

Galvin receptive to 'laboratory system of the nation' concept proposed by DOE lab directors

Narath employee dialogue sessions focus on Galvin Task Force activities

By John German

Lab News Staff

Labs President Al Narath, during three quarterly employee dialogue sessions at Sandia/New Mexico last week, said he is encouraged by what he perceives as a renewed spirit of cooperation among the directors of the 10 DOE multiprogram labs.

The dialogue sessions, which took place Oct. 4 and 5, focused on recent activities of

the "Galvin Commission" — officially the Secretary of Energy Advisory Board Task Force on Alternative Futures for the DOE National Laboratories. The task force was created by Energy Secretary Hazel O'Leary in February to recommend alternative missions for the 10 DOE multiprogram labs (*Lab News*, Feb. 18).

During the sessions, Al reported that the collaborative atmosphere among the directors resulted from the surprise challenge by Bob Galvin, Chairman of Motorola and head of

the task force, during his Aug. 16 visit to Sandia. During that visit, Galvin challenged the 10 directors to come up with a collective vision for alternative futures for the DOE labs (*Lab News*, Sept. 2).

Science serving society

Al says the consensus that resulted from subsequent meetings of the directors was that the DOE labs should join together to provide an integrated DOE laboratory system serving the greater needs of society — a "laboratory system of the nation."

This integrated laboratory system, they propose, would have as its primary mission supporting a "sustainable future" for the nation by providing unique research and development capabilities in its core missions (energy, environment, national security, and basic sciences) and in emerging missions (manufacturing, the National Information

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SPEEDY TESTING — Contractor Pat Candelaria conducts quiescent power supply current testing of an integrated circuit at Sandia's Microelectronics Development Laboratory. The instrument enables current testing of integrated circuits at a speed and resolution an order of magnitude beyond previous capabilities. It is capable of performing more than 333,000 current measurements per second, enabling fast, accurate screening of defective circuits. (Photo by Randy Montoya)

International symposium explores environmental cleanup in Eastern Europe

Sandia, DOE sponsor Budapest '94

By Ken Frazier

Lab News Managing Editor

As part of its responsibilities for DOE to evaluate environmental cleanup technologies in Central and Eastern European countries, Sandia and DOE co-sponsored a major conference in Hungary Sept. 20-23. Last week one of the conference's two co-chairmen, physicist Peter Richter of the Technical University of Budapest, returned the favor by visiting Sandia and participating in a DOE review of Sandia's international programs in environmental remediation.

He was accompanied by John Moerlins of Florida State University. Sandia is working closely with the university, which has extensive environmental interactions with Hungary and Central and Eastern Europe.

"It was exciting," says Rudy Matalucci of International Programs Dept. 6907 of the conference, which brought together nearly 700 participants from 40 countries. The conference was the Second International Symposium and Exhibition on Environmental Contamination in Central and Eastern Europe — Budapest '94 for short. The symposium focused on the environmental problems of Central and Eastern Europe and innovative technologies for attacking them.

Link to Central and Eastern Europe

"I think the symposium was quite successful," says Richter, who is head of the Department of Atomic Physics at his university. "Eighty of the papers were given by groups with representatives from at least two different countries," he says, "so partnerships are already forming. It presented an opportunity to meet potential partners and that was its goal."

Sandia has contracted with Florida State University to assist in its evaluation for DOE of environmental technologies in Central and Eastern Europe. Florida State has long-established direct links — joint programs, computer networks, phone lines, and people exchanges — with the Technical University of Budapest through the two universities' joint Center for Hungarian-American Environmental Research, Studies, and Exchanges (CHAERSE).

Hungary is ideally situated for this role. "Hungary is the gateway

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'Green box' helps keep road and railway traffic moving

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New telemedicine network links doctors from coast to coast

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Sandia rolls out the welcome mat — Special Sandia Day '94 guide inside

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Recent review calls for more user-friendly human resources services

This & That

Sandia Day Insert - Everyone except Sandia/California employees should find a special four-page insert in this issue, listing events and locations for the Sandia Day festivities at the New Mexico site next Saturday, Oct. 22. (Sandia Day is also being held the same day at Sandia/California, and a separate program is being published and distributed there; for information, call Laura Santos at the California site on 294-1214.) For up-to-the-minute info about what's going on at the New Mexico site on Sandia Day, you can tune in to Radio Sandia on 1610 AM that morning on your way to the festivities.

You may want to bring a few bucks for the food and drink that will be for sale. Also, you can buy those popular Sandia logo souvenirs - cups, caps, T-shirts, etc. - at a booth near the corporate display area by the Technology Transfer Center (Bldg. 825); all "profit" from the sale of the items goes to charity.

* * *

A real pizza joint - Some employees in the Energy and Environment Division recently decided to have a team-celebration pizza luncheon, and they ordered delivery service from an Albuquerque pizza joint. After a long wait, they called the pizzeria and were told the driver had left with their pizzas some time ago. Someone then decided to check with the Kirtland AFB guard gate to see if there was a problem. BIG PROBLEM! The guards discovered the delivery man was driving with a suspended license and had a warrant outstanding for his arrest, so they detained him, searched his vehicle, and allegedly discovered marijuana in his possession. The guards then impounded several things as evidence - including the pizzas. Maybe they thought that oregano on the pizza was another kind of plant - a potted plant, you might say.

* * *

Heavy metal news - A short but complimentary news item about how Sandia is working cooperatively with the US metals industry is in the Sept. 19 issue of *Business Week*. The item is in a column discussing several ways that the national labs are helping industry. It tells how Sandia is working with Fastcast Inc., a consortium formed to improve metal-casting processes with computational tools. Founded by three companies - Komtek, TrueCast, and Manufacturing Sciences - with Sandia's support, the group now includes 16 members. The article points out that some of these companies have "slashed development cycles from 18 months to 14 weeks."

Frank Zanner of Sandia's Liquid Metal Processing Dept. 1833 was instrumental in getting the Fastcast consortium established, and Mike McGuire (also 1833) is now the program manager.

* * *

Who's there? - I occasionally get anonymous suggestions, potential *Lab News* contributions, and controversial questions that for some reason we can't use or reply to in the paper. However, sometimes I would really like to reply to the folks submitting them. I have one such item now.

My firm promise: If you submit something to me in confidence, only two people will ever know about it - you and me - unless you choose to tell someone else. I won't reveal your name to anyone for any reason without your permission. If you need a written reply, I'll mail it to you in a private company envelope or to your home address if you prefer.

- Larry Perrine

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MARTIN MARIETTA

★ Congratulations

To Tracey and Dale (7435) Meredith, a son, Zachary, March 4.

To Kate Trauth (6341) and John Gahl, a daughter, Virginia Gahl Trauth, June 7.

To Laura and Raymond (7435) Garcia, twins, son Jesse Raymond and daughter Larissa Elise, July 11.

To Barbara and Matt (7435) Umstead, a daughter, Cassandra Marie, July 12.

To Laura and Charles (7435) Tabet, a son, Jeremy Allen, July 27.

To Pamela and Terry (2663) Bast, a daughter, Claire Elizabeth, Sept. 27.

To Robin and Doug (2346) Bentley, a son, Drew Daniel, Oct. 3.

☀ Recent Patents

Joseph Henfling (6111), Mark Smith (1841), and William Lenling: Method for Minimizing Decarburization and Other High Temperature Oxygen Reactions in a Plasma Sprayed Material.

Hugh Bivens, Dale Koehler, and Kurt Wessendorf (all 2254), and Jeffrey Sniegowski (1325): Micro-Machined Resonator Oscillator.

Medical corner

Kids in the middle can get squeezed

By Arlene Price

Sandia Clinical Psychologist

There are many kinds of families in the US today. Meeting the challenges and demands of these families requires patience, perseverance, knowledge, and skills, particularly in raising healthy, well-adjusted children.

Your children learn to make judgments and evaluations based upon what you teach them. Your beliefs and behavior provide a frame of reference for how your children view the world. Adult views often conflict, and children must learn to cope with differing beliefs and values in the household, often two households today. Usually children benefit from different points of view, learning to become more adaptable, if they aren't burdened by unresolved problems of their parents.

Psychological games harmful

Often parents deal with unresolved problems by engaging in psychological games of competition. Children are caught in the middle of these conflicts. Being placed in this position takes various forms. For example, the child may become the channel of communication through which parents express their feelings toward each other. In families where parents are separated, one spouse may use visitation as a lever to achieve certain goals, such as financial compensation. Another parent may use finances as a way of attempting to control a spouse. There is also the "I want you on my side" attitude toward the child, when a parent tries to convince the child that he/she is the "good" parent and the other the "bad" parent.

The messages children receive from parents may affect them into adulthood. Many children feel responsible for their parents' happiness. A child may spend a lot of time getting the parents to "make up." If parents use the child to get back at each other, the child usually realizes it and may grow to resent them for it. If one parent criticizes the other, the child may feel that those parts of him/herself that are similar to the criticized parent are defective, resulting in feelings of low self worth. Also, children in these situations find themselves experiencing loyalty conflicts toward their parents. The important thing to realize is that the child is not in a position to challenge either parent.

Parents need to help their children feel loved by both parents. Achieving this presents a challenge, particularly when one parent feels justified in criticizing the other. The goal is to think about what is in the best interests of the child. In the long run, working cooperatively is also in the best interest of the parents. The journey to success is a process. Parents need to be tolerant of themselves and their efforts.

Kids in the middle program is Oct. 19

In observance of National Family/Safety Month, Preventive Medicine and Employee Assistance Dept. 3335 is sponsoring a program titled "Kids in the Middle." The guest speaker is child psychologist Tom Carey. His talk will focus on effective and ineffective parenting. The one-hour program begins at 12 noon, Wednesday, Oct. 19, at the Technology Transfer Center (Bldg. 825). Spouses are welcome. For further information, contact Arlene Price (3335) on 845-8729.

'Green Box' smart sensor to help track transport

Will monitor and report on critical systems of buses, railroads, rapid transit

By Mike Sheehan

Lab News Correspondent

Safe, efficient transportation systems are vital to a nation's economic health. Accidents or unscheduled maintenance can result in revenue losses and environmental disasters, while breakdowns during peak periods can disrupt traffic, producing long delays and thousands of frustrated commuters.

To help reduce these problems, Sandia scientists have developed a smart, survivable sensor module that evaluates the critical functions of railroads, bus lines, and transit systems, such as BART (Bay Area Rapid Transit System). The sensor system called the Green Box is designed to cut operating costs by improving preventive maintenance scheduling, reducing the number and severity of accidents, and reducing theft.

"During normal operations, the Green Box sensor module will continuously monitor the performance of a transportation system's safety components and report deteriorating conditions to an operator, who can schedule maintenance to correct the problems," says Jim Mitchell, a project scientist with Advanced Systems Engineering Dept. 5371. "In addition, we designed the Green Box to survive most accidents. If an emergency occurred, the system would send a distress signal to notify authorities of the location and condition of the vehicle, thereby enhancing fast, efficient response." The original concept for the design came from Jim Hogan (5371).

A self-contained unit

Sandia's Green Box consists of a self-contained, 60-pound sensor package that mounts on a railroad car, bus, or transit vehicle. The 12" x 12" x 12" box includes a microcontroller, signal conditioner, geographic position locator, cellular transmitter, and power supply. To track the sensor system, the Sandians designed a base station that features a personal computer with an electronic map.

"The operator can follow the movement of a railroad car or other vehicle on the electronic screen by watching a light dot, much like tracing the route on a paper map with a pencil," Jim explains. "In addition to monitoring the brakes, lighting, propulsion, and other components, the intelligent Green Box can use learned information



BUSBORNE — Jim Mitchell (5371, right) and Victor Leong, a summer program student, take the "Green Box" for its first field test ride on a Livermore transit system "WHEELS" bus.

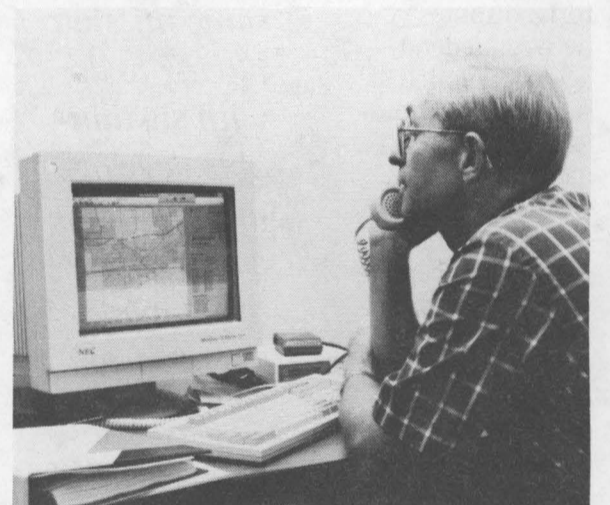
to evaluate acceptable performance and interpret deterioration in highly complex systems."

Preliminary bus test successful

To determine the feasibility of the new system, Jim and Victor Leong, a Sandia summer student, completed a successful preliminary test of the Green Box during a two-hour, 20-mile bus ride in August. The researchers traveled round-trip between the Sandia/California site and Pleasanton to check the system's communications and tracking capabilities.

"Although we tested a suitcase-type Green Box on the bus trip, our main thrust is toward railroads that transport critical shipments of high-risk materials, such as hazardous chemicals or high-value cargo like automobiles," Jim says. "This system will enable the railroads to closely monitor the location of key cars at all times."

In fact, Jim emphasizes that development of Green Box technology resulted from the railroad accident near Dunsmuir, Calif., several



MONITORING & MAPPING — Bruce Nevin (5366) uses his computer and a commercially available map program to monitor the route of the bus carrying the "Green Box." He is talking by cellular phone with Jim Mitchell, who is on the bus.

years ago in which a tanker car derailed and dumped thousands of gallons of herbicide into a river. Cleanup costs topped \$50 million.

"Several hours passed before the railroad company knew the location and extent of the spill," he says. "In contrast, placing a Green Box on railroad cars would enable operators at a base station to know immediately if an emergency occurs and help speed emergency response activities."

Helping states meet requirements

In addition to helping railroads, Jim says the Green Box technology may play a role in a congressionally mandated program that requires all 50 states to improve their infrastructure for moving people from one place to another efficiently.

"To assist the states in meeting federal requirements, Sandia's Transportation Systems Center is developing a prototype system that keys on geographic information systems," Jim says. "In the future, individuals might even be equipped with sensors and transmitters that give their location and condition in the event of an accident or if their automobile is stolen. We envision many far-reaching uses for Green Box technology, and hope to fully fund the project in the near future."

Sandia California News

Supervisory appointment

MARIE DREMALAS to Supervisor of Development and Administrative Support Team 5361-1.

