and DOE's Defense Programs Technology Transfer Initiative. The technologies being applied in this CRADA have their roots in long-term funding of Bill's department by DOE's Office of Basic Energy Sciences.

Bill expects to continue the same vein of research for a Defense Programs-funded project. In it, his staff will investigate the life span of aluminum-copper alloys that connect integrated circuits in weaponry. Because high current changes microstructures in this alloy, he hopes to predict how long these connections will last. The work has implications not only for weapons, but also for microchip producers.

Sandia California News

Computer modeling could also potentially be used to develop strong, lightweight alloys for fuel-efficient automobiles. Maintaining strength in a material that can also be smoothly shaped or bent involves "two sort of opposite qualities," Bill says. The requirements are driven by such logistical considerations as whether heavy Texas hailstorms might dimple a car hood.

Such problems may be ultimately solved by designing new materials, using computers. In the next decade, says Alcoa Executive Vice President Peter Bridenbaugh, "the US materials industry hopes to develop the capacity to design a material, develop its fabrication path, and test its performance against design criteria, all via mathematical models and computer simulation."



AN ELECTRON micrograph of a typical aluminum alloy. The dark areas are precipitates in the alloy. The inset shows an atomic-scale model of a precipitate. The shaded atoms represent the alloy additions.

Dona Crawford wins NIIT 'Vision Becomes Reality' Award for its 'remarkable success'

Sandia's Dona Crawford has received the highest honor of the National Information Infrastructure Testbed (NIIT), the 1995 Vision Becomes Reality Award for progress in accelerating the National Information Infrastructure.



DONA CRAWFORD

Dona, Director of National Information Infrastructure Research & Development Center 8900, is a founding member of the NIIT board. She went on to serve as secretary of the board of directors and chair of the consortium's original management

committee.

"Dona was part of the original 'red-checked tablecloth team' that met informally after the Supercomputing '92 conference to create an applications-driven consortium to accelerate the NIIT," said board member Phil Burgess, President and Chief Executive Officer of the Center for the New West, who presented the award. NIIT has grown from eight original members in September 1993 to more than 60 today.

"Thanks to Dona, NIIT has achieved remarkable success in a short time," said NIIT President Bill Murphy. "NIIT and its members have gained enormously from her experience and expertise. We are indebted to Sandia National Laboratories for supporting Dona in her efforts to make NIIT a world-class consortium."

Pat Smith Named 'Woman of Distinction'

Pat Smith, Director of Human Resources & Business Operations Center 8500, has been honored by Soroptimists International of Livermore as the organization's 1995 Woman of Distinction. She was recognized for being an exceptional role model for professional career women and for making a difference in a special way in the community — she is president of the Volunteer Center of the Tri-Valley board of directors and has worked on major fundraisers for them. The recognition came during Soroptimists' annual awards banquet.



Explosives Bldg.

(Continued from page 1)

1940s. (See "Five decades of big blasts" below.)

The facility represents a departure from a five-decades-old explosives safety philosophy at Sandia that, although successful, is no longer feasible, explains Lloyd.

"When Area 2 was designed, there was nothing but desert surrounding it," he says. "If there had been a large, accidental detonation, the buffer zone would have ensured that no one outside the compound was hurt."

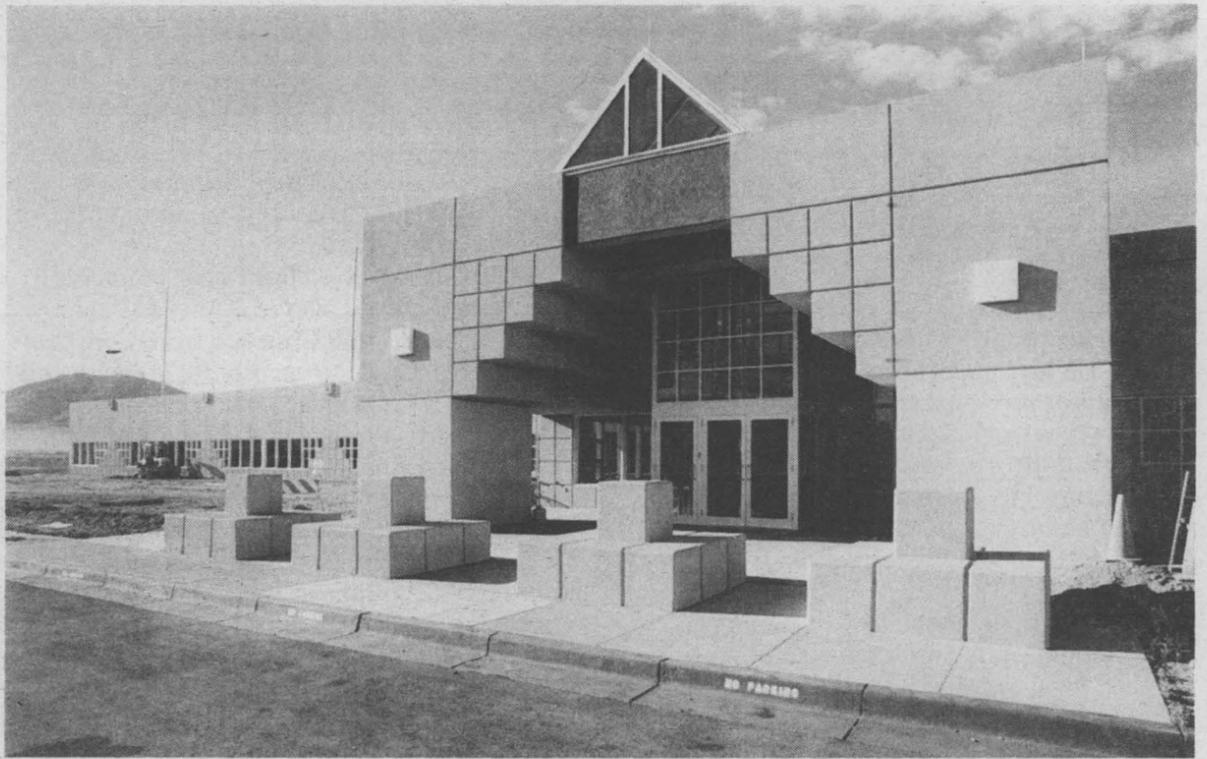
"But modern-day regulations discourage us from conducting tests outside," he says, "and we can't afford to tie up lots of land."

Thus, the new facility was designed without the empty safety buffer zone that defines earlier explosives testing facilities such as Area 2.

The ECF, with 11 explosives test firing bays along its south side, is designed to contain the routine detonation of a kilogram of explosives within the building. Steel blast doors and concrete barriers outside the doors ensure that shock waves and fragments never make their way beyond the site's boundaries.

The building is so safe that a precautionary buffer zone only 50 yards wide, demarcated by a barbed wire fence around the back of the building, is necessary.

"That's the whole philosophy behind the



FACADE of Sandia's new Explosive Components Facility (Bldg. 905) southeast of Area 1. The "stacked-block" design motif is repeated throughout the building. Every office has at least one window for natural lighting.

ECF's design," says Lloyd. "Under all normal and accident scenarios, the effects of an explosion could never reach the fence line."

With a 44,000-sq.-ft. office area to the north and a 47,000-sq.-ft. testing area to the south, plus six explosive storage magazines to the southwest, the ECF is really three separate buildings.

The office wing includes space for 80 people, plus several "light" labs for software development and other non-explosives work. All offices have windows so their occupants can enjoy natural lighting. A 110-person conference and training room, temporary cubicle space for industrial partners, and an inviting and unclassified lobby round out the north side.

The ECF's testing wing, separated from the offices by a long corridor and canopied by 80-foot-



TOUGH CUBES — Lloyd Bonzon (2554) examines explosives storage containers designed for the ECF's on-site storage magazines. Tests have shown that an explosion involving five pounds of explosive material inside one of the cubes will not "sympathetically" detonate explosive materials in a neighboring cube. Each magazine holds up to 24 cubes for a total of 120 pounds of material per magazine. The cubes are made of special fiber-reinforced concrete.

Five decades of big blasts

Sandia's explosives components program was born in the late 1940s to assemble explosives into nuclear weapons. Much of the assembly work now done at DOE's Pantex Plant was once performed in Area 2.

In recent years, Sandia also has had responsibility for designing and testing other types of explosives components in today's more advanced nuclear weapons: parachute activation components, explosive reefing line cutters, safer optical explosive components detonated with laser light rather than with electrical pulses, etc.

Sandia also has portions of the DOE missions of stockpile safety, surety, and surveillance, and it is designing new explosives-related deterrence devices for DOE's nuclear materials transport trailers.

With DOE's Defense Programs budgets down in recent years, Sandia has maintained its chemistry, design, and testing skills by applying its capabilities to private industry's problems, says Lloyd Bonzon, Dept. 2554 manager. The Labs has worked with the oil and gas industries, the mining industry, the demolition industry, the entertainment industry, and others.

It has also worked with the Department of Defense on advanced conventional weapons systems, and it has helped various government agencies detect and render harmless old explosives at former explosives testing sites.

Lloyd adds that the Labs still has responsibility to make sure explosive components aren't aging or corroding in the stockpile.

"We plan to stay very busy," he says.

New Mexico dignitaries helped dedicate ECF July 6

The ECF was dedicated yesterday morning at a ribbon-cutting ceremony outside the building's main entrance.

Scheduled participants included Rep. Steve Schiff; John Vuksich, science advisor to Governor Gary Johnson; Alan Richardson, DOE Deputy Secretary for economic development in New Mexico; Leonard Mecca, Director for Research and Development at Ensign-Bickford Inc. (a major ECF industrial partner); and DOE/AL Manager Bruce Twinning and Assistant Manager Jim Culpepper. Vic Reis, DOE Assistant Secretary for Defense Programs, provided the keynote address.

A tour and open house followed. Family members of the building's new occupants were encouraged to visit. Entrance to the building will soon require an L or Q clearance.

tall lightning poles and wires, includes a row of energetic material chemistry labs along the north wall and a row of 11 "performance testing labs," or firing bays, along the south, separated by a hallway that runs the length of the building.

Each firing bay, or "pad," shares an assembly/test-preparation room with another pad, but each has a separate control/diagnostics room where explosives, pyrotechnics, and propellants can be initiated, characterized, and photographed through porthole-like openings. Two of the firing bays contain walk-in cylindrical test chambers (see photo on next page).

Maze-like hallways adjoining the firing bays, assembly rooms, and diagnostics rooms provide added protection against blast pressure in case of an accidental explosion.

Gas gun, component "ovens"

Another performance testing lab will house a 56-ft. gas gun capable of launching projectiles at explosive materials at speeds approaching one mile per second. Other test cells will be used to test neutron generators in a variety of conditions. A filtered-air battery lab will put weapon battery technologies to the test.

Also included in the test wing are eight reinforced-concrete vaults containing "ovens" that will be used to accelerate aging processes on nuclear weapon components and materials. Heat, moisture, and other gases can be piped into the ovens to simulate a variety of

(Continued on next page)

IC defect-detection technique earns R&D 100 award

Third consecutive award for Electronics Quality/Reliability Center

This certainly has been Ed Cole's year.

First, Ed was named Sandia's Engineer of the Year on Employee Recognition Night last month; now his team from the Electronics Quality/Reliability Center, Failure Analysis Dept. 2275, has been chosen to receive an R&D 100 Award for significant new technology, sponsored by *R&D Magazine*.

The team includes Ed, Manager Rich Anderson, Jerry Soden, Chris Henderson, and Bruce Dodd (former Sandian). Ed says he was "extremely pleased" with his team's award, the third consecutive R&D 100 Award the Electronics Quality/Reliability Center has won and Sandia's only R&D 100 Award this year.

The award recognizes Ed's invention and his team's development of the charge-induced voltage alteration (CIVA) technique, which evolved into the low-energy CIVA (LECIVA) technique. (See "Sandia-developed imaging techniques push microelectronics" in the June 9 *Lab News*.)

CIVA is an imaging technique that locates defect sites in complex integrated circuits (IC). CIVA detects open conductors — microscopic cracks in any of the millions of electrical interconnections between the transistors in state-of-the-art ICs — that other techniques cannot find. LECIVA is basically the same technique as CIVA, except that a low-energy electron beam approach was developed, eliminating the possibility of electron beam damage to the IC.

An electron microscope is used to inject a small electrical charge at a precise microscopic spot on an IC interconnection, which wouldn't affect a normal IC. But if the interconnection line is defective, the charge would cause the device to attain an abnormal state, resulting in an increase in the power that the IC requires.



R&D 100 AWARD WINNERS Ed Cole (sitting), Chris Henderson (left), and Rich Anderson (right) look at an electron microscope image produced by the charge-induced voltage alteration (CIVA) technique, which evolved into the low-energy CIVA (LECIVA) technique. CIVA is an imaging technique that locates defect sites in complex integrated circuits (IC). The team won an award for their development of the technique. (Photo by Randy Montoya)

The defective area shows up as a bright region in the scanning electron microscope image, the brightness proportional to the voltage required to keep the current to the IC constant.

Advantages of the CIVA technique include: (1) Analysis of complex ICs takes 15 minutes to an hour, while traditional failure analysis techniques may take weeks to months. (2) CIVA is the only technique that can identify open interconnections covered by the multiple levels of metal in state-of-the-art ICs. (3) CIVA over-

comes the problem of superfluous information that complicates extracting information from most traditional failure analysis techniques. (4) The extra equipment needed in microelectronics laboratories for CIVA costs about \$10,000. Traditional test equipment can cost \$200,000 or more.

Ed attributes part of his team's success to Ted Dellin (2203), who is the Electronics Quality/Reliability Center's liaison with private industry. "Ted did a lot of work, helping us to produce a really first-rate entry," says Ed.

Ted was instrumental in generating the team's R&D 100 entry form, which asked why the applicant feels his or her product should receive the award. Ted responded that CIVA is "a revolutionary new diagnostic approach that has, within its first year of availability, already had a significant impact on the microelectronics industry."

The CIVA team will receive its award Sept. 19 at the Museum of Science & Industry in Chicago. — Tammy Locke

(Continued from preceding page)

environments.

The ovens support Sandia's stockpile surveillance mission. "That allows Sandia to predict what will happen as nuclear weapons in the field begin to age," says Lloyd.

Barely 30 yards off the southwest corner of the test wing are two rows of three explosive storage magazines, concrete rooms covered with earth and rock. The six new magazines aren't as robust as previous "igloos," says Lloyd, but each still can hold 120 pounds of explosives, primarily because of newly designed explosive storage cubes (see photo on page 4).

"The ECF really supports our cradle-to-grave mission for nuclear weapons," says Lloyd. "It also allows us to lend our explosives expertise and capabilities to private industry."

The ECF has been designated by DOE as a Technology Deployment Center/User Facility and already has several cooperative research and development agreements (CRADAs) and user facility agreements in place.

Consolidates people, capabilities

The ECF is more than just a modern facility where explosive tests can be conducted, says Lloyd. It's also a place where formerly separated portions of Sandia's explosive components test program can be consolidated.

"For years we've been occupying many different buildings in Areas 1 and 2, some dating to the 1940s," he says. "The ECF will allow us to move in together and will provide some important opportunities for interaction with each other."

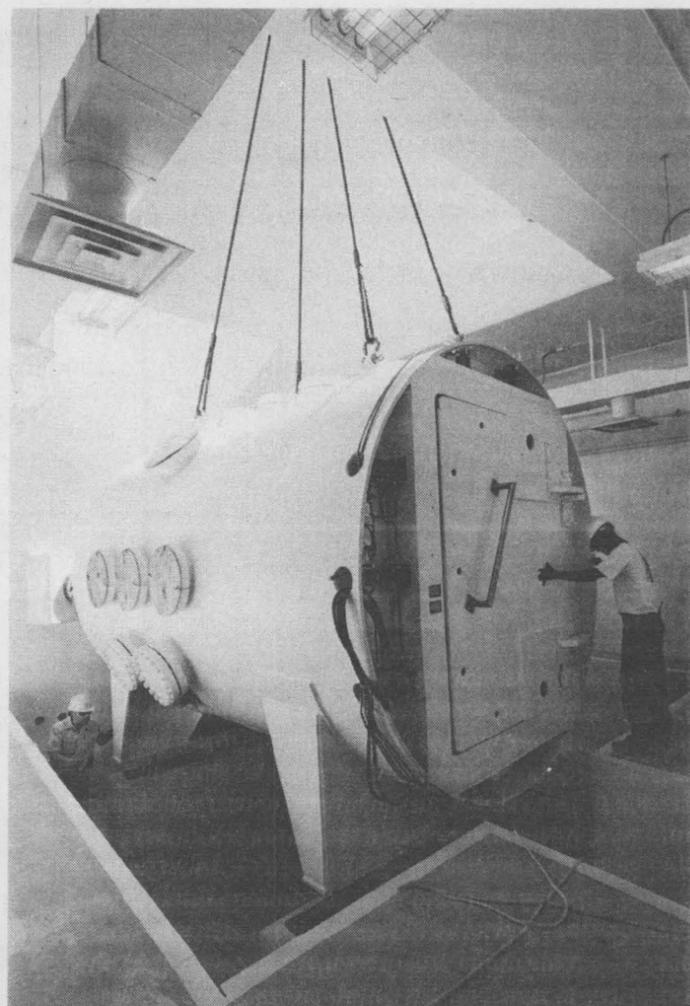
The building's new tenants began moving in several months ago even though the building wasn't yet operational, says Lloyd, a "conscious

decision" that helped the builders make some last-minute equipment modifications that wouldn't have been possible otherwise. The building was dedicated July 6 (see "New Mexico dignitaries helped dedicate ECF July 6" on page 4).

He says the ECF will house all the people in his current department, plus the people now in Explosive Subsystems & Materials Dept. 2552 (managed by Jere Harlan) and Explosive Components Dept. 2553 (managed by Floyd Braaten). In addition, staff from Sandia's neutron generator, battery, and stockpile surveillance programs, as well as representatives of DOE and Sandia's safety organizations, will have offices there. In all, the building will house about 80 Sandians and on-site contractors.

The building's architectural engineer — Frankfurt, Short, & Bruza of Oklahoma City — teamed with Mason & Hanger to design the unique building and test areas. (Mason & Hanger is the management and operating contractor at DOE's Pantex Plant.) The firm had previous experience designing explosives-related facilities; it also designed the High Explosive Application Facility (HEAF) at Lawrence Livermore National Lab.

"Although its plans were drawn during the Cold War, this facility should serve Sandia's explosives testing needs, and the needs of industry, well into the future," says Lloyd.



WORKERS lowered one of two 33-ton walk-in blast chambers through the roof of an ECF firing bay recently in preparation for the building's opening. Roy Dickey, a contractor in Explosive Projects & Diagnostics Dept. 2554, designed the 19-ft.-long, 11-ft.-diameter chamber, inside which up to a kilogram of explosive material can be detonated. Each chamber comprises some 2,000 parts, including mechanical, electronic, and optical components.

MLS job restructuring effort begins at Sandia

By Mary Hatheway

Lab News Intern

One year from now, the way that Members of the Laboratory Staff (MLS) are classified will be different due to a reengineering effort that begins this month. Reclassification of all employees is scheduled for June 1996. In the meantime, the MLS Job Restructure Team will be working with Members of the Laboratory Staff to redesign the MLS structure and job evaluation process to better meet corporate and employee needs.

"The restructuring is one part of the Human Resources overall reengineering effort and is expected to make MLS classification simpler," says Charlie Emery, Vice President of Human Resources Division 3000. A similar effort to restructure technical job classifications has also been initiated (see "Technical job structure employee questionnaire").

Industry alignment

One reason for reengineering the MLS structure is that Sandia's job evaluation process does not meet industry standards. Sandia currently has 11 MLS management levels and six MLS staff levels, compared with the industry standard of six management levels and five staff levels.

"AT&T, for example, is collapsing its fourteen-level plan," says Kirsten Randolph (3545), the project leader. "This is not something we're doing in a vacuum. The industry trend is to recognize fewer job levels with broader bands, which allows for meaningful careers even in flatter organizations."

In order to better align with industry, Kirsten says Sandia will shift to market pricing so that job levels at Sandia will be more reflective of the marketplace. "Although we're not addressing salaries directly, the shift to market pricing will likely have some impact on the salary structure, though it's too early to say what that will be."

Placing emphasis on external equity over internal equity and shifting the responsibility and accountability for job evaluation decisions away from Human Resources and back to line management are other ways the team will strive to improve Sandia's job evaluation system.

Technical job structure employee questionnaire

A Technical Job Structure Committee was formed last fall to respond to a Lockheed Martin/DOE contractual requirement to review Sandia's existing technical job structure and propose a new job structure that is not founded on a time-based metric (e.g., a maturity curve). The work to date and plans of this committee were presented in the April 14 *Lab News*.

Every Sandian currently classified under the existing technical job structure (SAT through STA, MTS through DMTS, and technical managers and above) will be given an opportunity to guide the work of the committee. The committee has designed a questionnaire, piloted by more than 60 technical employees in June, that will be sent to all technical staff next week. All recipients are encouraged to respond. The committee is interested in understanding what employees think are the strengths and weaknesses of the existing system and what a new system should provide.

Another driver for the restructuring is the high level of customer dissatisfaction with the current process, as expressed in job evaluation surveys. These surveys indicate that turn-around time for processing requests is too slow, job level evaluation criteria are difficult to understand, and decisions are not always understandable and consistent. The Red Team Report, prepared by an independent review board tasked to evaluate Sandia's Human Resources function, also identified serious weaknesses in the MLS job structure. The report found that Sandia had an administrative job evaluation process that was highly adversarial and labor- and time-intensive.