She joined Sandia/California in 1963 in the Document Control office, later moving into the Technical Library organization in the classified vault area. Next she worked in the Budgeting and Accounting Division, processing time cards, preparing



MARIE DREMALAS

checks, and doing airline ticket accounting. Then she worked as procurement coordinator for the W82, B83, W89, and W71 programs in the Procurement Support Section. More recently she has been administrative assistant for California Weapon Development Center 5300 where she joined a 5300/8100 team, handling budgeting and salary issues for these centers in the Defense Programs Sector.

Marie is a graduate of St. Mary's High School in Stockton and earned an AA degree in business from Delta College. She recently received the Distinguished Role Model award for Center 5300 from the Sandia Women's Committee.

Narath dialogue

(Continued from page 1)

Infrastructure, transportation, and health care). Industrial competitiveness, education, and scientific discoveries would not have to be viewed as missions, but rather as natural benefits of R&D in the core and emerging missions (see illustrations at right).

"Almost anything you think of in the area of sustainable development is already in the DOE portfolio," he said. "DOE needs to step up and take the lead."

In addition, the lab directors recommended that the DOE labs serve to revitalize the nation's science and technology infrastructure by facilitating R&D partnerships between the public and private sectors. Al said this can be accomplished by positioning the DOE laboratory system in such a way to link universities, industry, and other federal agencies using various partnership mechanisms — such as cooperative research and development agreements (CRADAs), joint research papers, research appointments for university students and researchers, and user facilities.

He added that memorandums of understanding (MOUs), like the one pending between DOE and the Department of Commerce, will help resolve "territorial disputes" between federal agencies, which serve only to hinder R&D relating to national needs.

Al said Galvin seemed impressed with, and receptive to, the directors' recommendations, which they presented to him in

Dallas on Sept. 28. "I have reason to believe that some mission having to do with sustainable development will be embraced by the Galvin Commission," Al said.

Another meeting between the lab directors and the Galvin Commission is being planned that will focus on DOE lab relationships and cost efficiency. Watch future issues of the *Lab News* for details.

"I have reason to believe that some mission having to do with sustainable development will be embraced by the Galvin Commission."

Q&A touched employee concerns

After discussing the Galvin Commission, Al put himself on the spot by addressing impromptu questions submitted by employees. Here are a few of the highlights of the question-and-answer sessions.

Salaries: Depending on which industry the Labs compares itself to, Sandia salaries look either good or average, he said. Although the one-year salary freeze for FY94 has put Sandians "a year behind," the Labs is doing fairly well when layoffs in DoD, NASA, and the aerospace industry in recent years are considered.

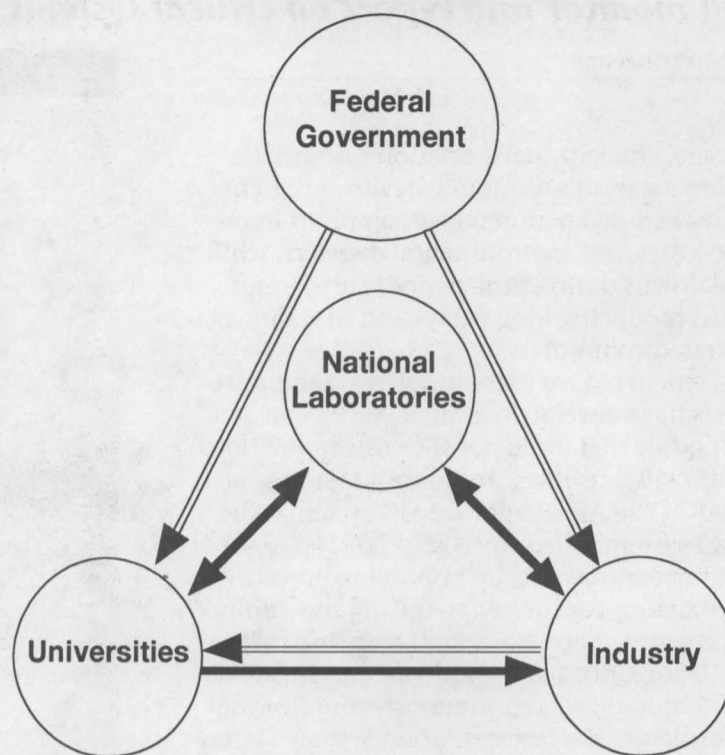
Lockheed-Martin: While it remains to be seen what culture will result from the pending merger between Lockheed and Martin Marietta, he says the merger will probably not affect Sandians very much.

Reengineering: "We've set a goal of 20 percent cost savings, and we'll do our best," he said. Although reengineering will result in some significant changes and automation of many Labs processes, overnight savings are improbable. He says major cost savings will occur over a number of years.

Compressed work weeks: Employees will know "soon" how the Labs will adopt the 9/80 work week (working 80 hours in nine

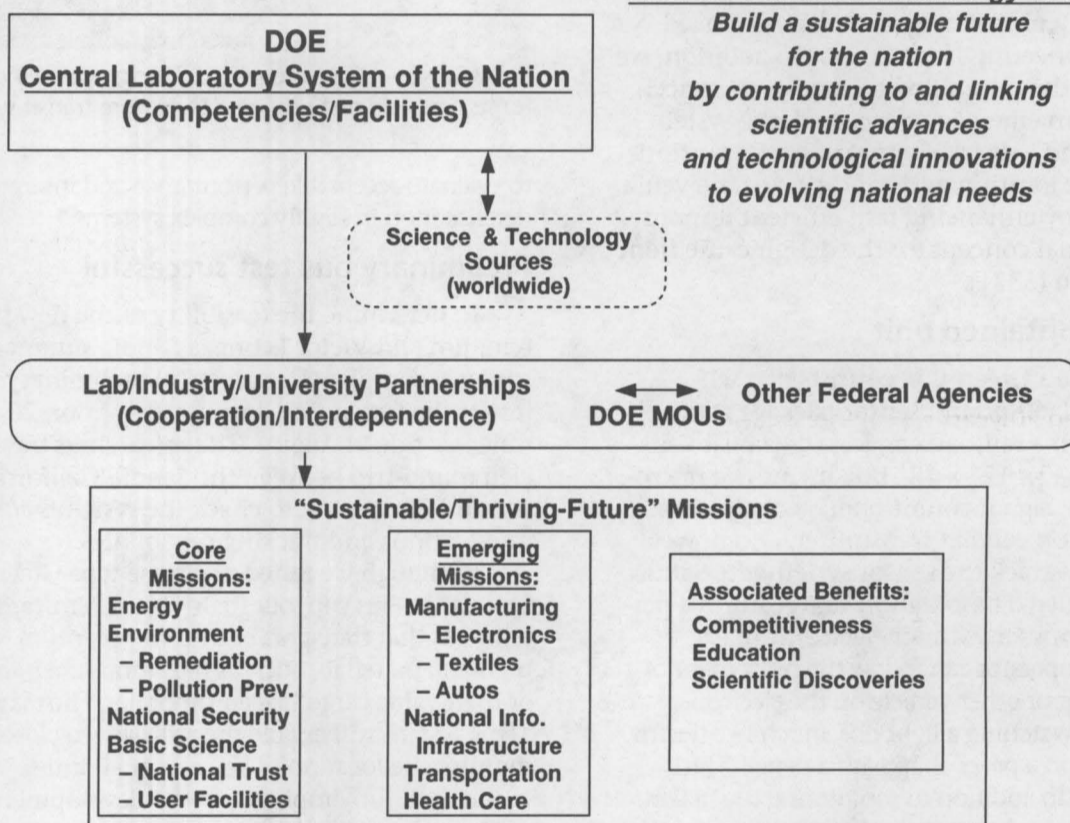
DIRECTORS of the 10 DOE multiprogram labs proposed a collective vision to Bob Galvin on Sept. 28 of an integrated DOE laboratory system that has as its primary mission supporting a "sustainable future" for the nation (bottom illustration) by providing unique research and development capabilities in its core missions (lower left) and in emerging missions (bottom center). Memorandums of understanding (MOUs) between DOE and other federal agencies, and a renewed interest in lab/industry/university partnerships, would place the DOE laboratories in a position of interdependence with all players in the national science and technology infrastructure (right illustration). Hollow arrows represent research and development funding, while solid arrows represent R&D relationships.

The national R&D enterprise



The DOE Science & Technology Vision:

Build a sustainable future for the nation by contributing to and linking scientific advances and technological innovations to evolving national needs

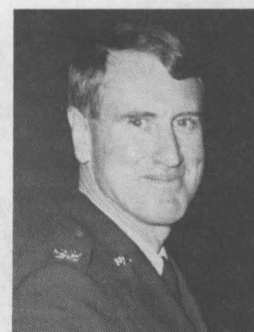


work days, with one extra day off every two weeks). He said he expects the 9/80 work week to be optional, and he hopes it will result in higher productivity and employee morale. "Of course, Sandians can continue to work 12 hours a day if they want," he joked.

Defense Programs: Weapons R&D budgets have dropped about 15 percent each year for three years now, he said, but the overall Defense Programs budget (with increases in nonproliferation and other emerging areas) has increased slightly. He predicts both will stabilize within the next few years.

Sandia/California: Responding to an employee question about the value of a Sandia presence in California, Al said California universities are some of the nation's best, providing partnership opportunities for Sandia. In addition, California leads the nation in nearly all areas of sustainable development (energy, environment, transportation, microelectronics, manufacturing), and the California site has been instrumental in establishing the new Sandia office in Silicon Valley. "So yes, our presence in California is of great strategic value," he said.

Employee deaths



ROGER HEAD

Roger Head of Smart Structures and Munitions Dept. 9122 died Oct. 3 after a long illness. He was 52 years old.

Roger had been at Sandia since 1993 and was a limited-term technical staff member. He is survived by his wife Jane.

Anthony Shay of Primary Electrical Standards Dept. 1742 died suddenly Oct. 7. He was 39 years old. (Photo not available.)

Tony had been at Sandia since 1990 and was a senior technical associate. He is survived by his wife Connie and son Bryan.

Sympathy

To Larry Greher (11200) on the death of his mother, Aranka Greher, in Albuquerque, July 26.

Budapest '94

(Continued from page 1)

to Central and Eastern Europe," says Moerlins, associate director of CHAERSE. (The director, Roy Herndon, was co-chairman of the symposium with Richter.) Hungary has a variety of projects focusing on environmental contamination in the surrounding region.

And Hungary leads the region scientifically. "Its scientific competence is excellent," Moerlins says.

He points out that by connecting up with CHAERSE and its existing links with Hungary, DOE and Sandia have

found an efficient and cost-effective way to "get way up on the learning curve," Moerlins says. "It's an opportunity to institute DOE's programs more quickly."

Sandia and DOE benefit greatly from the relationship between Florida State University and the Technical University of Budapest, Rudy says. "It provides ready-made access for DOE to institutions and agencies throughout the region. I find it to be very efficient and cost-effective to work this way. Sandia and DOE don't have to try to duplicate this existing entity." Rudy served on the executive committee of Budapest '94, participated in the symposium, and then hosted Richter and Moerlins in their Sandia visit last week.

Moerlins says Central and Eastern Europe have much the same environmental problems the US had 20 years ago before a variety of stricter US policies and regulations went into effect. And he wants to counter any impression that contamination is everywhere. "The entire

"Our responsibility is to evaluate those technologies that are superior, innovative, and cost effective."



INTERNATIONAL RELATIONS — John Moerlins (right) of Florida State University, Peter Richter (center) of the Technical University of Budapest, and Sandia's Rudy Matalucci (6907) discuss links among their three institutions in environmental cleanup technologies. The visit Oct. 5-7 also included briefings on Sandia's research capabilities and participation in a DOE review of Sandia's international environmental programs.

region is not contaminated; only certain areas are."

The relationship between Central and Eastern Europe and the US on environmental remediation is "a two-way street," Richter emphasizes. "This was clearly demonstrated at the symposium," he says. "Information flows both ways."

Knowledge flows both ways

Although on the average, environmental research in Central and Eastern Europe "is not on a high level," Richter says, "a few projects

are very competitive on a worldwide basis. We try to select these very capable researchers. These international opportunities allow those who are doing good work to be looked on internationally as very competent and be integrated into the international community."

There are indeed new technologies in Central and Eastern Europe for DOE and Sandia to learn from, Moerlins says. A Hungarian LIDAR (laser infrared radar) system developed by the Technical University of Budapest for use in remote-sensing of air pollutants is superior to anything available elsewhere, he says. And the Czechs are very knowledgeable in advanced technologies for separating radionuclides from contaminated water and in the vitrification of nuclear waste. "Some of the facilities are very, very good. There are some distinctly good opportunities for DOE," he says.

"Our responsibility is to evaluate those technologies that are superior, innovative, and cost effective for benefit to the DOE complex," says Rudy.

EnviroTRADE may aid site cleanup in Hungary

Sandians at the Budapest '94 conference Sept. 20-23 in Hungary demonstrated the EnviroTRADE information system, under development at Sandia for DOE as part of the cleanup program of the nuclear weapons complex. Sandians Rudy Matalucci, Mark Harrington, and Charlene Harlan, all of International Programs Dept. 6907, also presented a paper on application of EnviroTRADE for the cleanup of the Former Soviet Union military site at Komarom Base, Hungary.

EnviroTRADE is a multipurpose, multi-user, multimedia, interactive computer information system for worldwide environmental restoration and waste management. It provides waste site and technology information in the form of text, graphics, and photos. The system provides decision support tools to match sites and technologies.

At a NATO Advanced Research Workshop in Visegrad, Hungary, in June, conducted by the joint Center for Hungarian-American Environmental Research, Studies, and Exchanges (CHAERSE), contamination data from the Komarom site was entered into the system and used to demonstrate EnviroTRADE's ability to assist in identifying alternative cleanup measures for contaminated former military installations.

The data was used to evaluate technologies that might be used to clean up hydrocarbon and other types of contamination in the groundwater and soil. Although the 350

technologies for cleanup currently included in the database are only a portion of what it will eventually contain, the effort demonstrated the utility of EnviroTRADE to evaluate possible cleanup options at the Komarom site, say the three Sandians and colleagues Michael Kuperberg of Florida State University and Imre Biczko of the Technical University of Budapest.

There are 170 abandoned sites similar to Komarom in Hungary alone, the scientists point out, and hundreds of others in Central and Eastern Europe that will require cleanup in the future depending on when and how the land might be needed.

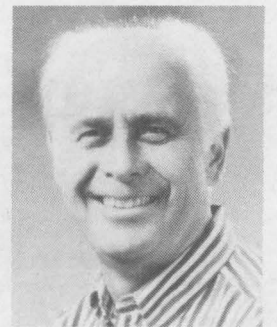
They say the successful demonstration of EnviroTRADE will have a significant impact on its potential application throughout NATO, in the Central and Eastern European region, and elsewhere. They believe EnviroTRADE's ability to match the needs of a site with potential technologies will make it a valuable tool in remediation efforts worldwide.

During his visit to Sandia last week, Peter Richter of the Technical University of Budapest said he is talking with Rudy about the possibility of installing an EnviroTRADE node at his university. "I think it would be very good to get this done. A node in Budapest would allow people in the region to access and use this information for addressing contaminated site problems."