"Customer surveys and the report indicate that our current process is broken," Kirsten says. "It's clear that the line organizations need more agility."

Charlie says the perceived "classism" between Members of the Technical Staff (MTS) and Members of the Laboratory Staff that was raised as an issue at the recent Human Resources Diversity Leadership Conference also reinforced the need for restructuring.

"We expect the restructuring to alleviate the problem to some degree, but there's no perfect job structure," he says. "We can't address all the inequities through reengineering. It also requires a change in attitude."

Kirsten says the new structure should provide employees with better tools for career planning and a greater ability to contribute and compete. It will also make the job evaluation process faster, clearly define levels, and establish parallel career paths.

"The new structure should make it much easier for parallel career paths to exist, so there are parallel career opportunities for those wanting to be managers and those wishing to remain equally valued individual contributors," she says.

Employee input

Employees can provide input to the MLS Restructure Team through several venues. Briefings on the MLS reengineering effort will be held on July 12 and July 19, 9-11 a.m. in the Technology Transfer Center (Bldg. 825). (A similar briefing was held at Sandia/California on June 27). All interested employees are encouraged to attend. A one-page questionnaire targeted at MLS employees and their managers will be distributed at the end of the briefings.

The Technical Job Structure Committee will also be issuing a questionnaire to Members of the Technical Staff to acquire feedback on the committee's design of a new technical job structure. The questionnaire will be mailed to

MTS employees next week. Both sets of questionnaires will also be used to identify issues to explore in follow-up focus groups.

"The team is seeking employee input to understand issues and concerns with the current system," Kirsten says.

You may contact MLS Restructure Team members

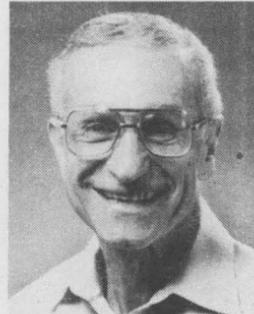
Members of the Laboratory Staff are encouraged to contact members of the MLS Restructure Team to provide ideas and feedback to help the team reengineer the MLS structure and job evaluation process.

Name	Division
Judy McKinney.....	1000
Linda Benavides	2000
Bill Drozdick.....	2000
Kirsten Randolph, Project Leader	3000
Compensation Staff.....	3000
Ashley McConnell	
Richard Garcia	
Evan Ashcraft	
Deborah Hovland.....	3000
Warren Klein	5000
Gwen Pullen	6000
Mary Kay Austin	7000
David Rosenweig.....	8000
Adele Caldwell.....	9000
Brenda DeLaurentis.....	10000
Ruben Muniz.....	14000

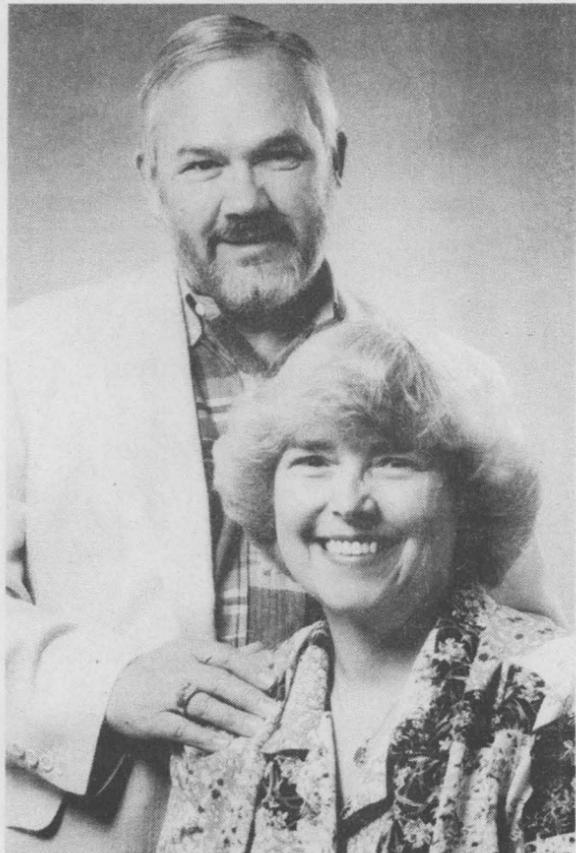
Recent Retirees



Pam Reed 11
7612



Sam Levy 33
2223



Carl Childers 34 5900
Pat Childers 31 5000

Fun & Games

Golf— The Sandia Golf Association announces the results of its Coyote del Malpais 2-Man Better Ball Tournament at Grants, N.M. A-Flight winners — first place, Charlie Salazar (2483-2) and Preston Herrington (9236); second place, Michael Quinlan (7911) and Thomas Ashwill (6214); third place, Carl Leishman (2412), Gary Schuster (2231), Tom Welch (9249), and Roy Tucker (6215). B-Flight winners — first place, Paul Homan (7601), Gary Mueller (7613-2), Dale Brandt (2314), and John Dye (2314); second place, Eli Perea (2643), Jim Salas (2652), Paul Plomp (2483), and Joel Stevenson (1841). C-Flight winners — first place, Robert Walsh (2481-2) and Rick Anderson (2481-1); second place, Jake Romero (13913) and Benito Chavez (13913); third place, Darrel Frear (1832) and Howland Jones (1823).

New airbag

(Continued from page 1)

that is, fabrics that are much heavier than either necessary or desirable."

The team of researchers — led by James Nelsen of Fluid/Structure Interactions Dept. 1516 and Ken Gwinn of Material and Structural Mechanics Dept. 1518 — set out to understand the underlying science of airbags and to design an airbag with optimal performance.

Carl Peterson, Manager of Dept. 1516 and manager of this project, told the audience that many of the same technologies involved in parachute design apply to airbag design.

Draws on Labs' parachute experience

"We see the inflation of a parachute in very much the same light that you saw the inflation of the airbag," Carl said. "Some of the same structural dynamics with respect to the cloth are involved. A lot of the same fabric technologies and aero technologies are involved. We've been trying to work that problem on behalf of the nuclear weapons parachute community for some time, and it turns out that the technology base is very similar."

PFG knew of Sandia's four decades of parachute expertise through its role as a supplier to the Labs of parachute textiles. A CRADA was signed in 1992.

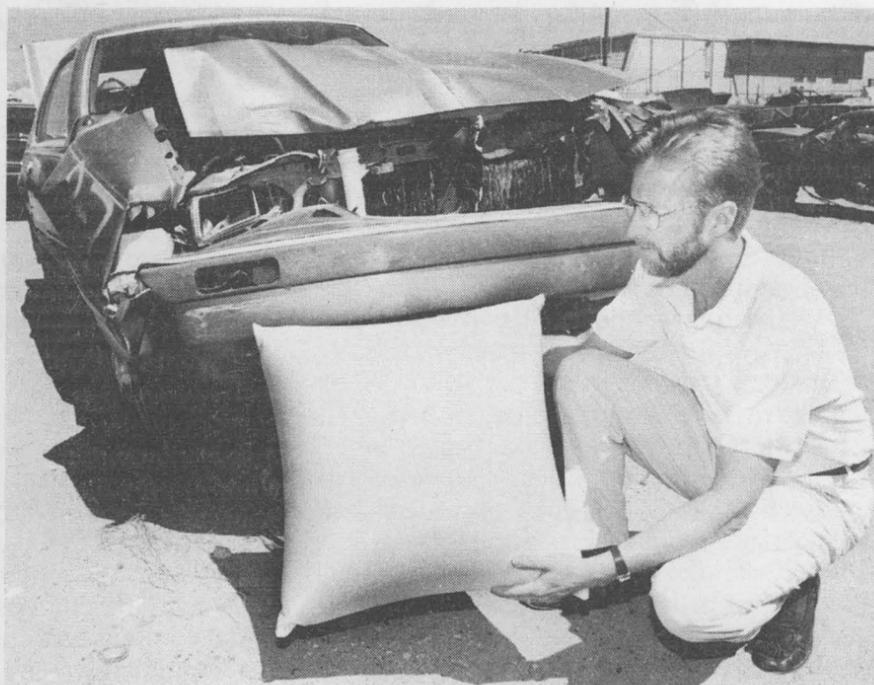
Working together, Sandia and PFG researchers analyzed and completely redesigned

the airbag. Instead of a circular shape, the Precision Technology Airbag is square and is made of silky, parachute-like fabric instead of the rough, heavy duty nylon used in conventional airbags.

Simple designs

The design distributes the stress upon inflation away from the seams and along the fabric walls, allowing much lighter-weight fabric to be used. The PFG airbag provides the same body coverage and protection as conventional units.

"The designs are simple but elegant," Smith said. "They are novel, quite different from any design ever before utilized in an automotive airbag." In an industry where five percent volume or weight reduction is significant, the new airbag offers approximately 60 percent volume reduction when folded and weighs 60 percent less than conventional designs. Smith noted that the smaller airbag will be easier to incorporate into dashboard areas and side doors without elimi-



KENNETH GWINN (1518) shows off the new, square PFG/Sandia airbag, which is expected to capture a major share of the auto airbag market in coming years.

nating glove boxes and storage bins.

Beginning in 1997, all automobiles sold in the US are required to have both driver and front-seat passenger airbags. Given its advantages over currently bulky and expensive-to-manufacture designs, the new airbag is expected to have a major impact on the airbag market, which is projected to reach 40 million units worldwide by 1997.

Dismantle DOE?

(Continued from page 1)

government," Al told the subcommittee. He outlined the Nobel Prizes (50) funded by DOE and its predecessor agencies, its litany of research awards, its "thousands of discoveries and inventions that have . . . helped the United States sustain worldwide technological leadership," and its crucial role in safely designing and supporting a US nuclear weapons stockpile "that excels in military performance, reliability, safety, and control."

"With such a distinguished record of accomplishment by its system of laboratories," Al said, "the Department of Energy must be doing something right."

Don't destroy synergistic strengths

Al said DOE is making fundamental changes in how it conducts its affairs and how the laboratories are managed. He said DOE is making good progress in reforming its direc-

tives systems, "going through DOE orders at a dazzling rate."

And he called on Congress to help in this effort. "Often, actions by Congress stimulate over-reactions in the agency, particularly when Congress has been harshly critical of DOE's management. I would urge you to let DOE solve some of its own problems using generally accepted best business practices employed by the private sector."

He noted that the recent "Yergin report," *Energy R&D: Shaping our Nation's Future in a Competitive World*, the final report of a Secretary of Energy Advisory Board task force chaired by Daniel Yergin, endorsed this approach.

Recent House proposals to narrow the scope of the labs likewise threaten the future level of excellence of the DOE labs, Al said. "I believe that House Resolution 1628, the 'Defense Nuclear Programs Agency Organization Act,' would destroy the synergistic strengths of the DOE laboratories as a system and put individual laboratories on a road to mediocrity. We must take care that mission

consolidation not lead away from the multiprogram concept toward single-mission laboratories. The multiprogram, multidisciplinary environment is absolutely essential for excellence in national security and other federal R&D missions."

He called on recognizing that world-class scientific excellence is essential in meeting "the extreme requirements" of the nuclear-weapons mission. Broad-based research that offers a variety of challenges and opportunities is essential to recruit and keep top talent.

Keep civilian control for safety

Al argued strongly for keeping nuclear weapons under civilian control. "This independent role has allowed the civilian agency [DOE] and its laboratories to be advocates of safety and other improvements, even when opposed by a reluctant military."

"Sandia and the other nuclear weapons design laboratories have been known to take positions on stockpile issues that were at odds with positions advocated by the military services," Al pointed out. He gave two examples:

- In the early 1960s, Sandia and the University of California Radiation Laboratory, which became Lawrence Livermore National Laboratory, pushed for implementation of use-control devices on nuclear weapons "in the face of adamant resistance by the services."
- "In 1990, the other directors of the DOE defense programs laboratories and I expressed concerns before Congress about the operational safety of the W69 Short Range Attack Missile as then deployed. Our testimony brought into sharp focus the difficulties that can arise when safety considerations conflict with military utility."

Al said he had heard arguments made that a nuclear weapons agency reporting to the secretary of defense could maintain independence and impartiality. "I am very skeptical of this argument," he said. Questions of tradeoffs on safety and performance would very likely be appealed in the direction of more performance and less safety, he predicted. — Ken Frazier

Narath: 'Care should be taken'

Here is the concluding section of Sandia President Al Narath's testimony to the House Committee on Commerce energy and power subcommittee hearing on dismantlement of DOE, in full:

"A change in attitude and a new seriousness of purpose at the Department of Energy is evident to me as a long-time observer of the Department. DOE is making substantial changes in how it manages its programs and laboratories. The Strategic Alignment initiative now under way makes use of restructuring and downsizing processes similar to those that have been successfully employed by large private corporations.

"The Department of Energy manages a system of laboratories that collectively constitute an important national scientific and technological asset. Although there is much diversity among the individual laboratories' mission

responsibilities, there is an underlying base of science and technology that is common to most DOE programs. Collaborations among the laboratories and with universities and industry have been shown to magnify the value of these laboratories. This judgment is independent of any changes in laboratory staffing levels and program balance that may result from current and future Congressional actions.

"The value of these national laboratories would be greatly diminished if they were dispersed among several agencies. Care should also be taken to preserve the independent accountability for nuclear weapon surety and stewardship that now exists. Congress should exercise great caution as it contemplates what actions to take regarding the future administration of these laboratories and the Department of Energy."

Sandia cites tech transfer successes before Congress

Technology transfer is a thriving practice that has contributed significantly to American society and the accomplishment of DOE missions. This was the message of several witnesses who testified at a joint hearing of the House Committee on Science subcommittees on technology and basic research in Washington June 27. The hearing was held to discuss tech transfer successes and the improvement of federal technology transfer policies.

The hearings were sponsored by Rep. Constance Morella of Maryland and Rep. Steve Schiff of New Mexico, who have proposed legislation that builds incentives into federal technology transfer policy, increasing protection of intellectual property rights for scientists and encouraging cooperative research and development opportunities.

Witnesses included officials of the DOE national labs and representatives of companies that have developed new products and applications with federal laboratories. VP of Laboratory Development 4000 Paul Robinson, who represented Sandia at the hearings, submitted a statement prepared by President Al Narath on technology transfer and how it is working at Sandia.

"Since 1991, over 200 cooperative agreements between Sandia and industry have been approved, with a total value in excess of \$650 million," says the Sandia testimony. "This interaction has contributed directly to accomplishing DOE missions by permitting us to cultivate relationships with important industrial suppliers, explore technical frontiers with those who have a common interest, and maintain critical technical competencies at world-class levels during a period of reduced federal investment."

How Sandia and other laboratories have strived to build relationships with industry in areas that support the core technical requirements for DOE missions is the cornerstone of the testimony. It references the recent Galvin report's support for continuation of laboratory-industry collaboration when it is related to capabilities required for mission work.

"Sandia's industrial competitiveness activities rest upon a firm policy foundation and are focused on explicitly defined strategic initiatives," Al said in the testimony. "The policy foundation is laid out in our strategic plan. The policy is to seek strategic alliances with industry, universities, and other laboratories to pursue research objectives that are mutually beneficial to the sponsoring DOE program and industrial partner."

How industry benefits

As he did in his recent State-of-the-Labs interview (May 26 *Lab News*), Al points, in his testimony, to Sandia's partnership with Goodyear Tire and Rubber Co. as an example of a collaboration in which two seemingly unrelated companies achieved mutual benefit. Goodyear benefited from access to modeling and simulation codes and experimental techniques developed in the nuclear-weapons program, and Sandia and DOE benefited from improved computer codes that will be used to solve weapon component design problems, he said.

"Many technical advances originating in the DOE laboratories have had a profound

impact on whole industries," the statement says. "The truth is, the DOE labs are the source of hundreds of technical advances that have proved to be highly relevant to a broad range of industrial needs. There are many compelling examples of collaboratively developed technology that has helped industry make new or better commercial products."

Expanding tech transfer

Several examples of how Sandia's technology transfer successes have been beneficial to industry are cited. One is the vertical laminar-flow clean room, invented at Sandia, which contributed to the growth of the semiconductor industry. Another is Sandia's role in developing synthetic diamond drill bits. Strained-layer superlattice semiconductors, lightweight automobile airbags, non-CFC cleaning processes, fluxless soldering, reliability testers for semiconductor fabrication, robotic manufacturing processes, advanced welding tech-

niques, and rapid prototyping are other Sandia tech transfer successes cited.

Al's testimony calls for expansion of technology transfer at federal laboratories. It recommends more emphasis on large-scale strategic alliances, the designation of more laboratory user facilities, exploitation of technology "road maps" or action plans, and increased technical assistance to small and medium-sized companies. And it urges the committees to adopt the proposed legislation.

"The technology bases for government and commercial needs are rapidly converging," the statement concludes. "Collaboration with industry is essential for helping the national laboratories maintain and advance mission-related competencies. By passing this legislation, Congress will acknowledge and endorse a defined role for technology transfer and cooperative work between the national laboratories and industry."

— Mary Hatheway

Sandia tech transfer 'on an upward track'

If Congress cuts technology transfer funding, Sandia will find new and better ways to continue industrial partnering, says Warren Siemens, Director of Technology Transfer and Commercialization Center 4200.

Warren says one major change that may occur during the next fiscal year is the reduction or elimination of Technology Transfer Initiative (TTI) funds as a line item in the budget, so that cooperative research and development agreements (CRADAs) and other industrial partnerships would not be covered by a separate budget. If that money is redirected back into the Defense Programs budget, established CRADAs will be maintained and new ones started, but they would be program-funded. He says that change will be a challenge to Sandia because few program-funded CRADAs have been done to date. About ten percent of current CRADAs are program-funded.

"We've been planning for the TTI funds to be folded into DP programs for some time," Warren says. "My concern is finding incentives to encourage Sandians to continue to work on industrial partnerships when we make the transition to program-funded CRADAs."

To meet its DOE and DP missions, Sandia will need to do more partnering with

industry, not less, Warren says. "We are no longer able to afford captive suppliers like we've had in the past," he says. "We need these industrial partnerships to sustain the technology base needed to achieve mission success."

He says the other technology transfer activities that his office handles, including invention disclosures, patent applications, commercial licenses, user facility agreements, and employee exchanges will not be affected by possible cuts in TTI funding. In fact, those programs are expanding steadily each year.

"Our other programs are not impacted at all," he says. "Some of these programs, like our employee exchange plan, are just getting off the ground, and others, like our commercial licensing program, are generating royalties (a five-fold increase over last year) for the Labs that go back into our research and development."

Overall, Warren says things look OK for technology transfer at Sandia. "Tech transfer is not dead," he says. "We're on an upward track in many areas that I expect will increase significantly over the next several years. We're just going to have to learn to do partnerships even better than we have in the past."

Feedback

Q: The latest *Safeguards and Security Guide* presents a potential requirement that most Sandians may shy away from, as follows: Building owners are responsible for ensuring that facilities outside established tech areas and off-site leased locations are locked at the end of the workday or when unoccupied.

Our facility contains six small buildings with six separate owners within a fence. The facility is not in a tech area. Security used to lock our facility every evening during swing shift. They no longer do that. If the building owner or designated monitor fails to lock the facility and we incur a loss of property, is a building owner responsible for the loss?

A: Owners of buildings located outside established technical areas and leased locations do indeed have the primary responsibility for ensuring that the facilities are locked at the end of the workday or when unoccupied.

However, if a loss of property occurs due to failure of an individual to lock the facility, the subsequent investigation will determine the responsible individual. Building owners are encouraged to have a written Security Plan including locking and monitoring procedures. All occupants of the building should be familiar with the Security Plan. It should include the statement: "The last individual leaving the facility is responsible for ensuring that the building is secured."

Security Requirements and Planning Dept. 7432 helps organizations determine property protection requirements, evaluate effectiveness of current protection measures, and develop property protection security plans. For assistance, call Manager Al Villareal on 844-0673.

Frank Gallegos (7400)

Expect some temporary delays while the people who bring us our mail and material take team training

They handle a million mailings, 45,000 packages monthly

By Janet Carpenter

Lab News Staff

When everything is running smoothly during our workday, we tend to take for granted that mail and materials and supplies we've ordered will be delivered. Who handles and delivers these things?

Some 70 employees in Receiving and Distribution Dept. 7613 make sure you get the tens of thousands of packages and one million pieces of mail Sandia receives each month. Those one million pieces of mail are processed and delivered through 750 mail stops and 259 buildings at Sandia/New Mexico by 29 people in Sandia Mail Services Team 7613-2. The 39 members of Receiving and Distribution Team 7613-1 and 7613-3 process and distribute 45,000 packages received from vendors and suppliers each month.

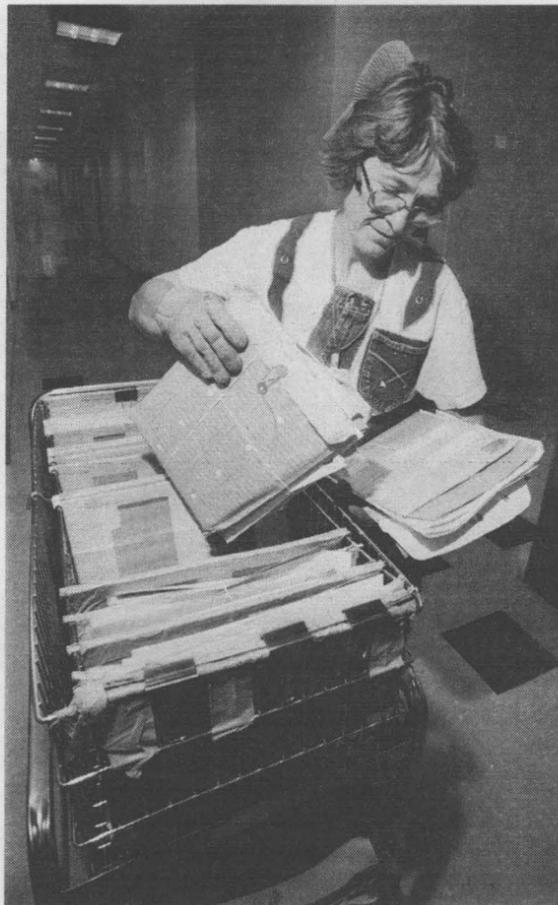
Due to staffing constraints, increased number of buildings, and the large quantities of materials moved, it is difficult to find time available for these employees to take the training opportunities typically offered Sandians.