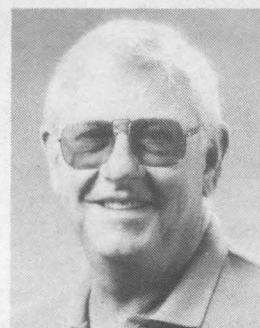
Recent Retirees



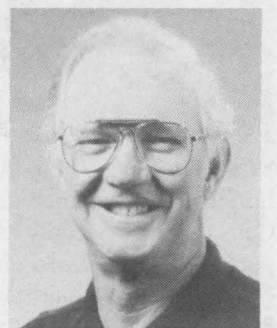
Robert Scharrer 43
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Winn Erdman 36
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Paul Seward 39
9300



John Gallagher 34
2645

Sandia aids in NIIT telemedicine demonstration in D.C.

Gabe Gutierrez gets praise from congresswoman

When a new prototype medical communications network was unveiled in Washington, D.C., recently, Gabe Gutierrez, Manager of Communications Liaison Dept. 8902, was there to make sure it all worked.

Gabe, a 34-year employee of Sandia/California, has been "on loan" to the National Information Infrastructure Testbed's (NIIT) demonstration project on telemedicine, which linked doctors coast to coast over interactive, high-speed computer lines.

In a demonstration project for Congress, telemedicine experts, and the media Sept. 20, doctors in various sites consulted on a simulated medical emergency case. They looked at medical records, examined 3-D medical images, and determined a course of treatment for an automobile accident "victim."

In addition to Sandia, a variety of private companies, government labs, and hospitals collaborated in the demonstration.

NIIT says the demonstration showed that the basic technology needed to practice telemedicine already exists, but serious legal and policy problems prevent immediate creation of a commercial telemedicine network in the US.

The new technology depends on high-speed, high-capacity fiber optic links. It also demands a seamless interface between numerous types of computer hardware and software.

As demonstration project manager, Gabe's job was to ensure that this entire network worked.

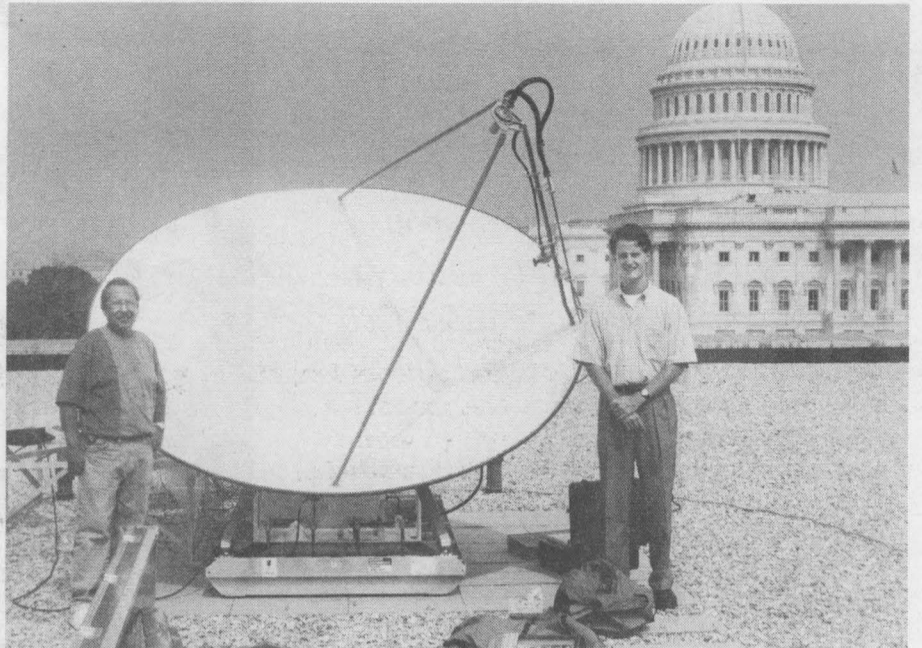
Setting up a complex, high-capacity network is "something Sandia does best," says Dona Crawford, Director of National Information Infrastructure R&D Center 8900 at Sandia/California. She points out that Sandia has had to resolve similar problems to link its New Mexico and California sites. "This involves linking local and wide-area networks; it involves different protocols, operating systems, and bandwidths; and it all has to work together seamlessly."

Gabe says one of Sandia's hardware contributions to the telemedicine project was the DS-3 delay simulator, a device that simulates the split-second communications delays that occur over the information highways. This simulator helps engineers allow for delays when setting

up a network.

Gabe had an office in Washington starting in early August. His assignment: coordinate all the linkages among Johns Hopkins Medical Center in Baltimore, the University of Southern California Medical Center in Los Angeles, and the Rayburn Office Building across the street from the Capitol.

One problem was the need to place a TV satellite link atop the Rayburn Building. "For national security reasons, nothing is supposed to go on the roof of that building," Gabe says. "It's right across the street from the Capitol. When I went up on that roof to look it over, it was absolutely clean." To maintain security, Gabe had to specify in advance precisely which pieces of equipment needed to be installed there and which vendors would provide them, and he had to make all arrangements.



HIGH-LEVEL COMMUNICATIONS — Gabe Gutierrez (8902, left) and Lance Scott, legislative aide to US Representative Anna Eshoo of California, flank the satellite dish Gabe had installed on the roof of the Rayburn Building, across from the Capitol, for a national telemedicine demonstration in Washington Sept. 20.

The simulation project was supported by California Rep. Anna Eshoo. Following the demonstration, Eshoo wrote Dona thanking her and Sandia for making the NIIT telemedicine demonstration successful, and added, "Please communicate my special thanks to Gabriel Gutierrez for his tireless efforts to make this a success."
—Barry Schrader

Retirement open houses

Sandia is holding open houses in honor of retirees **Tommy Donham** (2601) in the Area 1 Cafeteria (Bldg. 861) on Tuesday, Oct. 25, 2-4 p.m.; **Marvin Bauder** (2663) in the Area 1 Cafeteria (Bldg. 861) on Thursday, Oct. 27, 2-4 p.m., and **Jose Gutierrez** (7618-1) in the Area 1 Cafeteria (Bldg. 861) on Monday, Oct. 31, 2-4 p.m. Refreshments will be served. Friends and acquaintances are invited.



Fun & Games

Tennis — Coronado Tennis Club members spent Labor Day playing in a tennis tournament at the Coronado Club. Here are the results: Men's Singles — Alex Pimentel (1824) defeated Tom Caldwell (9312), 5-4 and second set retired because of injury; Women's Singles — Carmen Allen (9215) defeated Teresita Martinez (5900), 6-2 and 7-5; Men's Doubles — Tom Caldwell and Fred Zutavern (1248) defeated Tom Brennan (1311) and Steve Stribling, 7-5 and 7-5; Mixed Doubles — Joe Ruggles (13314) and Teresita Martinez defeated Joe (6121) and Ruth Tillerson, 6-3 and 6-4.



HOGS, PICKERS, AND HAMBURGERS helped kickstart the 1994 Employee Contribution Plan (ECP) campaign at Sandia/New Mexico on Friday, Oct. 7. Left photo: At Gate 1, Sandia Security Police Officer Paul Baca (7435), far right, prepares to admit a parade of Sandia "wild ones" into Tech Area 1. Leading the pack of Harley-Davidson "hogs" are ECP chairman Jerry Esch (13401) and passenger Jim Tegnalia, Sandia Executive VP. Nearly 30 motorcycles participated. The annual ECP campaign was held this week, Oct. 10-14. The Plutonium Pickers (right photo) plucked and strummed some toe-tapping music for the ECP campaign kickoff event on the Technical Library

mall. Despite the rain, approximately 800 people came to see the "hog" parade, hear the music, and eat hamburgers. The musicians were among many volunteers who spent time helping make this year's campaign more visible. Band members (not all pictured here) include Jerry Letz (10104), Allison Davis (7254), Greg Sitler (6218); Doug Denham, Curt Kenagy, A.J. LaBarro, Karen Agogino, and Ron Holton (all DOE); Jerry Grayson (DOE, ret.); and Skip McCollum (ADP, Inc.). Today is the final day of the 1994 ECP campaign; however, it's never too late to consider a contribution to United Way through ECP. Contact ECP center representatives for more information.

Thousands of friends and relatives expected to visit New Mexico and California sites for Sandia Day '94

Exhibits, demonstrations, food, and fun on Oct. 22, 9 a.m.-4 p.m.

Thousands of guests are expected when the Labs' gates open to family and friends for Sandia Day '94 on Saturday, Oct. 22 — a special celebration of Sandia's contributions, with the theme "Today and Tomorrow." Hours of operation are 9 a.m.-4 p.m.

Both the New Mexico and California sites will welcome guests, who will find exhibits, children's activities, food, fun, and more, according to Sandia/New Mexico coordinator Ken Hanks of Program Management and Support Dept. 6911 and Sandia/California coordinator Laura Santos of Project and Administration Dept. 8601. This special *Lab News* insert covers New Mexico only. (A separate program is being distributed at Sandia/California.)

Q, L badges are 'tickets'

"This is a great opportunity for employees to show family and friends where they work and what they do," says Laura. Ken agrees, saying, "It has always been a popular event among Sandians' close family members, but with the growing openness of our work, we thought this would also be an appropriate occasion for inviting friends and other acquaintances." Three years ago, nearly 16,000 people visited Sandia on Family Day '91.

Anyone with a DOE-issued Q- or L-level badge — Sandians, other DOE labs employees, DOE employees, contractors — is allowed to bring eight guests, who can be family, friends, or students. Anyone attending — alone or with guests — must wear his or her badge to be admitted. As usual, uncleared employees may not enter the technical areas without a cleared escort.



Guest registration forms for Q and L badge holders are available at the reception counter in Bldg. 800; the form was also printed in the Oct. 10 *Weekly Bulletin*. You should complete the form and bring it with you, with your badge, on Sandia Day. Your guests can receive their visitor badges at Sandia gates 1, 4, and 6, at the Technology Transfer Center (TTC, Bldg. 825), or as you enter Area 5. If you prefer, you may present your form at one of several locations Oct. 18-20 and pre-register visitors then; for details, see the "Security Requirements" section on the back of the registration form.

Former Sandia employees, including retirees and those who had summer jobs, will need to have cleared escorts for Sandia Day. Redd Eakin of Community Relations Dept. 12640 (phone 844-4124) is coordinating escorts and special activities for retirees. Summer-only employees interested in attending should ask their supervisors or co-workers to add them to their guest list.

Special restrictions apply for foreign national guests, so if you are thinking of bringing one, call Don Jerome (7400) on 844-9170 right away.

What's happening?

The map at left shows in general the areas that will be open on Sandia Day (areas in gray and black). Free shuttle bus service will run continuously from Area 1 to the outlying areas, as shown. Bus stops around Area 1 are at the TTC and at the National Atomic Museum. Specific exhibits, demonstrations, and attractions are shown with maps on pages B and C. Buildings open to all visitors are shown in black on all maps.

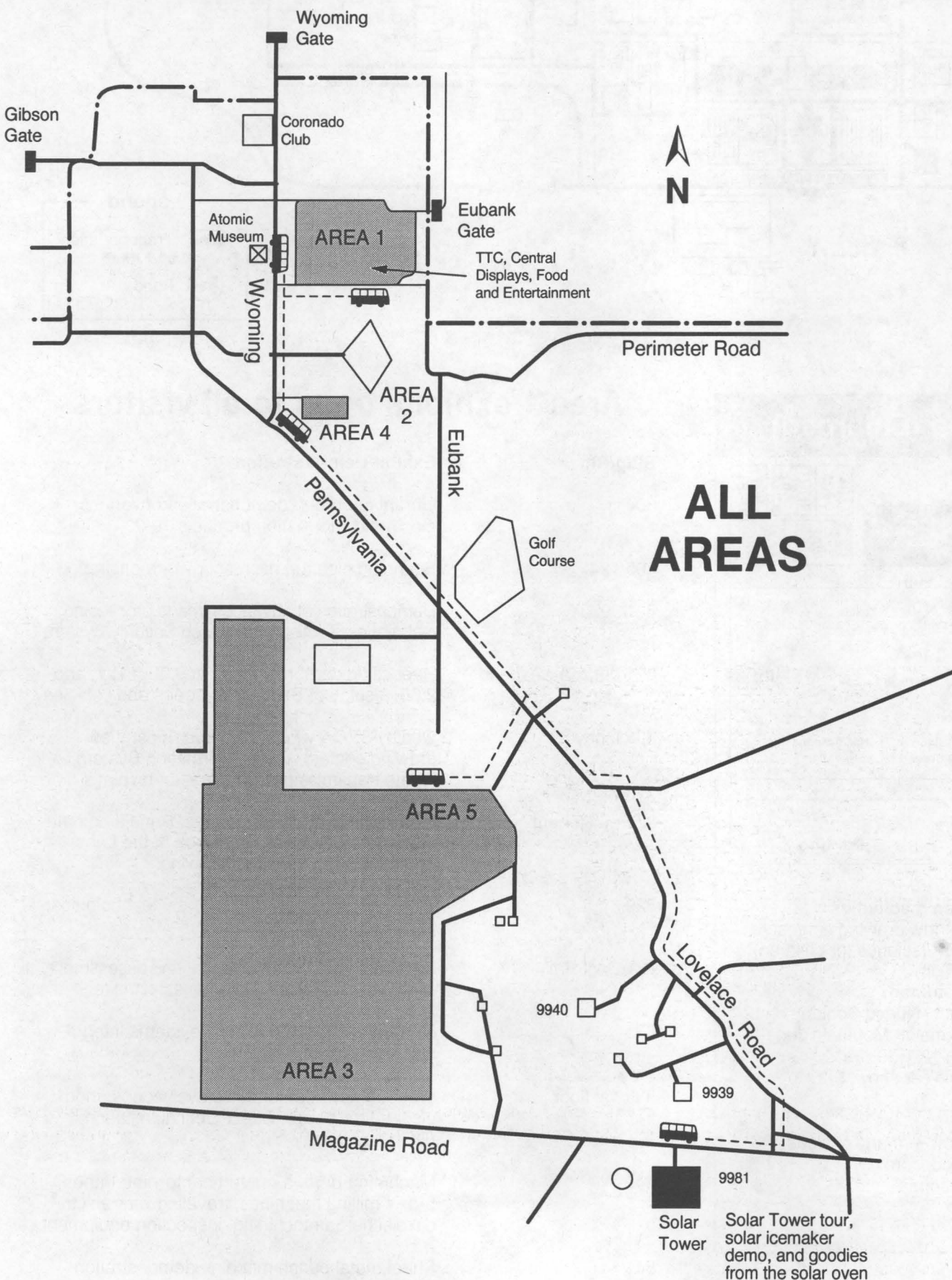
The Wyoming and Gibson gates to Kirtland AFB will be open as usual, and the Eubank Gate will be opened especially for Sandia Day 8 a.m.-5 p.m.