Facilities O&M Special Projects Dept. 7817 launched High-Performance Team Training in 1993 (see July 23, 1993, *Lab News*). It was highly successful. It's based on AT&T/Little Rock's award-winning training program, combining concepts such as quality, integrity, and teamwork with real-world meaning.

"I took this training when I worked in Facilities," says Dept. 7613 Manager Reggie Tibbetts. "Its purpose is to improve customer service, individual performance, and the working environment through teamwork, improved processes, and efficiency." Expected benefits, he says, include "improved employee satisfaction and the realization of Sandia corporate values of teamwork, integrity, quality, leadership, and respect for the individual; customer service and satisfaction; and improved processes and quality."

"Because of the success of this training, we want to take advantage of a proven program," says Reggie. He has signed up his department, comprising Receiving and Distribution and Mail Services teams, to participate in 7800's High-Performance Team Training.

"We're hoping that by fully communicating our needs and plan, our customers will understand and be patient."



ONE IN A MILLION — Cathie Estill of Mail Services Team 7613-2 delivers the mail in Bldg. 880. The team delivers a million pieces of mail a month.

"High-performance training focuses on trust, which I think is the key to teamwork," says Dody Hoffman, Director of Logistics Management Center 7600. "It will help us work smarter rather than harder, and we'll be able to meet the new challenges within the constrained budget parameters we have. I'm pleased that this will make our Logistics Management team stronger and more efficient."

"Our employees can take advantage of Center 7800's specialized training if we temporarily reduce our services," says Reggie. "We're hoping that by fully communicating our needs and plan, our customers will

understand and be patient through this endeavor."

The entire department will not be participating all at once in the training. The three teams involved will be divided into thirds and assigned to groups to minimize impact on service. (See "Expect services cutbacks on these days.") Each group will be given high-performance team training in a classroom for two days, adventure-based team training outdoors for two and a half days, and process quality training in a classroom for two days.

Reggie says the department will make every effort to minimize the impact on its customers. "We appreciate the opportunity to work closely with our customers on any concerns or special needs they may have during the next few months." He says you may call any of the following: Reggie Tibbetts, Dept. 7613 Manager, 844-5244; Mario Ramirez, Supervisor, Receiving and Distribution Team, 844-6748; Johnny Ayala, Supervisor, Receiving Clerical Team, 844-3703; and Carter Kidd, Supervisor, Mail Services Team, 844-5741.

Expect services cutbacks on these days

Here is the schedule for Dept. 7613's high-performance team training. The impact on services on these days will include, for mail services, one daily delivery instead of two; for distribution of materials, 36-hour turnaround instead of 24-hour.

Effective High-Performance Training: July 12-13, July 25-26, Aug. 1-2.

Adventure-Based Training: Aug. 21-23, Aug. 23-25.

Process Quality Training: Oct. 10-11, Oct. 17-18, Oct. 24-25.



Retiree deaths

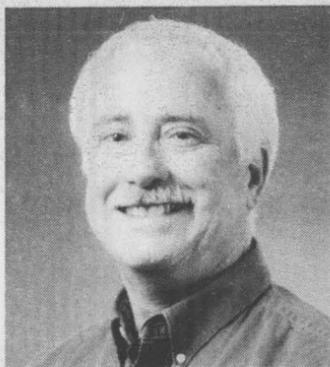
Eileen Fitzmorris (80).....3252	May 1
Frances Voorhies (85).....3321	May 4
Thomas Moran (100).....3122	May 5
Arthur Randall (73).....3733	May 6
Ina Brown (92).....4622	May 14
Antonio Villescás (84).....4514	May 19
Audra Wood Reger (79).....2550	May 20
Alton Anderson (73).....2565	May 21
Katheryn Park (89).....3256	May 21
Burton Wood (64).....8025	May 25
Mary Dean (87).....3421	May 27
George Ray (81).....2323	May 29
Leonard Thompson (92).....4632	May 29
Charles Spriggs (74).....3155	May 31



CITIZEN ADVISORY BOARD — A local resident speaks at the first-ever meeting of the Sandia/ITRI (Inhalation Toxicology Research Institute) Citizen Advisory Board June 15 at the Indian Pueblo Cultural Center. The board is made up of 31 citizens from throughout the Albuquerque area representing neighborhood associations, businesses, environmental groups, activist organizations, and other segments of the community. It is charged with giving DOE advice from the community's perspective on environmental activities at the Labs and at ITRI. Sandia is represented on the board by Robert Kaneshiro (2400-1), Jerry Romero (13913), and Lynn Jones (VP 7000), who is an ex officio member. At the meeting, Sandia Executive VP Jim Tegnalia, DOE Albuquerque Operations Manager Bruce Twining, Lynn Jones, and Tom Blejwas (7500) welcomed the board, which is funded by DOE. The board's next meeting is July 20 at 7 p.m. (Photo by Diane Sewell)

Mileposts

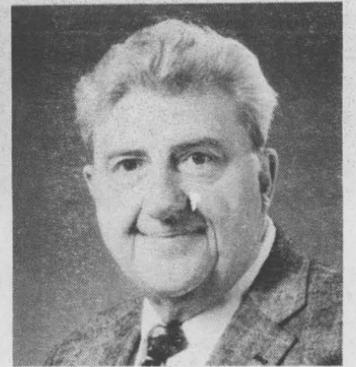
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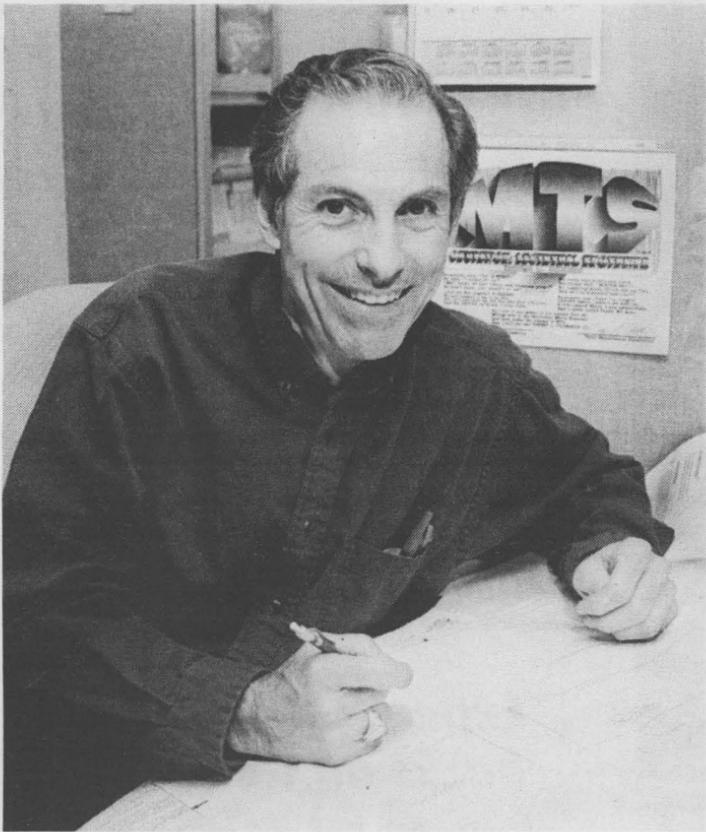
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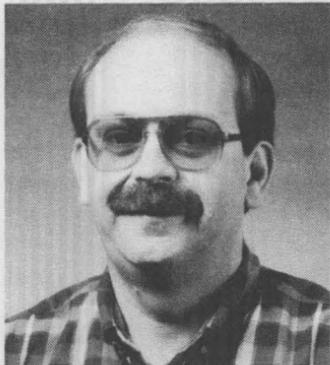
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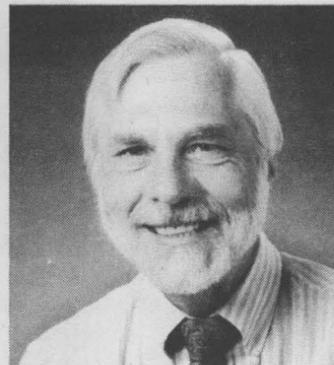
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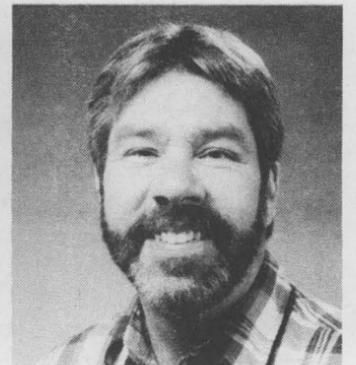
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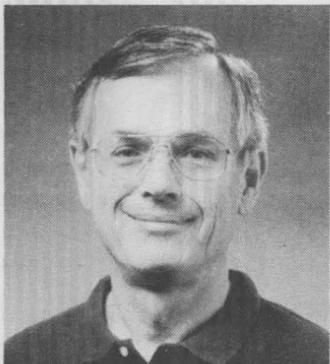
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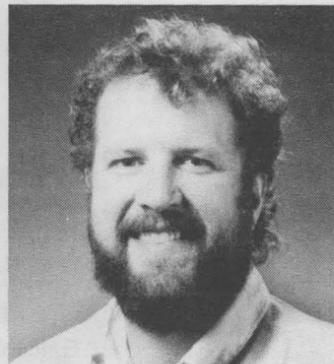
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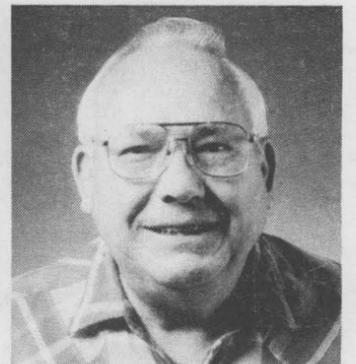
John Lavasek 25
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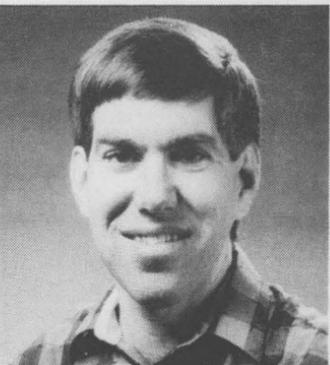
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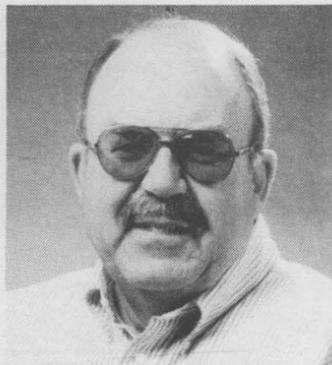
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Leroy Gibson 40
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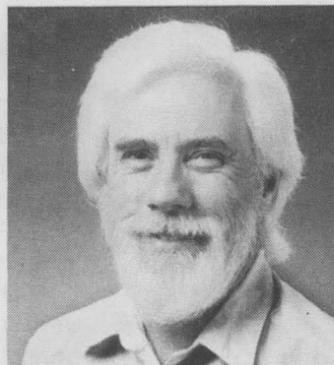
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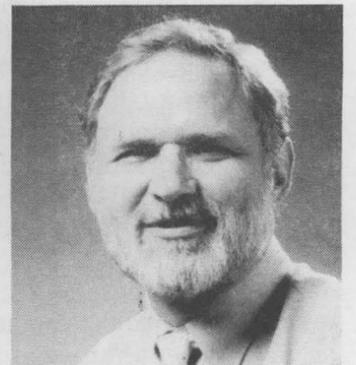
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Linda Flanders 15
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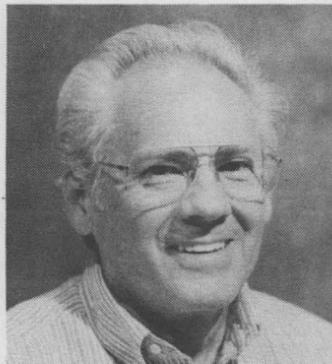
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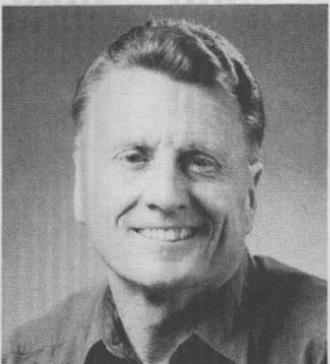
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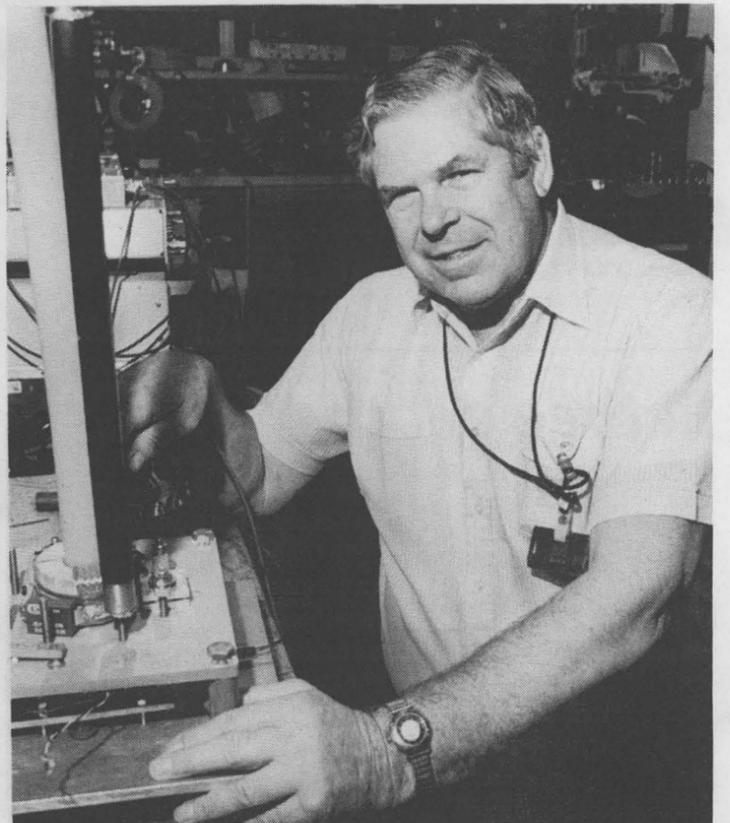
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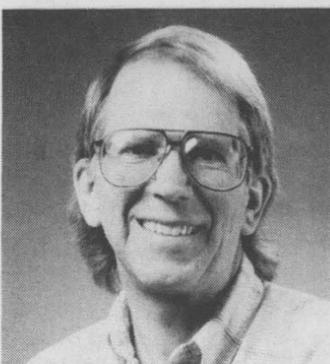
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Patrick Walter 30
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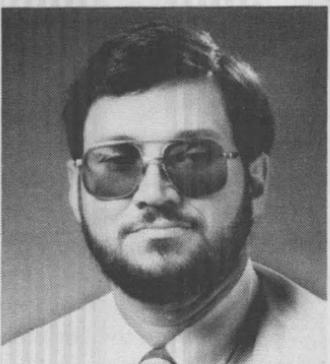
Gerald Rohwein 35
9323



Wayne Sundberg 30
1516



Ruth David 20
1090



Raymond Sanchez 15
12336

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

MISCELLANEOUS

HEDGE TRIMMER, cordless, electric, 14-in. blade, Disston Mod. CEHT-2, w/charger & blade guard, \$29.50; Big Bertha driver, graphite, \$150. Stang, 256-7793.

WROUGHT-IRON WINDOWS & DOORS, different sizes, white and black. Sanchez, 873-4281 or 873-1751.

THREE-WAY SPEAKERS, Legacy II+, rosewood & black grill, excellent for jazz, classical/surround sound, \$700. Norton, 266-3417.

QUEEN-SIZE SOFABED, tweed, \$100; recliner, \$45; large-dog carrier, \$20; assorted bedding, comforters, baskets, dishes, pottery, misc. Campanozzi, 291-8677.

CROSS-COUNTRY SKI MACHINE, Biomix, excellent condition, \$150; large wood entertainment center, one shelf needs repair, \$50. Fleming, 892-5438.

TV, 27-in., \$350; 20-in. wide built-in VCR, \$300; solid cherry entertainment center, \$600; VCR, 4 head, \$150. Eikelberg, 296-0899.

KENMORE WASHER, 1 yr. old, \$200; twin bed, w/mattresses, \$100, sofa/sleeper, \$175; dresser w/mirror, \$70, some work. Rochester, 296-1350.

PACKARD BELL 486SX20 COMPUTER, 107 MB HD, 2 MB RAM, w/color monitor & Epson printer, \$775. Baker, 884-8543.

CONVECTION OVEN, Farberware, \$65; automatic 8-in. thru-wall fan, \$45; 5-globe wood/brass chandelier, \$30. Reed, 268-7484.

SOLID OAK COFFEE TABLE, w/2 matching end tables, \$85/set. Boom, 898-9141.

EXERCISE MACHINE, Schwinn "Air-Dyne," w/reading stand, seldom used, cost over \$500, asking \$300. Claycomb, 294-8103.

MANX CAT, Calico female, spayed, de-clawed, new home due to allergies, carrier & litter box included. Wheeler, 892-6404.

EXTERNAL FRAME PACK, Jansport, height guide 5'2" to 5'9", \$75; Weber grill, 18-in. kettle, \$25. Edmunds, 856-6918.

NORDICTRAC, All American Premier Edition, new \$370, will sell for \$250; rocking chair, \$75. Conway, 271-0770.

PENTAX ME CAMERA, 33mm, 50mm, and 2X converter lens, case, flash attachment, good condition, \$160. Giachino, 821-6351.

HOSPITAL BED, w/new mattress, \$350; bedside commode, \$65 OBO. Young, 296-1138.

STATIONARY BIKE, rarely used, \$100. Mohagheghi, 271-0724, ask for Amir.

TEKTRONIX RM35 SCOPE, extra preamp, \$35; AM/FM stereo tuners, digital, \$20; analog, \$15. Guilford, 255-6297.

SHARP STEREO TURNTABLE, tape player, radio, 2 speakers, excellent condition, \$50. Meeks, 828-9825.

ANTIQUA QUILTS, new condition, 9-patch, stars, Dutch girl, wedding ring, \$100 ea. Daniel, 260-0461.

RUGER REDHAWK 44 MAG., w/holsters, \$450; camper shell, 76" x 64", \$45; JBL stereo speakers, \$350. Mitchell, 281-6841.

LAWN MOWER, Toro, 18 in., w/grass catcher, excellent condition, \$75. Ryerson, 296-4479.

GIUITAR, Bently (Gibson "Les Paul" knock-off), w/new case, Gibson pickups & electronic hardware, \$250 OBO. Letz, 293-4525.

EVAPORATIVE COOLER, in portable cabinet, on rollers, revolving filter, speed selection, \$100. Fields, 883-9789.

ROWING MACHINE, contemporary DP, hardly used, good condition, only \$35. Proby, 266-8857.

GATEWAY COMPUTER, 8 MB memory, two 4 MB, 72-pin SIMMs, 70 nsec. from PS-75, \$300. Bodette, 275-9722.

BABY ITEMS: infant car seat, \$30, stroller, \$25, backpack, \$15, pool float, \$15, beautiful condition. Shul, 821-4075.

"AMERICAN SCIENTIST" (Sigma XI), 30-yr. collection, will donate to educational organization or sell to individual. Woods, 884-4224.

BEDROOM SET, solid oak, 4-piece, w/queen-size bed, excellent condition, \$1,000. Hughes, 821-0945.

TWO SOFA/SLEEPERS, twin-size, \$100 ea., swivel chair, \$45, 2 rocking chairs, desk. Calvert, 823-2559, ask for Rick.

BUNK BED, solid pine, custom-made, unique, w/desk & bookcase underneath, natural finish, \$180. Diniz, 884-9350.

GIUITAR, Ibanez electric, maple body, sunburst finish, 24 frets, humbuckers, hardshell case, \$400. Manginell, 296-7961.

MOUNTED DEER ANTLERS, \$25 ea. Graham, 836-2752.

ALLOY RIMS & TIRES, used, Chev., 5-bolt, 14x7, \$100 OBO. Maestas, 831-4072, after 5 p.m.

DRAPES, two pair, 114"W x 85-1/4"L, cream background, camel/gray abstract puff flower design, fully lined, \$200/set. Hawkins, 296-8531.

COMPOUND BOW, P.S.I. 40-50 lbs., w/overdraw, complete w/arrows & other accessories, \$150 OBO. Manzanera, 836-4109.

CAMERA, power zoom, 35-135mm, auto focus, flash, exposure, manual option databack, Ricco's advanced "Mirri", cost \$600, asking \$200 OBO. Rainhart, 821-3690.

CALCULATOR, HP-48S, plotting, matrix solver, complex analysis, equation writer, algebra, calculus, statistics, programmable, mint condition, \$65. Ho, 237-2668.