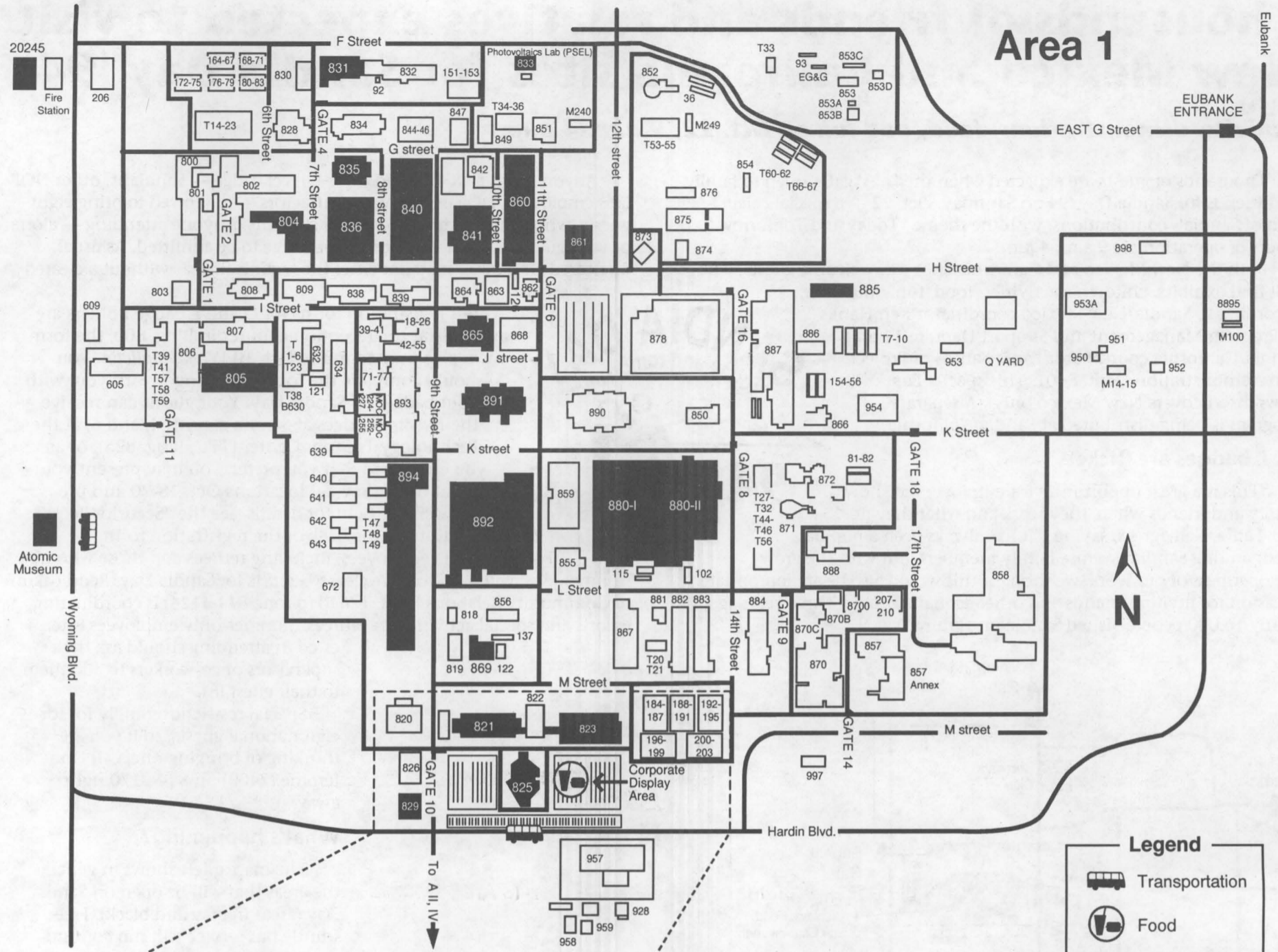
Drawings from the "Kids' View" contest, a popular feature of past Family Days, will be exhibited in the Corporate Display Area near the Technology Transfer Center (Bldg. 825) south of Tech Area 1 (see map on page B). Children entered their drawings with descriptions of what their parents, grandparents, or aunts/uncles do at work (see a few of the drawings on page D).

The car show, open to all retirees and Sandia and DOE employees, features restored and custom vehicles, motorcycles, street rods, and other varieties of automobiles, also displayed in the Corporate Display Area.

While employees' guests are enjoying exhibits and demonstrations, Labs President Al Narath will host a tour of the New Mexico site for a special group of invited guests that will include civic, business, academic, and political leaders, and California Programs VP John Crawford (8000) will host a similar group at the California site.

If you have general questions about Sandia Day, call Ken Hanks on 845-9370. If you have questions about guest registration, call Melanie Florez (7437-1) on 844-3668.





Corporate Display Area (Enlarged)

Displays and demonstrations

- Technology transfer, partnerships with industry
- New technologies for the future
- Martin Marietta Corporation
- Environment, Safety, and Health programs
- Personnel services
- Community involvement
- Education programs
- Computer games
- Special fun displays and activities

Special retiree area

- Historical display

Children's activities

- Kids' View drawing contest
- Explora (science for children)

Entertainment

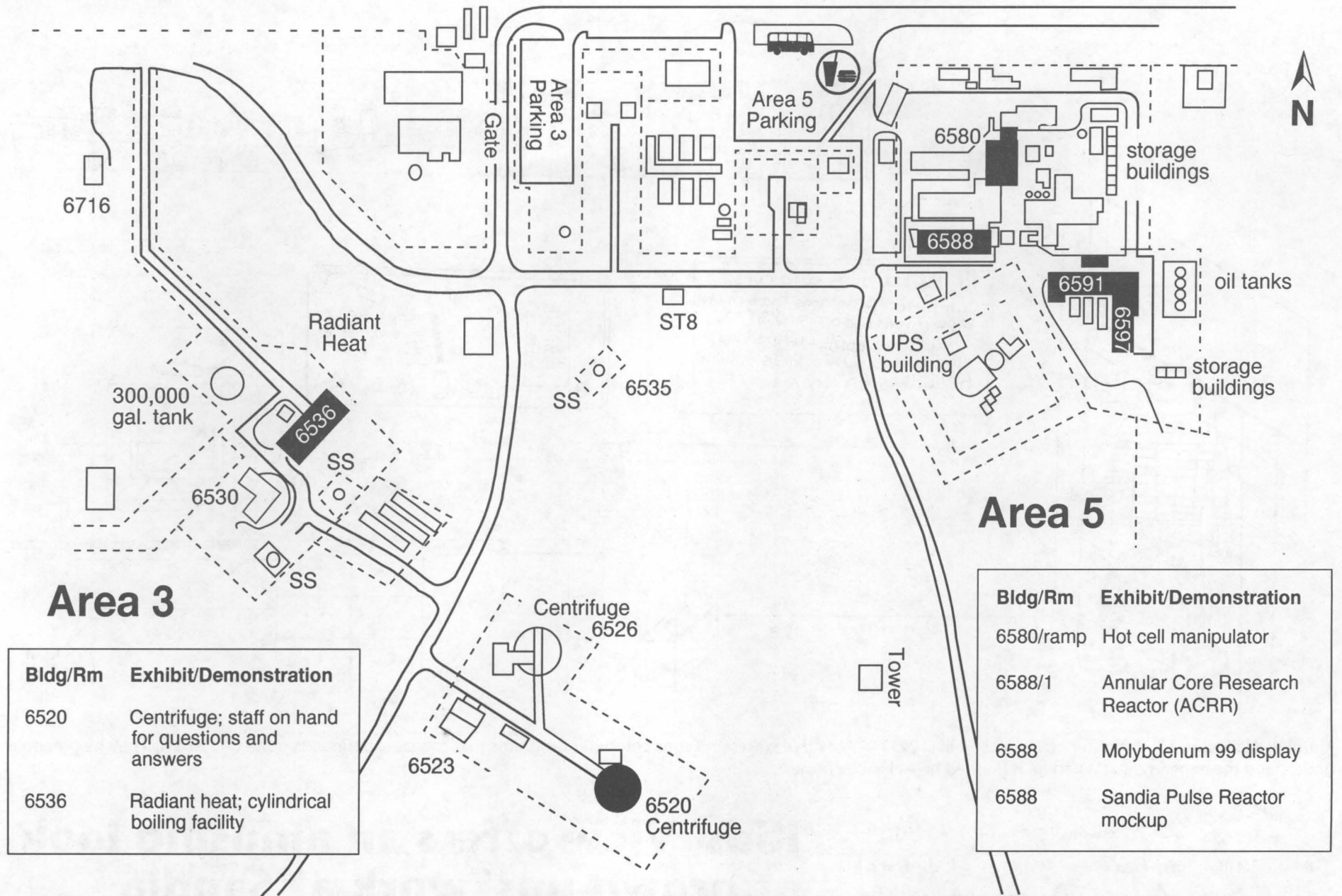
- Mariachi Nuevo Sonido, 11-12
- Watermelon Mountain Jug Band, 12-1:30
- Classic car show, 9-2

Food

- Marriott — many choices
- Free popcorn
- Snowcones

Area 1 exhibits open to all visitors

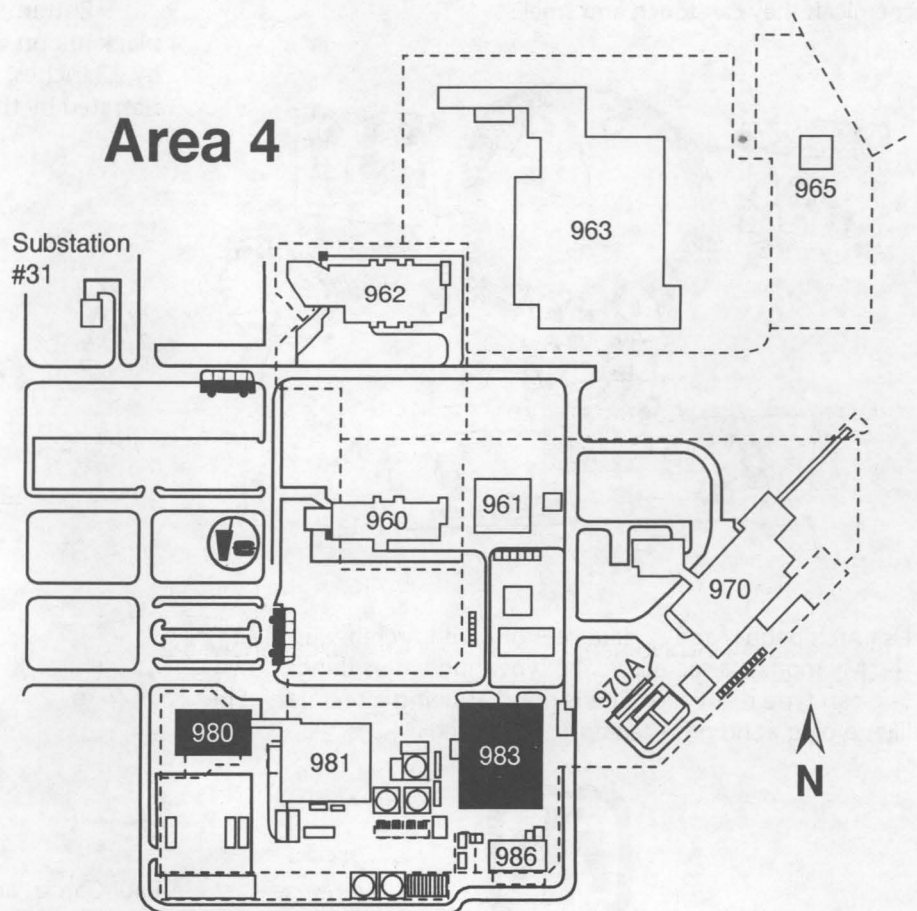
Bldg/Rm	Exhibit/Demonstration
804	Library open 9-4; demonstration of various electronic information products 10-2
805/124	Scanning electron microscopy demonstration
821/3025	Demonstration of advanced image processing techniques; Tactical Automated Security System
821/outside west end	Rappelling demonstrations at 9:30, 11, 1, and 2:30; display of Security weapons and vehicles
825/lobby	Quality/SPQA winner displays, Kids' View drawing contest, Voice Information System, image transmission demo, sector displays
825/auditorium	Film Fest, Sandia in the News, Sandia community involvement, historical look at the Labs, and more — continuous showing
829	Telephone building; old and new technologies; tour of building
831/Conf Rm	Body fat testing; safety, health, and assessment, computer analysis based on questionnaire
835	Network multimedia exhibit; systems integration test bed
836/1st floor	Weapon development displays; videos, models, and hardware; Direct Optical Initiation (DOI) technology
840	Machining demos on vertical turning lathes, 5-axis milling machines, traveling wire electrical discharge machining, inspection equipment
841	Sheet metal punch machine demonstration

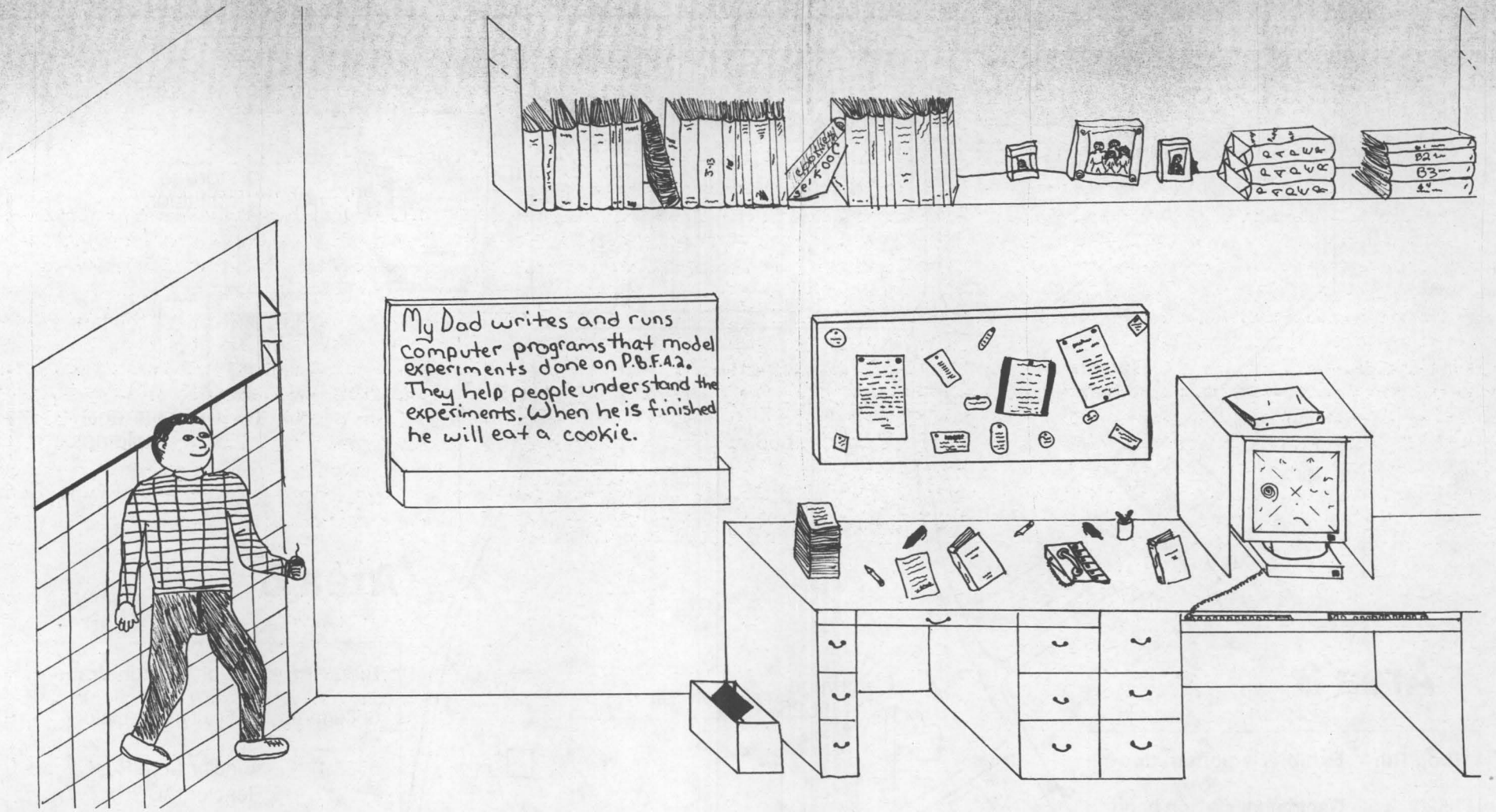


A shuttle bus will run from the Area 5 bus stop to Area 3 exhibits

Bldg/Rm	Exhibit/Demonstration
860/205	Engineering Integration Lab (no handicap access)
860/212	Development Testing Center (no handicap access)
865/3	Standoff bomb model
865/7	Round Airbag in Rapid Inflation Facility (RIF) wind tunnel model
865/8	Force and moment balance calibration demonstration; video of Experimental Aerodynamics Facility
869/pkg lot W. of bldg	Hazardous material demonstration; equipment displays and confined space demonstrations
880	Central Computing Facility tour; Cray computers and Paragon, the world's fastest parallel processor
885/outside security area	Facilities Operation and Maintenance Center; review of 6.5-day training program for High Performance Teams; kids converse with "talking computer" and receive honorary certificate
891/1031	Electronic subsystems; Surety Components and Instrumentation; medical sensors/detectors; instrumentation in harsh environments; Smart Gun Technology Project (demo 12-4 only)
891/S. pkg lot	Electric vehicle display
894/145	Bomb chutes from B61, B83, B90 programs; airbags from Martian Lander; computer simulations of textlite structures; videos of Area 3 canyon drop tests
894/N. hallway	History project exhibit
20245/highbay	Robot tic-tac-toe
Atomic Museum	Grand reopening

Bldg/Rm	Exhibit/Demonstration
980/95	Massively Parallel Computing Research Laboratory tour; demonstration on Mosaic over the Internet; workstation demonstration of the World Wide Web
983	Particle Beam Fusion Accelerator II tour, every 20-30 minutes





Kimberly Haill, age 12, daughter of Thomas Haill (1271) — "My dad writes and runs computer programs that model experiments done on PBFA II. They help people understand the experiments. When he is finished he will eat a cookie."

my mom is a toxicologist. she reads books and tells people what chemicals they can touch and smell.



Aja Roberts, age 8, daughter of Linda Stiles (7712) — "My mom is a toxicologist. She reads books and tells people what chemicals they can touch and smell."

Kids' View offers an amusing look at grown-ups' work at Sandia

Sandians' children, grandchildren, nieces, and nephews who entered the "Kids' View '94" competition were asked to draw what their parent, grandparent, aunt, or uncle does at Sandia. Here are some of the drawings, presenting entertaining views of that work.

The first-place winner — not selected at press time — in each age group at each site was to receive a \$100 savings bond, and the second-place winner a \$50 bond. Age groups were eight and under, 9-13, and 14-18.

Entries will be displayed at both sites on Sandia Day, Saturday, Oct. 22, and special recognition ceremonies are planned for the young artists on Sandia Day.

Entrants had to present drawings in black ink on white paper no larger than 17 by 22 inches. A short paragraph — written or narrated by the child — describing the work

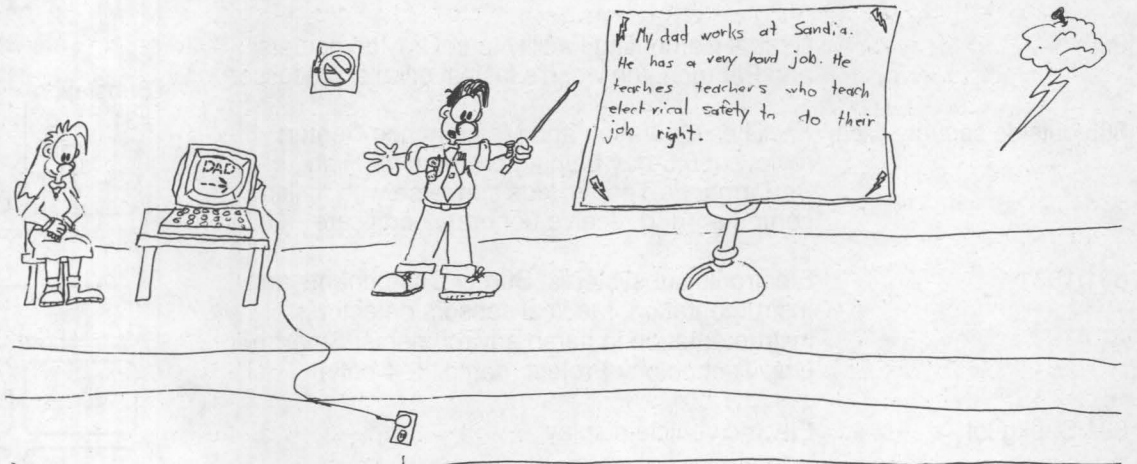
done by the Sandian accompanied each entry or was included as part of the drawing.



Molly Lappin, age 5, daughter of Al Lappin (6307) — "My dad works on a computer. He goes to meetings. He writes papers. He does rock stuff and goes out of town."



Lisa Archibeque, age 8, daughter of Karen Archibeque (1434) — "My mom is a secretary. She types and writes things down. She can type really fast! She is good at being a secretary. She likes typing at home. The end."



Raúl Garcia, age 12, son of Ricardo Garcia (3524) — "My dad teaches teachers to teach electrical safety for different kinds of jobs."



Sandia's contributions to Galileo spacecraft honored by NASA

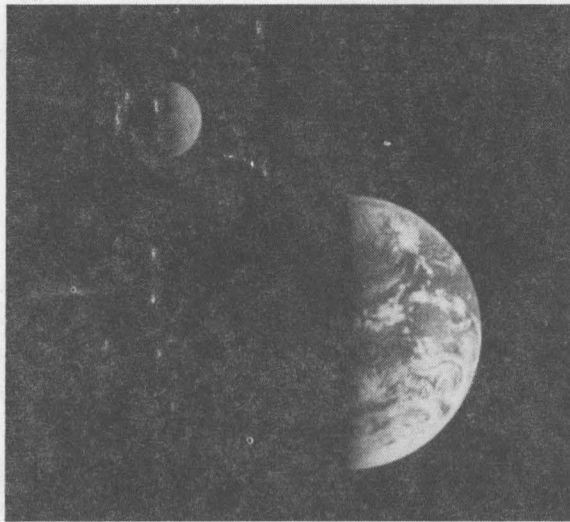
The Galileo spacecraft is still 14 months from Jupiter, but Sandia's contributions to the mission were recognized by the National Aeronautics and Space Administration in a special ceremony recently in Bldg. 858. Sandia was presented the NASA Public Service Group Achievement Award, recognizing its Galileo Single Event Upset Hard Parts Design and Development.

Single event upset is a temporary memory loss in a computer chip struck by a charged particle. The Galileo mission is especially vulnerable to this hazard because of the presence of high-energy oxygen and sulfur particles around Jupiter. Sandia supplied more than 2,000 radiation-hardened chips to the Jet Propulsion Laboratory (JPL) to help overcome this problem. The specific citation praises Sandia "for the successful development in record time of a CMOS (complementary-metal-oxide-semiconductor) replacement coprocessor and peripherals for the Galileo Attitude and Articulation Control Subsystem, thus enabling the successful mission of the spacecraft on its demanding flight to explore the Jovian system."

JPL Galileo Mission Director Neal Ausman, Jr., presented the award to Sandia President Al Narath, who accepted on behalf of all Sandians who worked on the project. Ray Bair, Director, Electronic Components Center 2200, hosted the Sept. 19 ceremony. Ausman said the Sandia components are "working flawlessly."

On 74-month, multiplanet flight

The Galileo spacecraft was launched by the space shuttle *Atlantis* Oct. 19, 1989, after a three-year delay caused by the space shuttle *Challenger* disaster. Instead of the originally planned 30-month flight to Jupiter, the delay required a complex 74-month trajectory that has involved two flybys of Earth and one of Venus (for gravitational assist). In the course of its extended flight, Galileo has already taken close-up images of two asteroids (Gaspra and Ida) and discovered a satellite in orbit about the latter. From its unique van-



GALILEO'S VIEW — Image of Moon (in foreground) and Earth taken by Galileo spacecraft Dec. 16, 1992, looking back six days after Galileo's second encounter with Earth, part of a complex 74-month trajectory to reach Jupiter in December 1995.

tage point in space, it also photographed this summer's collision into Jupiter of Comet Shoemaker-Levy.

The big day for all the scientists and engineers involved with the mission is Dec. 7, 1995. That's when Galileo will pass close to the Jupiter moon Io, recover the data from a probe released into Jupiter's atmosphere, and go into orbit about Jupiter (becoming the first spacecraft to do so). Galileo is to remain in orbit around Jupiter for 23 months, monitoring its atmosphere and magnetosphere and photographing it and its moons at unprecedented resolution.

Ausman says all efforts to unfurl the spacecraft's stuck high-gain antenna continue to be unsuccessful, but JPL engineers are improving communications through the low-gain antenna by redoing all onboard flight software, carrying out a variety of data-compression techniques, and increasing the sensitivity of ground antennas that should allow 70 percent of mission objectives to be accomplished. —Ken Frazier

Chevron exec says reengineering mostly impersonated, 'like Elvis'

Although 70 percent of major US companies claim they are reengineering themselves, only about 25 percent are actually "doing process reengineering."

That's according to Jim Yochim, Manager of Chevron Chemical's multimillion-dollar Core Systems Integration Project, who spoke to nearly 200 Sandians in the Technology Transfer Center Oct. 4.

"Reengineering is like Elvis — spotted everywhere but mostly impersonated," he said. But impersonators can be spotted easily, he said.

If a company doesn't have clearly defined drivers and business objectives for process reengineering, as well as a broad license for change, it's not "doing reengineering," he said.

Drivers, or business reasons, for change can include competitive pressures or excessive costs or turn-around time. Objectives include measurable cost, time, or quality goals that can be compared to a baseline, or starting point.

And to be truly reengineering itself, a company must be examining its policies and processes from a broad, "cross-functional" perspective that considers the cumulative effects

and benefits of each process or policy on the customer or product.

Yochim differentiated process reengineering from Total Quality Management, saying TQM involves making continuous improvements to individual processes. Reengineering, on the other hand, is a breakthrough approach that requires a company to look at each process in its entirety and ask, "Is this process important anymore?"

He said improvements of 30 to 50 percent in cost, time, and quality are possible as the result of a successful reengineering effort. The major cost savings come from changes to policies, especially those having to do with delegation of authority.

But is it an oxymoron to reengineer a federally funded entity such as Sandia, where competitiveness is not the primary concern?

Yochim says "no." Reengineering can, and should, address those issues that are most important to an organization. At Sandia, cycle-time reductions and, more important, customer satisfaction may be the primary targets of reengineering. —John German

Gray Matters

In each *Lab News* issue, Ethics Center 12700 provides a mini-case from the game *Gray Matters* that poses an ethics question, along with feedback on how we in the Labs answered the previous issue's case and how our answers compare with the answer that is given in *Gray Matters*.

The last question was: "You have been directed by your supervisor not to show lost time on your timecard. What do you do?" Eighty-seven percent of the respondents said the correct answer was, "Discuss the directive with your supervisor, calling his or her attention to company policy."

That was the most correct answer, according to *Gray Matters*.

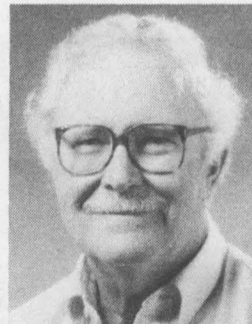
Test your ethics

Management of the XYZ Company is always impressed by employees who go in and work on Saturdays. This weekend you have a dilemma: If you work Saturday and Sunday, you can complete a project two days early. Or, you could take your family to the beach. What do you do?

1. Take the family to the beach for two days.
2. Work, knowing the family will understand.
3. Work, letting your spouse take the kids to the beach.
4. Work one day, go to the beach the other day.

To register your answer and/or leave a comment, call the Ethics Answer Line on 844-3225 and follow the instructions.

Recent Retirees



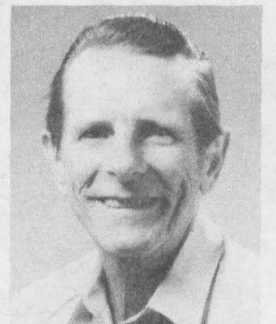
Jim Leonard 38
12611



Clarence Washington 30
9211



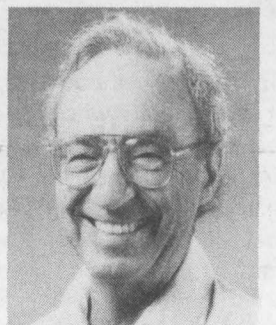
Stan Booker 36
1742



Robert Everett 18
2251



Miller Cravens 37
5123



Calvin Rogers 38
9432

Feedback

Paperwork morass 'absurd'

Q: I recently had to have a safe moved, so I filled out a move order (MO), drove to the remote site where the safe was located, and taped the MO to it. Then I called the transportation dispatchers to arrange the move. They informed me that "a safe is considered furniture and we can't move it; call your Facilities Customer Representative (FCR)." So I called the FCR and started to read off the MO information only to be told "we don't use move orders; you'll have to fill out a Facilities Service Request."

They faxed me a copy of the service request, I filled it out and faxed it back. Two days later I got a call from the FCR informing me that I'm not authorized to sign the service request. This is absurd.