CAT, stunning black, neutered male, 3 yrs. old, has all shots, well trained, free to loving home. Seyfer, 292-0179.

OFFICE PROFESSIONAL, 4.3 w/bookshelf & money, CD-ROM, \$200; Interplak toothbrush, \$10; Caravelle pocket watch, \$30. Fogelson, 296-0620.

WOMAN'S LEATHER JACKET, Harley Davidson, size 34, excellent condition, bought too small, \$175 OBO. Zozaya, 848-0160.

BAR, imported wood from Guatemala, w/built-in wine rack & glass rack, 2 stools, \$400. Wemicke, 298-4819.

BANTAM CHICKENS & BABY GEESE, very "cheep," Corrales. Stude, 897-4352.

REFRIGERATOR/FREEZER, Sears, frostless, 16.6 cu. ft., copper-tone, excellent condition, available July 14, \$175 OBO. Lambert, 344-9012.

QUEEN-SIZE SOFABED, contemporary styling, pillow-back, mostly white, purchased January, '95 for \$600; will sell for \$400. Gabel, 822-9582.

PRINTER, AT&T 457, letter quality, daisy wheel, w/extra print wheels & ribbons, \$300. Graham, 865-9427.

KITCHEN TABLE & CHAIRS, \$100; sofa & chair, \$250; hide-a-bed, \$150; microwave cart, \$50, computer table, \$50. Brangan, 866-1563.

BABY WALKER, Graco, \$20; Graco baby swing, \$35. Pregent, 281-1414.

TONNEAU COVER for Jeep Wrangler soft-top, black, like new, \$45. Mirabal, 877-0510.

CHINA, set of 12, w/extras & matching glassware, white w/green border, w/pale yellow flowers, (new \$495), asking \$200. Malcomb, 294-6975.

NEW TODDLER BED, mattress, bedding; new car cover, bumper-to-bumper, 14-ft, 1-in.; new indoor electric barbecue. Lee, 833-0485.

BEDSIDE CHEST, 24"H x 26"W x 16"D, mahogany, traditional by Pennsylvania House, paid \$600, asking \$375 OBO. Adams, 823-1845.

CRAFTSMAN LAWN MOWER, 21-in. rearbagger, \$25; window air conditioner, \$25; rowing machine, \$50; kitchen table, \$20. Gentry, 298-3574.

CAMERA, Konica, FS-1, 50mm lens; Vivitar 283, flash attachment, hardly used, \$175. Greene, 299-6302.

WATER SOFTENER, Sears best, 1-1/2 yrs. old, 2 yrs. left on service contract, works great, \$325 OBO. Hernandez, 344-0852.

COFFEE & END TABLES, oak & glass, \$75; Autumn Wood pub table, \$125. Savage, 890-4796.

GAS WASHER & DRYER, Kenmore, \$125 pair. Frantz, 298-7731.

OAK BEDROOM SET, double dresser w/mirror, armoire chest, night stands, queen-size footboard/headboard, \$750. Pace, 292-8249.

SAAB ACCESSORIES, like new: 4-piece blue carpet floor mats, custom windshield reflector, hydraulic back-life arm, \$50. Corey, 294-6337.

COCKER SPANIEL, free to good home, Roman is male, 5 yrs. old, black, very obedient. Armijo, 247-8798 or 242-8969.

DROP-LEAF TABLE, extends 36" x 24", two chairs, good condition, asking \$70. Abeyta, 298-4276.

HUTCH, Country pine, heart cut-outs in doors, light honey stain, 36"W x 69"H x 12"D, \$200. Kribs, 294-8408.

SEWING MACHINE, left-handed, portable, zig-zag, White brand, w/accessories, excellent condition, \$95 firm. Gallegos, 271-0061.

DEADLINE: Friday noon before week of publication unless changed by holiday. MAIL to Dept. 12622, MS 0413, or FAX to 844-0645. You may also send ads by e-mail to Nancy Campanozzi (nrcampa@sandia.gov). Questions? Call Nancy on 844-7522.

Note: The number of ads received is steadily increasing; our space is not. To resolve this, we are now limiting people to one ad per issue. We will also strictly enforce the word limit and ask your help to keep ads as short as possible.

Ad Rules

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

PASSPORT RADAR DETECTOR, leather case, power converter, cords, mount, manual, essentially new, (\$295 new), \$195 OBO. Abeyta, 271-1469.

TWO TWIN BEDS, w/boxspring, mattresses & frames, \$100 ea. Beckmann, 296-1829.

ELECTRIC HIGH-FIRE KILN, Cress; weaving loom, Macomber Add-A-Harness, 40-in., 4 harness; Lockerbie potter's wheel, kick & electric. Evans, 299-2363.

WEDDING SET, unique design, w/pear-shaped, 3/4-carat diamond, gemology report included, \$2,500. Lockwald, 298-3332.

BEDROOM ENTERTAINMENT CENTER, oak, whitewash, \$250; 2 queen headboards, \$20 ea.; '60s card table/chairs, \$100. Bartlett, 833-6095.

APPLIANCES: refrigerator, \$100; washer, \$75; stove, \$75; all for \$200. Kelly, 294-6576.

DRESSER & NIGHTSTAND, Drexel, Italian Provincial, both pieces \$250 OBO. Harris, 299-4559.

SOFA & LOVESEAT, \$225; entertainment-center, \$200; two revolving chairs, \$15 ea., desk, \$15; Tamron 80-210mm telephoto lens for Olympus, \$50. Goel, 897-3880.

GARAGE SALE, July 7 & 8, 8 a.m.-2 p.m., 3304 Candlelight NE, east of Morris, north of Candelaria. Reich, 281-3521.

FURNITURE, excellent condition: flexible sofa, cherry coffee & side tables, solid oak dining table, w/6 chairs. Lott, 856-5956.

DINING TABLE, dark wood, 4 chairs; bunk bed frame; brass queen bed & daybed, w/trundle. LeGalley, 822-0676.

BEDROOM SET, '30s Art-Deco style, double bed w/footboard, mirrored vanite, 4-drawer dresser. Moore, 296-6586.

ENAMELED SINK, cast iron, 2 tub, wall mounted, \$75; contemporary gray sleeper/sofa, excellent condition, \$150. Bleakly, 888-4608.

GRAY DASH COVER, for '94 Dodge Caravan, new, \$20; flute w/marching band music holder, \$125. Linnerooth, 299-6558.

WATER SKIS, EP foamcore tricks w/bag, \$75; custom subwoofer for Toyota pickup, \$50. Nicholl, 293-2977.

ANCIENT SAMURAI SWORDS, 1400 A.D., excellent condition, rare works of art, \$5,500 each or pair is \$9,500. Dodson, 271-0468.

GOOD CLEAN FILLDIRT for sale at a great price delivered. Vigil, 345-9590 or 224-8156.

MOTORS, 1/2 hp, 2-spd.; 3/4 hp, 2-spd.; 1/6 hp, 2-spd. with exhaust housing. Luikens, 881-1382.

SEWING MACHINE, Singer computerized free arm, \$85. Aragon, 888-3473.

ANNIVERSARY BAND, 1 ct. TDW, must sell. Sanchez, 873-2058; please leave a message.

TELESCOPE, TeleVue Pronto 2.7" refractor with 2" star diagonal, as shown in astronomy magazines, \$600. Dooley, (510) 455-8426.

GIANT GARAGE SALE to benefit needy family with 7-year-old child with cancer. July 7-9. 2612 Virginia NE. Alexander, 291-8028.

TRANSPORTATION

'90 MAZDA B2200 PICKUP, AM/FM cassette, tinted glass, campershell, 5-spd., low mileage, \$4,000. Ewen, 836-3563.

'81 MERCURY CAPRI, 165K miles, needs some work, but good transportation, \$900. Crumley, 299-5293.

'89 MAZDA MX-6 DX, 2-dr., red exterior, gray interior, tinted windows, AT, AC, AM/FM cassette, new tires, excellent condition, \$5,200. Zarrella, 831-1981.

'93 FORD EXPLORER SPORT, 4x4, 2-dr., lumbar support, hitch, excellent condition, below book, \$18,500. Sanchez, 344-5088.

'85 TOYOTA 4-RUNNER, SR5, standard, AC, PB, PS, PW, 3-in. lift, 33-in. BFG. Padilla, 865-4263, after 6 p.m.

'93 HONDA CIVIC EX, coupe, excellent condition, 12K miles. Vittitoe, 888-0441.

'90 HONDA ACCORD LX, 70K miles, 5-spd., AC, excellent condition, \$9,700. Foster, 823-1162.

'92 MAZDA MX3, 5-spd., cruise, tint, custom wheels, very nice, 50K miles, \$11,000 OBO. Ryan, 265-3715.

'87 OLDS CUTLASS CIERA BROUGHAM, w/many extras, leather seats, excellent condition, less than 60K miles, \$5,500. Mauney, 822-0250.

'86 ISUZU PICKUP, deluxe 4x4, w/white matching cap, AC, PB, PS, 5-spd., excellent condition, low 57K miles, \$4,200 OBO. Curzi, 296-5386.

'92 CHEV. LUMINA EUROSPORT, loaded, AC, CC, PS, PB, cassette, tilt, spoiler, excellent condition, below book, \$9,955. Miller, 883-0218.

'88 LINCOLN TOWN CAR, excellent condition, \$7,500. Sanchez, 877-9665 or 877-0526.

'90 FORD SHO, 4-dr., 5-spd. transmission, silver/black, 67K miles, new tires/brakes/clutch, air bags, ABS, FWD, loaded, \$7,900. Carroll, 898-9488.

'91 GEO METRO, 4-dr., AT, AC, 48K miles, \$3,400. Lenberg, 266-8988.

'94 FORD EXPLORER XLT PACKAGE, 4-dr., strawberry, tinted windows, AT, 4WD, \$22,000. Green, 823-4486.

'90 SUBARU LEGACY, one owner, AT, security, \$7,500. Wheeler, 821-0049.

'86 CHEV. NOVA, 4-dr., 5-spd., AC, 116K miles, \$1,600. Williams, 299-3261.

'90 PLYMOUTH SUNDANCE, 2-dr., excellent condition, blue, low mileage, \$4,250. Snyder, 281-3822.

'85 CHEV. S10 BLAZER, 4x4, AC, CC, 4-spd., V6, one owner, 20-mpg., custom rims, stereo, looks/runs well, \$3,450. Mason, 883-6430.

'93 SUBARU LOYALE WAGON, 5-spd., 4WD, AC, PS, PB, PW, PDL, PM, white, 32K miles, original owner, excellent condition, \$9,900. Stueber, 867-3074.

'93 TOYOTA PICKUP, X-Cab, 2WD, low mileage, theft deterrent, excellent condition, \$13,500 OBO. Sanchez, 873-2058, leave message.

'85 FORD LTD, 4-dr., 6-cyl., AT, AC, good condition, great first car or commuter, \$1,800. Anderson, 298-2069.