I've been here 14 years and I can't get a safe moved!? There should be one phone number and one form to get things moved. I don't care which union does the work, all I want is to get the work done in a timely, efficient manner. One phone call and they divvy up the work as appropriate. As for authorization, if I need to get additional approvals for something this trivial, then Sandia will never survive. So much for empowerment.

A: I can appreciate your frustration. There are a number of players in such issues, and therein lies the problem. The reason for establishing the Facilities Customer Representative (FCR) concept was to provide organizations with a single point of contact to get these kinds of issues handled without this kind of aggravation. The process is not working, and we suspect one fundamental reason is that the system is based on organizational needs — rather than broader, site-wide needs — that must be coordinated and integrated. This results in a couple of situations.

First, we may solve problems for one organi-

zation, but create problems for another, or duplicate efforts. We also may create a situation where the service providers are stressed as they try to follow the rules knowing that the rules are irritating their customers. Perhaps that results in the "you-gotta-have-the-right-form" reaction.

In any case, no one wants the kind of situation described above. This center (and the rest of Division 7000) is dedicated to improving the process. We are devoting much time and energy creating and implementing a different ownership structure based on some tried and true principles of site management. Other organizations, in and out of Division 7000, are involved and assisting in that effort, and I am optimistic we will solve the kinds of problems you encountered.

J.D. Martin (7300)

Outside areas need cleanup

Q: Why can't Sandia do a better job of keeping our outside areas looking decent? It seems that the so-called "clean and green" campaign launched some months ago is not getting the job done. Our outdoor areas in Tech Area 1 are disgraceful — cigarette butts and trash all over the place, and they stay there for months, literally for months. The only greenery around my area is the weeds that are growing out of the walks and pavement. And please don't tell me we can't afford to clean this place up.

Cleaning up this place on a regular basis might just do something to improve the morale of employees. How about it?

A: More Sandians should display such interest. In fact, that is the thrust behind the "clean and green" project — each Sandian doing his or her part to keep our workplace clean.

On any given day, approximately 10,000 people — Sandians, contractors, and visitors — pass through the Labs' gates. Imagine the difference in the way the Labs areas would look if 10,000 passers-by would do their part. Support Services Team 7813-4 is primarily responsible for keeping the Labs clean and green. This team consists of 19 employees, down from 32 just a few years ago. There is one team supervisor, one planner, four lead men, four gardeners, six vehicle operator helpers, and three heavy laborer helpers.

One lead man operates the dumpster truck and collects trash from 225 dumpsters every week. Trash is picked up from all tech areas, including Areas 3, 5, and the Coyote Canyon section. This particular procedure has temporarily ceased as of Aug. 1, 1994, and

has been contracted out.

One lead man and one vehicle operator helper move furniture for Sandia employees each day. During the past year, more than 800 move jobs were completed. That averages out to be over 65 moves per month.

One lead man and one vehicle operator work on the excavation crew, which is responsible for repairing roads, fences, and parking lots, and installing guard posts, to name only a few tasks. They also maintain over 25,000 linear feet of storm sewer arroyos.

Two vehicle operators collect more than three tons of cardboard per week and process it for recycling each day.

One lead man, four gardeners, two vehicle operators, and two heavy laborer helpers maintain more than 2,100 trees, 10,000 shrubs, 1,400 bulbs, and 35,000 square feet of sod. These tasks are performed daily — in Tech Areas 1, 2, and 4, and the Org. 6000 Igloo Area — on 1,252 acres of land, roads, and parking lots. A separate crew for remote areas reports to Department 7818. That's more than 233 trees, 1,111 shrubs, 155 bulbs, 3,888 square feet of sod — on 139 acres — for each person to maintain.

In addition, there are dozens of miscellaneous jobs, such as snow removal, helping Sandians with set-up and clean-up of special events (Earth Day, Fitness Day, Family Day, etc.), preparing for dignitary visits, and supporting Department 7813's craftsmen makes for a full workload.

Concerning the weeds in your area, unfortunately, sometimes some of the areas are missed, and weeds do grow. Also, weeds grow at an accelerated rate when the summer rains come. This year there was an exceptional amount of rain and under those circumstances, it is very difficult to keep the weeds completely under control.

Support Services Team 7813-4 would appreciate the help and support of 10,000 passers-by. If there is a particular area of concern, please call the Maintenance Service Desk on 844-4571 to initiate a Maintenance Service Request to have that area receive additional attention.

Lonnie Trujillo (7813-4)

Calling-card fraud

Q: There appears to be increasing concern regarding calling card fraud (using someone's calling card number without permission). I have a Sandia calling card, but I never see the statement from the phone company. I have no way of knowing whether someone else is charging calls to my card. I suspect no one at Sandia, other than myself, could tell. Is it possible to obtain copies of statements on a periodic basis so we can check the use of the card?

A: We have issued cautions to people both about the custody and the use of the Sandia calling cards. The most serious threat to abuse is the loss of a card. Next is the theft of the number. The telephone system infrastructure contains monitoring and response elements for significant abuse practices.

We recently reissued the cards to move from commercial to Federal cards. The Federal Telephone Service contract provides very low rates; our corporate monthly credit card bill is averaging \$2,000. The low rates are accomplished, in part, by less paperwork in the system, and that includes delivering regular individual billing information. We are attempting to obtain an acceptable method of monitoring for "minor" call misuse in this new environment, but we are not yet satisfied with the options. If you have a specific concern, please contact us on 845-8509.

Bob Dougherty (13902)

Favorite Old Photo



This is my childhood hero, who was also my grandfather, Michael Abbin. He was an Irish immigrant who came to the US for a better life, leaving the potato famine behind. After arriving in the US in 1892, he enlisted in the US Navy as a machinist's mate and served in the Spanish-American War. Later he graduated from the New York Police Department Academy, in 1913, and served as a horse patrolman in Central Park and pounded a beat in Brooklyn, where he practiced "community policing" in the neighborhoods, as he's doing here. (Note that one of the local dogs has a firm grip on his pant leg.) He and my grandmother, Rose, moved to New Mexico in the 1920s for her health, and Mike went to work for the Santa Fe Railroad as a machinist, retiring in the mid 1940s. Some of him rubbed off on me: I am serving as a reserve officer in the Albuquerque Police Department.

Joe Abbin (5093)

Labs' HR services need to be more user friendly

Red Team diagnosis a 'reality check'

Simple fixes won't do. Sandia needs to completely redesign many of its human resources (HR) services.

That's the diagnosis delivered by members of a "Red Team" that recently compared Labs HR processes with HR programs in the commercial sector. Although the Red Team said the quality of Sandia's Benefits program, Medical delivery process, Total Life Concept program, and developing Diversity program was outstanding, many other HR processes need serious attention.

"Based on what they saw, a Band-Aid approach won't work," says Shirley Wallace (10605), project manager for the assessment. "We need to do a clean-slate redesign of many of our HR policies and services."

The Red Team — comprising 16 business-people representing such companies as Battelle, Honeywell, IBM, Westinghouse, and Xerox — spent a week at Sandia Aug. 15-19 evaluating the Labs' current HR services and gathering information necessary to recommend changes based on customer needs, commercial business practices, and making HR-related job tasks easier (*Lab News*, Sept. 2).

Sponsored by Human Resources VP Charlie Emery (3000) and Sandia's Human Resources Laboratory Process Reengineering (HR LPR) Team, the assessment was a preliminary, diagnostic step in reengineering Sandia's HR processes. Red Team members spent hours listening to presentations by HR managers, interviewing employees and other HR customers, and discussing individual processes with Sandia's HR specialists.

The assessment included all Labs HR processes, including staffing, employee assistance, health promotion, training, labor relations, performance appraisal and management, and compensation.

A painful diagnosis

The Red Team's analysis pointed to three fundamental flaws with Sandia's current HR practices. First, *"the architecture and cost of the Sandia HR program is fundamentally inconsistent with commercial business practice. Minor fixes won't do."*

What that means, says Shirley, is that Sandia's approach to providing human resources services has been fragmented and inefficient in the past. An entirely new approach is needed.

Second, *"substantial, interwoven institutional and program barriers are in the path to an HR breakthrough."* The report emphasized a lack of meaningful incentives at Sandia to make improvements in HR practices, as well as a lack of unifying leadership by senior management to drive changes.

The report also said department-level managers aren't rewarded for sound HR practices and therefore don't feel responsible or accountable for their HR-related decisions. "Many managers see the HR organizations as keepers of the HR policies," says Julian Sanchez (3010), the Sandia human resources representative on the assessment team. "The result is a perception among line managers that HR is not their job."

And third, *"DOE oversight and requirements do not appear to be driving or limiting HR improvements. Major HR barriers are self-imposed."* While DOE and other regulatory bodies do impose some limitations on Sandia's HR practices and policies, says Shirley, far too many barriers are created internally. "According to the Red Team, it's primarily the self-imposed barriers that are limiting how we make improvements," she says.

Shirley says hearing the rather critical diag-

nosis of Sandia's HR services was painful and provided a "reality check" to Sandia's HR staff. "Most of what they were telling us about ourselves we already knew," she says. "But it helped to have them look at our practices from a business perspective and suggest improvements."

According to the report, three fundamental changes in how Sandia provides HR services could improve matters significantly. The most important of these is to change Sandia's approach to serving its "customers," Sandia managers making HR-related decisions based on organizational needs.

In other words, Sandia's HR program needs to get more user friendly. "We need to move from being the policy police to being true partners with the line in HR decision-making processes," says Julian.

Introducing customer service agents

As the result of the Red Team recommendations, HR "customer service agents" will be introduced to serve as resident consultants within each Labs division. These agents will work with managers in their "home divisions" to make sound HR-related business decisions. Each agent will be supported by a small staff of HR specialists.

The focus of the customer service agents — who are Sandia managers with broad knowledge and experience in HR-related policies and practices — will be to help organizations find the best ways to achieve their desired outcomes, not fulfill specific HR transaction requests. They should also be able to answer most HR-related questions "on the spot," says Shirley.

Julian says the customer service agents will be involved primarily in high-level strategizing — anticipating staffing needs, establishing new organizations based on work needs, optimizing job placement, etc.

Charlie Emery says introducing the customer service agents is a major philosophical shift from Sandia's past approach to providing HR services. "HR needs to get closer to the customers in the line organizations so we can meet their needs," he says.

This January B.J. Jones, Manager of Health Planning and Administration Dept. 3543, and Julian will become Sandia's first two HR customer service agents as a pilot project. Julian will serve in Component Development and Engineering Support Div. 2000, and B.J. will join Energy and Environment Div. 6000. Until then, the two will be working with a team of Sandians defining the roles and responsibilities of the HR customer service agents, including how the current personnel representatives fit into that structure.

Several more HR customer service agents are expected to be added at the completion of the pilot, probably around the beginning of FY96.

"We are pleased that Dan Hartley [VP-6000] and Heinz Schmitt [VP-2000] have agreed to pilot the project in their divisions," says Charlie.

Core and optional services

The Red Team's second recommendation is that the Labs redefine its core policies, products, and services (the basic, minimum set of services that Sandia must provide as required by current laws and regulations and business needs) and



THIS JANUARY Julian Sanchez (left), Manager of Labor Relations Dept. 3010, and B.J. Jones, Manager of Health Planning and Administration Dept. 3543, will become Sandia's first two human resources "customer service agents."

then negotiate optional policies, products, and services that individual Labs divisions can choose to adopt or not adopt.

"We've followed a 'one-size-fits-all' approach in the past," says Julian. "Now we're working to define what mandatory products and services we must provide corporately, and then giving the line organizations the freedom to adopt the services and practices that best meet their business needs." The core/optional approach should allow for more flexibility in how line organizations receive HR services.

Core services might include parts of staffing, benefits, and compensation. Optional services might include employee training, the Upward Feedback Program, or those parts of staffing or compensation that aren't included as core services.

A positive side effect of such flexibility, says Shirley, is that the cost of providing optional services will be more apparent. "Managers will be able to see what those optional services are going to cost Sandia, and that will allow them to make more informed, conscientious decisions about how money is spent," she says.

Redesigning the HR infrastructure

And the third Red Team recommendation is that the Labs should "equip and enable" the divisions to meet their business needs through new, more efficient human resources mechanisms. Shirley says this will be accomplished by redesigning the HR "infrastructure" through which HR customer services are ultimately delivered, and by integrating many HR functions that currently are regarded as separate.

Today, Shirley points out, a Sandia manager often has to make several phone calls — to Personnel, Labor Relations, Compensation, Benefits, Staffing and Training, etc. — to perform the simplest of HR functions. "What our customers typically get when they call is a 'you'll need to call so-and-so down the hall' response," she says. "What they are really looking for is to make one phone call and get the job done."

"The customer shouldn't have to worry about what goes on behind the scenes," she says. "The goal is to provide user-friendly 'one-stop shopping' for managers who need HR products or services."

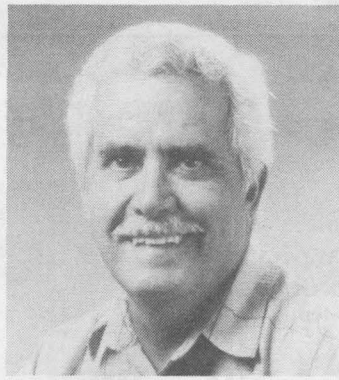
Charlie says the next step is to study the changes recommended by the Red Team and determine which changes make sense for Sandia and add value for the customer. Three working teams have been created to put the HR customer service agent, core/optional products and services, and infrastructure concepts into practice at Sandia. —John German

"We've followed a 'one-size-fits-all' approach."

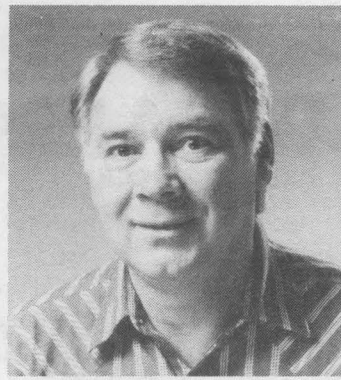
"The result is a perception among line managers that HR is not their job."