'84 FORD XLT RANGER PICKUP, 4-cyl. diesel, w/shell cover, AC, power, 65K miles, clean, \$3,400 OBO. Bear, 881-7128.

'78 MERCEDES BENZ 280SE, 4-dr., white, good condition, some extras, \$4,500 OBO. Zaffery, 294-6768.

'83 BUICK SKYLARK CUSTOM, 2-dr., 4-cyl., AT, PS, AC, cruise, PB, AM/FM cassette, new brakes, \$1,250 OBO. Gonzales, 823-9511.

'75 DODGE BROUGHAM motor home, self contained, 48,000 miles, new tires, runs great, \$5,000. Brooks, 271-1500.

'73 DODGE EXPLORER camper van, A/C, cruise control, 360 V8, completely self-contained, excellent condition. Ronquillo, 842-8833.

'84 HONDA GOLDWING, red, lots of chrome, 48K miles, good condition, \$4,000. Nicewander, 260-0884.

'78 CAPRICE CLASSIC, AC, rebuilt motor, new tires, shocks, brakes, maintenance records available, solid & dependable, \$1,500. Cocain, 281-2282.

RECREATIONAL

MAN'S BICYCLE, 10-spd., Royal Asport, French, white, 33-in. bar to ground, \$20. Beard, 821-0309.

PEUGEOT MAN'S BICYCLE, 12-spd. racing type, pearl white, excellent condition, \$125 OBO. Garcia, 344-3406.

'94 MINI JET BOAT/TRAILER, Baja "BLAST," w/extras, \$9,500. Everett, 873-6132.

TWO MEN'S 27-IN. BIKES: 12-spd., Schwinn World Sport, \$70, 10-spd., Panasonic, \$50, trunk-mounting rack, \$25. Coconelli, 293-1304.

MOUNTAIN BIKE, w/motor, \$490; power scooter w/motor, \$390; excellent condition. Babcock, 299-3121, leave message.

'84 POP-UP CAMP TRAILER, Jayco, sleeps 4 adults, \$1,800 OBO. Roeschke, 266-8988.

'94 MOUNTAIN BIKE, 22 in., Cannondale M-800, 8-spd. grip shift, coda brakes, coda cranks, \$750 OBO. Martinez, 255-9916.

FISHING BOAT, Sears super gamefisher, 14-1/2 ft., w/suntop, cover, seats, Mercury 110 outboard; Shoreland'r trailer, w/spare, \$3,000 OBO. Hughes, 299-6674.

CAMPING WATER FILTER, Katudyn, .2 micron filter, \$150. Lorence, 275-3586.

MAN'S BICYCLE, 10-spd., \$20; hitch receiver, \$35; motorcycle bumper mounts, \$15; mini trampoline, \$15 Duliere, 296-4785.

MOUNTAIN BIKE, TREK 830, never used, \$250; Yamaha bass guitar, \$175; Tenturi Ergometer stationary bike, \$75. Clevenger, 821-0046.

'78 VESPA P200E, beautiful classic Italian scooter, many extras, must see, \$2,000 OBO. Espander, 293-4108.

OUTBOARD MOTOR, 15hp Sea King with 6-gallon tank, excellent condition. Luikens, 881-1382.

REAL ESTATE

5-BDR. BRICK HOME, new pitched roof, 3,100 sq. ft. on .3 acre lot, 10 minutes from tech area. Axness, 296-4691.

4.19 ACRES, east Sandia Mountains, Magic Valley, breathtaking views, utilities, \$63,900. Gabbard, 294-6904 or (510) 833-1935.

4-BDR. MOSSMAN HOME, updated, Sandia high school, 1-3/4 baths, 2,700 sq. ft., new kitchen, great yard, 7016 Dellwood, NE. Lonsberry, 837-9345.

3-BDR. HOME, Pendaries, NM, 2 baths, spacious deck, mountain views, golf course. Gregory, 425-8611.

4-BDR. CUSTOM HOME, Altura Park area, 3 yrs. old, 2-1/2 baths, all amenities, 4207 Sunningdale NE, open house July 9, 1-4 p.m. Mound, 260-0116.

2.29 ACRES, beautiful, in Placitas, w/electric & phone. Duncan, 867-3626, contact Susan anytime.

3-BDR. HOME, 1-3/4 baths, 3.5 miles to SNL, approx. 1,300 sq. ft., hardwood floors, enclosed porch, recently remodeled, \$97,900. Ritson, 299-6284.

WANTED

TRUNKS OR SHIPPING CONTAINERS, large & sturdy, Malcomb, 294-6975.

FLUTE/SAXOPHONE LESSONS, \$6/45 minutes, taught by high school senior. Harrington, 296-8208.

CAR TOP CARRIER, for van, good condition. Brigham, 899-4883.

SERIOUS DRUMMER seeks keyboard, guitar, bass, for new variety band: rock, country, latin, blues & jazz. Williams, 293-1765.

RIVER ROCKS, lava rocks, flagstones, bark, or other landscaping material, cheap or free. Orand, 833-2060.

AUTUMN WOOD FURNITURE, in excellent condition; chipper/shredder, patio furniture. Sayers, 877-8094.



Sandia News Briefs

DAMAS Corp. and Sandia sign license agreement for swing-free crane technology

DAMAS Corp. of Birmingham, Ala., and Sandia have signed a license agreement for the swing-free crane technology. The technology may be retrofitted to existing cranes or ordered for new crane installations. DAMAS Corp. specializes in developing and providing automated crane controls worldwide. The swing-free crane technology, developed by Ben Petterson (ret.), John Feddema (2111), and Rush Robinett (9816), incorporates hardware and computer software to minimize nearly all residual swing during the transport of crane cargo. DAMAS' initial markets will be the seaport shipping container industry, but the company plans to expand into other markets.

DOE HQ to inspect Sandia's Safeguards and Security programs July 17-Aug. 30

About 25 members of DOE's Office of Security Evaluations will inspect Sandia's Safeguards and Security programs (and those of the Albuquerque Operations Office and Kirtland Area Office) July 17-Aug. 30. The inspection will focus on Sandia's ability to provide adequate management and oversight of the Safeguards and Security programs that fall within the scope of its mission. The DOE inspectors will be accompanied by Sandians. For more information, call James Giachino on 844-9026 or Linda Hurley on 844-9063 (both in 7402).

Shannon Lytle wins APEX '95 award for publication excellence

Shannon Lytle of Community Partnering Dept. 3610 has won an APEX '95 National Award for Publication Excellence in the External Magazines & Journals category. Shannon was recognized for producing the *Educational Outreach FOCUS*. Communication professionals from across the US competed in this seventh annual APEX Awards competition, which recognizes "exceptional entries" in major categories.

Send potential Sandia News Briefs to Lab News, Dept. 12622, MS 0413, fax 844-0645.

! Take Note

The Women's Community Association (WCA) operates a shelter for victims of domestic violence for more than 1,500 people each year and offers nearly 20,000 hours of counseling yearly, serving Bernalillo, Torrance, and Sandoval counties. WCA always needs volunteers and donations and now has an urgent need for computers, printers, and peripherals. WCA is a 501(c)(3) organi-

zation, and donations are tax deductible as permitted by law. For information or to arrange a donation, call Kathryn Chaney on 247-4219.

Retiring and not seen in *Lab News* photos: Bobby Collins (13913), 33 years; Luther Horning (2272), 33 years; and Josef Wintersberger (2481-2), 19 years.

Coronado Club

July 7 — Friday night buffet/dance. \$7.95 all-you-can-eat buffet, 6-9 p.m. Music by Isleta Poorboys, 7-11 p.m.

July 9 — Sunday brunch buffet, 10 a.m.-2 p.m. \$7.95 adult members, \$8.95 guests, \$2.95 for children 4 to 12, free for children 3 and under. Music for buffet by So Rare, 1-4 p.m.

July 13, 20, 27, Aug. 3 — Thursday bingo nights. Card sales and buffet start at 5 p.m., early birds' bingo at 6:45 p.m.

July 14 (Friday) — Kids' bingo night. Buffet, 5 p.m., with cartoons and movies. Bingo starts at 7 p.m. Free hot dog and soft drink for all kids playing bingo.

July 21 — Friday night buffet/dance. \$7.95 all-you-can-eat buffet, 6-9 p.m. Music by Three Legged Willie, 7-11 p.m.

July 23 — Sunday brunch buffet, 10 a.m.-2 p.m. \$7.95 adult members, \$8.95 guests, \$2.95 for children 4 to 12, free for children 3 and under. Music for buffet by Bob Weiler and Los Gatos, 1-4 p.m.

Sympathy

To Antonio Zamora (2483-2) on the death of his mother, Cruzita Sanchez Zamora, in Estancia, June 25.

To Marcie (6641) and Steve (5807) Jordan on the death of her father and his father-in-law in Texas, June 17.

To Tommy (2481), Charles (9432), and Walter Simpson (1273) on the death of their uncle, Alvin Simpson, in Quemado, June 28. Their uncle raised the brothers after their father died when they were children.

To Jim Harrison (5111) on the death of his father in Las Cruces, June 18.

Favorite Old Photo



This photo was taken in June 1945. Ken Trow, my grandfather, is in the back row at the right side. He was the pilot of this B-29. With him is his crew, with the exception of his new nose gunner. The nose gunner, Charles Buchinsky, arrived about a week later. After the war, Mr. Buchinsky returned to the US, changed his name to Bronson, and took a job in Hollywood. During the 1977 filming of "Telefon," Charles Bronson visited Great Falls, Mont., for the filming of a stunt. My grandfather hired on as an extra, and during filming breaks the two recounted old World War II memories.

— Anna Schauer (2346)

Trinity Site open July 16 for 50th anniversary

The Trinity Site, where the world's first atomic bomb was detonated in 1945, will be open July 16 for the 50th anniversary of the historic test. The anniversary opening is in addition to the site's normal dates — the first Saturday of each April and October.

On Sunday, July 16, the site will be open from 5 to 11 a.m. The early hours will allow visitors to be at the Trinity Site at the same time of day the detonation occurred 50 years earlier (at 5:29:45 a.m. on July 16, 1945), as well as avoid the extreme afternoon heat.

Attractions at the site include the McDonald ranch house (where the bomb's plutonium core was assembled), a Fat Man bomb casing display, and a small monument marking "ground zero." No ceremonies or speakers are planned.

The missile range provides historical photographs and concessions. Portable toilets are available. Cameras are allowed at the Trinity Site, but their use is prohibited anywhere else on White Sands Missile Range.

Visitors traveling from Albuquerque may enter White Sands Missile Range through the Stallion Range Center. The Stallion turnoff is 12 miles east of San Antonio, N.M., on Highway 380. Stallion Gate is five miles south of the turnoff, and the Trinity Site is approximately 17 miles southeast of the gate. Roads are paved and marked.

For more information, contact the White Sands Missile Range Public Affairs Office at (505) 678-1134, ext. 1700.