Mileposts

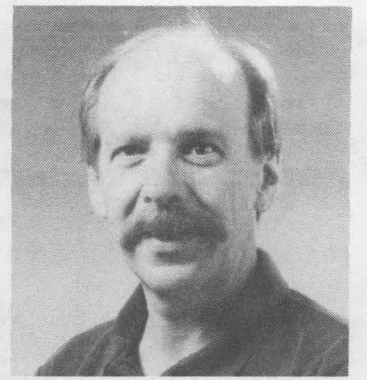
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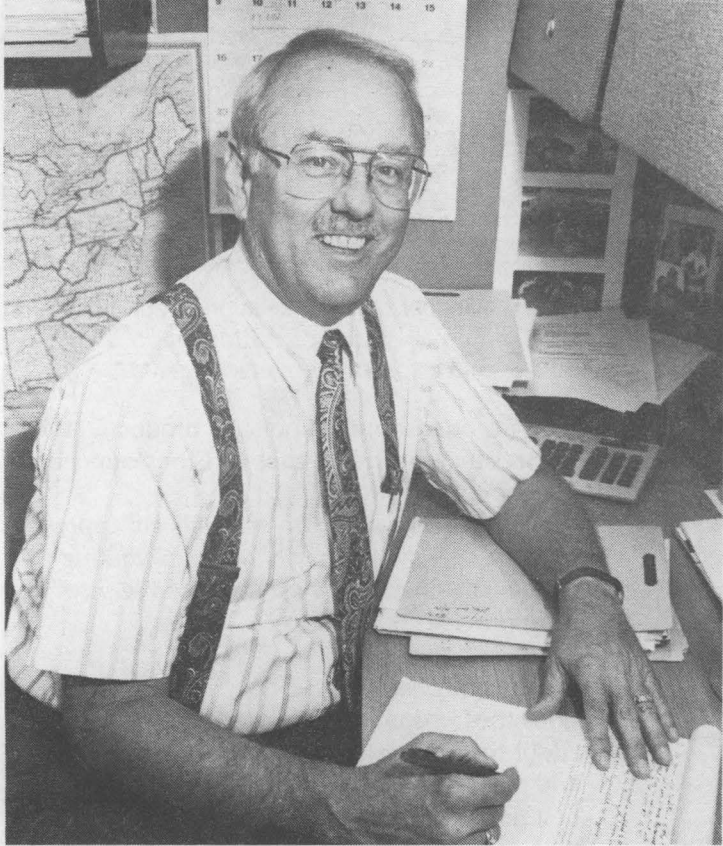
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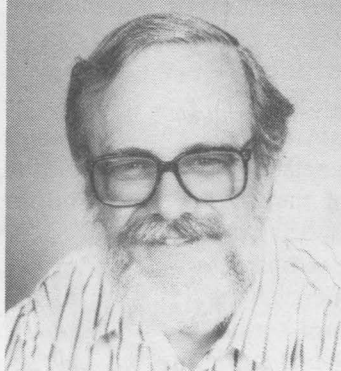
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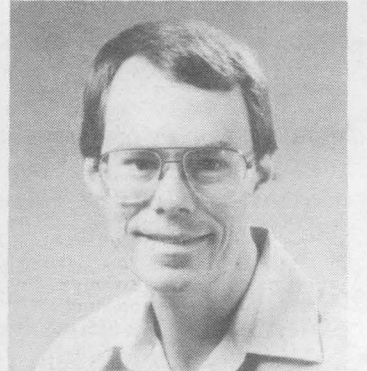
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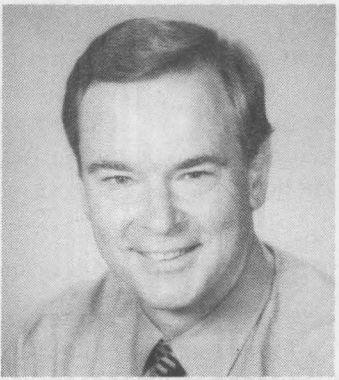
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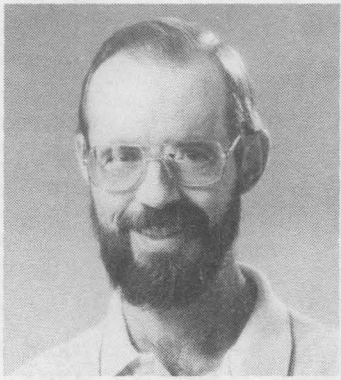
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Steve Hatch 15
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Sheridan Johnston 25
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Joseph Woodworth 20
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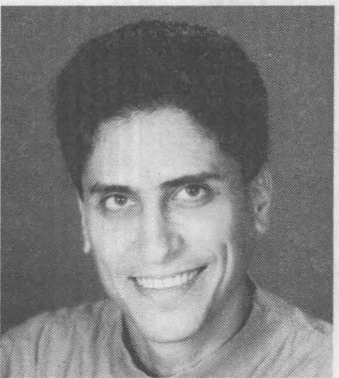
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Marv Loll 30
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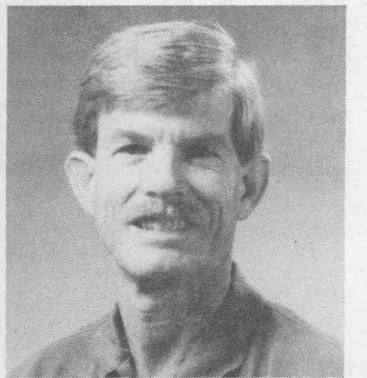
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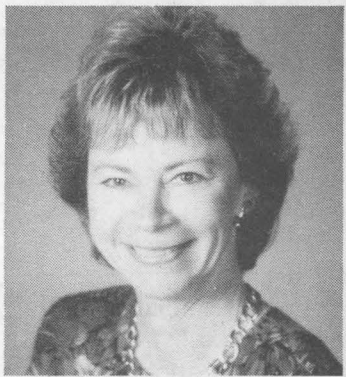
Artie Ortega 15
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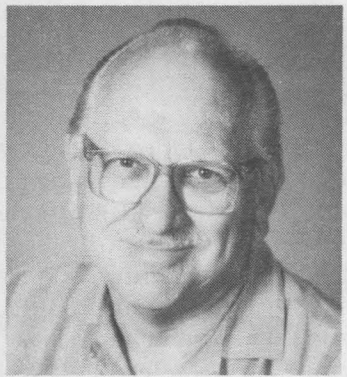
Richard Anderson 20
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Michael Shortencarier 15
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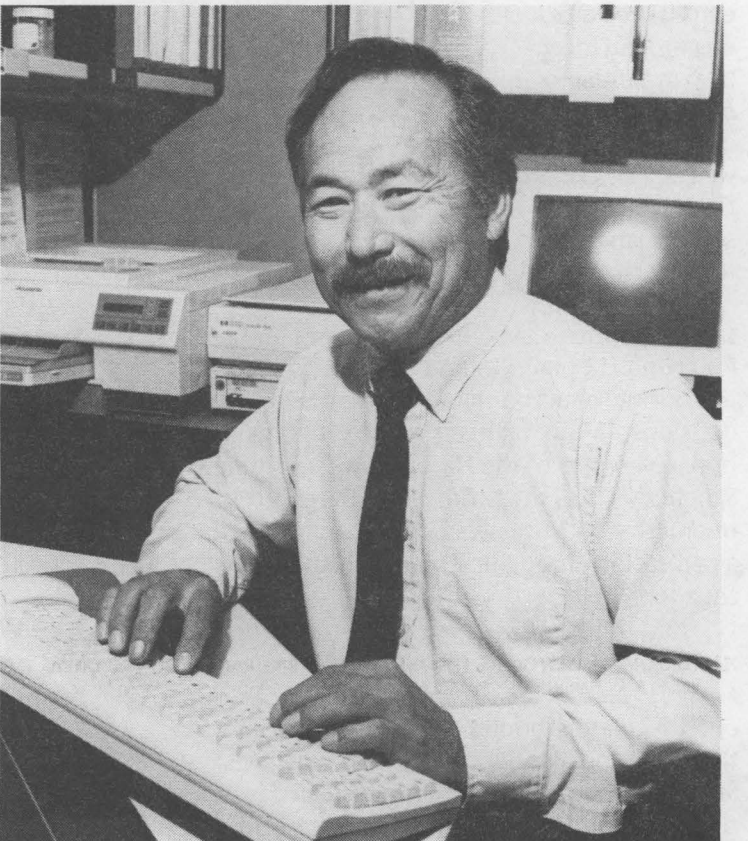
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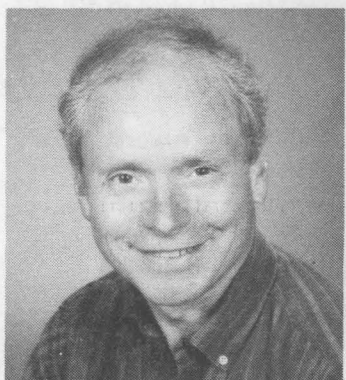
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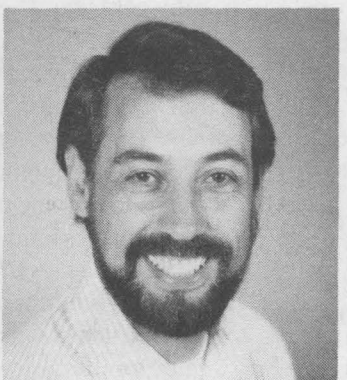
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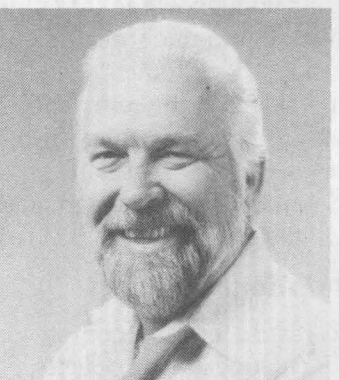
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Ed English 30
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Al Ducharme 25
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George McClaffin 15
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Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads

MISCELLANEOUS

DINING ROOM TABLE and 6 chairs, excellent condition, \$175. Langwell, 293-2728.

PRINTER, Epson 286-NLQ, \$75; Epson FX-100, 9-pin, \$45; cable, \$8. Dietzel, 294-4702.

BLACK CAT, male named Sam, 3 years old, needs new loving home, lovable, affectionate, huggable, and well behaved. Andersen, 294-8624.

RATTAN HALL TREE, \$100; marble rectangular bistro tables, \$95/ea.; antiques: oak pedestal dining set, \$750; walnut dresser. Jennings, 255-5950.

ELECTRONIC TYPEWRITER, IBM Selectric, correcting, w/disk drive system, extra elements, ribbons, and lift-off tapes included, \$160. Smiel, 865-9081.

CHILDREN'S GAMES, in good condition, ages 5 and older, priced from 50¢ to \$8. Drake, 299-1209.

SWING SET: 4-position swing set w/attached clubhouse and jungle gym, \$25. Woodard, 299-4575.

OAK STEREO CABINET, 4 shelves, drawer, 21L x 18D x 49H, \$125; child's easel, w/paint trays, \$25; child's playhouse, 49D x 58L x 61H, \$30. Shrouf, 821-0765.

EPSON MONOCHROME MONITOR, green, excellent condition, model MBM-2095-E, \$50. North, 299-5091.

PATIO BRICKS, approx. 1,000, hard, red, free if you pick up. Ronan, 268-0726.

TROMBONE, Olds brand, in good condition, great for beginner, \$100 OBO. Soltan, 291-8250.

OAK DAY BED, w/trundle, 2 innerspring mattresses, \$225; 18-plus yards of like-new taupe carpet, w/pad, \$150. Wright, 293-9599.

RECORDS: 78-rpm and 33-rpm, classical and 50's and 60's, singles and albums. Stuart, 345-6358.

KENMORE FREEZER, white, upright, 12-cu. ft., excellent condition, \$125. Perrine, 293-1429.

BABY CRIB, Sears router table, \$40/ea. Prior, 281-5532.

DINETTE TABLE, Formica top, 4 chairs, w/leaf, \$65; 2 large, framed couch-size pictures, \$10/ea. Matlack, 256-7371.

GREEN IGUANA, rescued 2-ft. male needs a home, experienced lizard keeper preferred, but will consider knowledgeable prepared novice. Wilson, 821-7953.

CROSS-COUNTRY SKIS, Fischer Glass-SL, 215cm, w/poles, like new, \$75; children's XC Eadsbyn 150, 160cm skis, \$20/ea.; ski shoes, various sizes. Axness, 296-4691.

MOVING BOXES, small, medium, large, and wardrobe sizes, 120 boxes plus packing paper, \$150 OBO. Cherry, 275-2835.

OAK CRIB, strollers, booster seat, toddler swing, all in excellent condition. Surbey, 823-2843.

ANTIQUA BOTTLES from England, some dated back to 1800, 23 bottles in all, \$125. Bronkema, 291-1323.

RESCUE KIT for boaters and pilots, Penguin brand, includes 2 smoke cartridges, 5 aerial flares, and anodized case that floats, \$20. Schkade, 292-5126.

POP-UP CAMPER, '91 Palomino Pinto, sleeps 6, electric water pump, ice-box, converter, awning, roof vent, excellent condition, \$2,800 OBO. DeReu, 275-2336.

WHITE IRON DAYBED, mattress, bedding, \$140; oak spindle twin bed frame, with head/footboards, no mattress, \$25. McDuffie, 292-0459 evenings or 263-5578 days.

K2 SKIS, model TNC 7.3, 200cm long, 1993 model, like new, \$190 OBO. Plummer, 828-3028.

REFLECTOR TELESCOPE, \$250; Ivers and Johnson breach-break .32 revolver, \$100; leather weightlifting belts, \$30/both; stamp collection; 12-gauge pump, \$150. Eikelberg, 296-0899.

STEREO SPEAKERS, JBL 100T, \$500; Marantz receiver w/equalizer, \$100; antique oak desk, 4 drawers, \$125. All OBO. Mitchell, 281-6841.

KING-SIZE MATTRESS and box spring, \$200; Hot Point dishwasher, \$75. Atencio, 899-8373.

BUMPER POOL TABLE, slate, 3' x 5', \$100 OBO. Commodore 64 computer, monitor, printer, extras, \$150 OBO. Greving, 831-6015.

CHILD'S DESK/EASEL/CHAIR, Fisher-Price, \$30; Italian inlaid wood gaming table, \$800; Smith-Corona typewriter, \$35. Klavetter, 299-4299.

IBM-CLONE PC, 8088-based, 10-Mhz, 20MB HD, 14-in. amber monitor, 2400-baud internal modem, Word-Perfect, Quattro-Pro, \$250. Caskey, 298-6428.

CHAIN SAW, Homelite 150, runs well, starter needs work, extra chain & carrying case included, \$50. Woodfin, 281-2702.

MAN'S LARGE-SIZE CLOTHES, 3X, 4X, 5X, mostly winter clothes, great stuff in excellent condition, free, charities welcome. Wood, 823-1965.

COMMODORE COMPUTER, printer, games, \$175; love seat, rowing machine, weight bench, krumcake baker, salad shooter, equalizer, \$25/ea. OBO. Howard, 298-7147.

WOMAN'S PIONEER JACKET, tan leather, w/tuxedo fur trim, size 12, paid \$150, worn twice, \$75. Moll, 836-5673.

GARAGE SALE: Sat. & Sun., waterbed, microwave ovens, Cherokee hitch, Chev. rims, many books, household items, etc. Harstad, 298-6551.

NINTENDO, w/approx. 10 games & game case, like new, \$75; student's desk, good condition, \$20. Anderson, 897-2772.

MOTORCYCLE FORK LOCK, Kryptonite 4, new, \$25. Wright, 296-3850.

CUSTOM VICTORIAN ORNAMENTS. Riley, 869-2119.

WATERBED, king-size, mirrored headboard w/doors, 12-drawer pedestal, heater, good mattress, dark pine finish, \$200. Reber, 898-0076.

FORMAL DINING ROOM TABLE and chairs, \$700; child's bedroom furniture, oak, \$550. Salazar, 281-0560.

PIANO, 1954 Lester mahogany, \$1,900; oak table w/6 chairs, \$400; oak bar stools, \$80; antique office chair, \$120; walnut rocker, \$100. Roybal, 836-5062.

GERRY BOOSTER CAR SEAT, \$25; Carri-Cradle, \$10; boy's clothes; 2 Fisher-Price potty seats, \$5/ea.; playpen (needs work), \$5; receiving blankets, \$1/ea. Caton, 281-9420.

GRACO BABY STROLLER, \$20; infant seat w/covers, \$5. Nelson, 828-2755.

PET RABBIT, w/hutch & travel cage, free. Hosking, 823-9512.

KENMORE MICROWAVE, 1.5 cu. ft., carousel, used 3 months, \$125; antique tiger-maple twin-bed frame, \$50. Raney, 883-8615.

TURNTABLE, needs needle, \$7; headphones, \$3; leather jacket, \$25; canning shelves, \$15; metal garage shelves, \$10; records, \$2.50/ea. Armstrong, 266-2334.

ELECTRIC DRYER, Sears Kenmore Heavy-Duty Plus, 4-cycle, 220V, \$50. Aubert, 296-4173.

REFRIGERATOR w/ice maker, side-by-side, 18 cu. ft., avocado, \$150. Blossom, 299-6709.

SEWING MACHINE, Sears Kenmore Freearm, excellent condition, \$85; metal detector, excellent condition, \$75. Aragon, 888-3473.

TWO INFANT/TODDLER CAR SEATS, Century 2000 STE, well used but good condition, \$25/ea. OBO. Chow, 281-9235.

GE REFRIGERATOR, 23.6 cu. ft., side-by-side, water/ice dispenser, very clean, great condition, delivered within 15 miles, \$600 OBO. Jagdmann, 271-2241.

CROSS-COUNTRY SKIS, Germina Classic, 215cm, w/poles, bindings, size-12 boots, \$100. Mann, 343-0524.

RCA CONSOLE REMOTE COLOR TV, 25-in., good picture, \$65; Sears 17-in. gas Weedwacker, \$20; Ajay triple-action exercycle, \$25. Sublett, 884-4426.

BUNDY FLUTE, w/case, music stand, \$100; orange wing parrot, w/cage, \$650. Babcock, 296-2729, leave message & phone number.

HIDE-A-BED COUCH, neutral colors, in good condition, great for den or student apartment, \$100. Corbet, 856-6161.

MACINTOSH SE COMPUTER, w/Imagewriter II printer, \$600 OBO; in-door tabletop grill, \$10; steamer/deep fryer, new, \$20; moving boxes, free. Sastry, 298-9557.

METAL DESK, \$25 OBO; futon, \$40. Drebing, 299-0083.

PANASONIC BREAD MAKER, model SD-BT6P, 13-hour timer, produces 1-1/2-lb. loaf, used only a dozen times, \$225. Shane, 294-4920.

LEAF BLOWER, \$50; leaf & garden grinder, \$45; both gasoline powered; Prince tennis racquet, 110-sq. in., 4-5/8-in. grip, \$19. Horton, 883-7504.

BUNK BEDS, red metal, twin top, double bottom, excellent condition, 10-year warranty on mattresses, \$350 OBO. McLellan, 292-5597 after 6 p.m.

TWO BIKE RACK MOUNTS, Yakima, 6T, \$75/ea. or \$140/both; Loadwarrior, \$35; all \$160. Weirick, 281-1462.

CHRISTMAS AT DISNEYWORLD, 2 round-trip tickets, Albuquerque/Oro-lando, 1 male, 1 female, depart Dec. 20, return Dec. 29, \$400/ea. value, \$320/ea. OBO. Brooks, 275-0056.

BREAKFAST OR DINING TABLE, nice, glass & wood top, 6 brass cane-back chairs, \$70. Hall, 294-3448.

ORLEY WOODSTOVE, w/fireplace insert, \$250. Kadlec, 299-2034.

Deadline: Friday noon before week of publication unless changed by holiday. Mail to Dept. 12660, MS 0413, or fax to 844-0645.

Ad Rules

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

GARAGE SALE: multi-family, Oct. 14-15, 8 a.m., proceeds to go to AYSO girls' rep team, 4816 Brenda NE, near Osuna/Wyoming. Dotson, 292-0045.

DRUM SET: bass, snare, tom, floor tom, highhat, crash cymbals, \$200; self-cleaning electric range, \$175. Cameron, 266-3250.

ADCOM GFA-565 POWER AMP, GFP-565 pre-amp, ACE-515 line conditioners; Magnum Dynalab Etude tuner; B&W 803 speakers; stands; cables. O'Malley, 271-9269.

GARAGE SALE: microwave, furniture, kids' clothes, etc., Saturday, Oct. 15, 9 a.m., 725 Supper Rock, at far east end of Copper. Reno, 296-6290.

VGA COLOR MONITOR, 14-in., 640x480, \$125. Lanes, 856-7738.

REEL-TO-REEL TAPE DECK, AKAI 747, dbx noise reduction unit, dozen-plus tapes, hardly used, \$250 OBO. Peery, 271-9683.

OAK MICROWAVE CART, drawer and storage area below, glass doors, excellent condition, \$50. Berlage, 271-8305.

WATERBED, king-size, w/bookcase, headboard, heater, padded side rails, regular mattress, \$100 OBO; drafting table, w/parallel bar, \$150. Obrien, 892-2498.

WATERBED, queen-size, Simmons Beautyrest waveless, heavy-duty frame, top-line thermostat, \$75. Martel, 293-1892.

COMPUTER, Commodore 128, Magnavox color monitor, Okidata color printer, \$250; six-drawer pine dresser, \$60. Olbin, 275-2681.

SIERRA WOOD-BURNING STOVE, 1925 antique coal stove, Sears Road Talker 40 CB radio, TV stand, parts/10 speed. Garcia, 343-8207.

NORDICTRACK, cross-country skiing exerciser, \$200. Prevender, 296-8586.

STEREO ENTERTAINMENT CENTER, oak, sliding shelf, drawer, glass doors, \$250; round oak dinette, 4 leather swivel chairs, extra leaf, \$150. Sanchez, 898-9598.

BLACK & WHITE SHELTYE, 4-yr.-old, female, to good home, \$15. Pullen, 291-1555.

486DLC COMPUTER, 40Mhz, 8MB RAM, 256K cache, 212MB hard drive, math co-processor, super VGA monitor & card, mini-tower, fax-modem card, \$1,200. Malone, 821-9051.

DINING TABLE, w/6 chairs, very nice, \$375; Olympic juicer, nearly new, box of filters, \$140. Barton, 268-7349.

TRANSPORTATION

RALEIGH 10-SPD. BIKE, 21-in., brand new tires, \$50. Howard, 298-7147.

'92 ACURA VIGOR, brown w/black leather interior, AC, AT, sunroof, AM/FM cassette, anti-theft, showroom condition, 22K miles, \$23,500 OBO. Gonzales, 884-7909.

'90 TOYOTA CAMRY, V6, 45K miles, loaded, mint condition, dealer offered \$8,500 towards purchase of new car, will sell for \$9,500. Carnes, 344-4128.

'92 CHEV. 1500 PICKUP, V8, loaded, standard transmission, low mileage, sand beige, Travel Time package, \$14,500. Smith, 275-8185.

'72 VW VAN, ready to restore, needs starter, \$700. Gomez, 291-0691.

'76 SAAB 99GL, FWD, 4-cyl., 4-spd., AC, radio/cassette player, fuel-injection problem, won't start, \$550; woman's 3-spd. Huffly bike. Axness, 296-4691.

'92 TOYOTA PICKUP, 5-spd., AC, AM/FM cassette, 20K miles, like new, below book, \$7,900. Padilla, 294-3127.

'79 VOLVO 245 WAGON, 5-spd., safe, reliable transportation, \$1,600. Carson, 294-2230.

'91 SUBARU LEGACY, 4-WD, 4-dr. sedan, 5-spd., AC, AM/FM tape, cruise, PL, PW, 62.5K miles, \$8,950 (\$500 below book). Schkade, 292-5126.

GIRL'S BIKE, 20-in., \$40. Prior, 281-5532.

'76 FIAT 28X, 2-dr., removable hardtop, dependable transportation, \$900. Guinn, 898-9339.

'92 OLDS. TORONADO TROFFEO, excellent condition, low mileage, one owner, diamond-white exterior, real leather interior, loaded, \$19,500. Perez, 828-9005.

'85 CHEV. CONVERSION VAN, AT, PS, PB, PL, cruise, 4 captain's chairs, trailer kg., excellent condition, \$5,200 book, asking \$4,300. Lanes, 856-6237.

'61 AUSTIN-HEALY SPRITE, restored, spare engine & transmission, \$2,500/all, firm. Eikelberg, 296-0899.

'87 TOYOTA MR2, red, AC, cruise, tinted windows, sunroof, 4-cyl., 5-spd., AM/FM cassette, new low profile tires & American Racing alloy wheels w/warranties, 89K miles, \$4,500. Johnson, 271-1382.

'78 FIAT 128, 4-dr., low mileage rebuilt engine, valve job, runs very well, \$800 firm. Brooks, 255-7551.

MAN'S FUJI 10-SPD. BICYCLE, 26-in., \$50. Anderson, 897-2772.

'78 SUZUKI SP370 DIRT BIKE, street-legal, knobby tires, Barnett clutch, Super Trapp exhaust, strong runner, \$500. Souther, 254-9361.

MOUNTAIN BIKES, man's and woman's, brand new, w/thorn-proof tubes, \$225/both. Gonzales, 344-6742, leave message.

'82 YAMAHA MX100, new motor, oil injection, \$400; '81 Yamaha YZ80, new top end, \$400; \$750/pair. Pantuso, 865-1597.

'92 JEEP CHEROKEE LAREDO, 4-WD, AT, PS, PB, AC, AM/FM stereo cassette, alarm, tinted windows, black, 35K miles, \$16,500. Johnson, 822-9160.

'94 CHRYSLER LEBARON, 4-dr., 18.8K miles, all power, tilt, rear window defrost, \$13,500 OBO. Liguori, 256-3613.

'90 VOLKSWAGEN PASSAT GL, 5-spd., AC, gold w/tan, 65K miles, all maintenance & new tires, \$8,900. Dudley, 255-3626.

'79 MERCEDES 300SD, original motor, totally rebuilt, excellent condition, new tires, cream w/bucksin interior, \$5,750. Salazar, 281-0560.

'64 CHEV. 1/2-TON PICKUP, PS, LB, 87K miles, no rust, \$1,800; '81 Honda Goldwing GL1100 motorcycle, stereo cassette, 19K miles, \$1,900. Roybal, 836-5062.

'90 FORD SHO, 4-dr., 5-spd., silver/black, 64K miles, new tires, brakes, & clutch, airbags, FWD, loaded, below NADA, \$9,900. Carroll, 898-9488.

'85 GMC 1/2-TON TRUCK, 105K miles, AT, PW, PL, rebuilt engine, \$4,500. Simon, 293-3204.

'75 PLYMOUTH TRAIL DUSTER, 4x4, 318, trailer hitch, many extras, \$1,500 OBO. Ghorrmley, 831-1991.

'66 CHEV. 1-TON TRUCK, 350 engine, 4-spd., camper shell, runs great, extra parts, \$1,000 OBO. Armstrong, 266-2334.

'84 FORD TEMPO, AT, 4-cyl., 85K miles, white, clean, excellent condition, \$2,200. McBride, 821-6839.

'90 PLYMOUTH GRAND VOYAGER MINIVAN, gray, AM/FM cassette, AT, V6, 3.3-liter engine, rear AC & heater. Caton, 281-9420.

'82 BUICK CENTURY LTD. 4-dr., V6, 87K miles, AM/FM cassette stereo, AC, AT, cruise, white, looks better than age, \$1,600. Xavier, 292-1229.

'87 DODGE RAM 50, white, 2.6L, 5-spd., LWB, AC, PS, PB, tilt, cruise, tinted, AM/FM cassette, shell, records, 29K miles, \$4,950. Sublett, 884-4426.

'84 CHEV. CITATION, 2-dr., \$650. Drebing, 299-0083.

'86 MAZDA RX7, silver, 65K miles, one owner, 5-spd., AC, AM/FM cassette, \$800 below book, \$3,500. Hughes, 296-8940.

'78 DODGE OMNI, 4-dr. hatchback, 57K miles, excellent condition, \$600. Whitham, 266-9313.

'90 TOYOTA CELICA, All-Trac turbo, 4-WD, all options, red w/gray leather interior, 32K miles, \$16,000. Smith, 856-1567.

'66 FORD MUSTANG, V8 289, 98K original miles, new paint/interior, AT, PS, PB, \$5,500 OBO. Flores, 831-2954 or 877-7439.

MOUNTAIN BIKE, Diamondback Arrival, 18-in., aluminum frame, Rock Shock Quaudra suspension fork, Shimano Deare STIX bars, \$375. Weirick, 281-1462.

'88 FORD AEROSTAR VAN, 5-spd., fully loaded, high mileage but excellent condition, \$4,300 OBO; 12-ft. flatbed tilt trailer, \$350. Whitley, 293-2807.

'86 MAZDA 626 LX COUPE, 2-door, PS, PB, PW, PL, sunroof, AM/FM/CD, 86K miles, \$2,700. Kral, 298-6699.

MOUNTAIN BIKE, 18.5-in., Fisher Hoo-Koo-E-Koo, suspension fork, STX, excellent condition, many extras, cost \$750 new in Feb., \$500. Mann, 831-6169.

'78 EL CAMINO, must sell, recently moved to Carlsbad, had to leave it behind, needs some work, \$1,500 OBO. Archuleta, 505-885-1272 or Victor Baca, 823-2980 in Albuquerque.

'90 FORD AEROSTAR, 4x4 van, low mileage, excellent condition, security, hitch, AC, PS, AM/FM cassette, PL, ABS, luggage rack, \$9,500 OBO. Herrera, 856-6188.

'87 FORD HONEY RV, 20-ft., completely loaded, very low mileage, like new. Brooks, 265-8612.

'83 TOYOTA TERCEL, 84K miles, AM/FM cassette, AC, 5-spd., new clutch, excellent condition, \$2,200. Martel, 293-1892.

'85 VIP KONA SKI BOAT, 21-ft., excellent condition, I/O, new covers, \$11,000. Pullen, 291-1555.

'88 NISSAN PATHFINDER, 4x4, PB, PL, PS, PW, AC, AM/FM cassette, good condition, 99,228 miles. Braaten, 858-7058 (voicemail).

'90 ACURA INTEGRA GS, 3-dr., 39K miles, AC, power sunroof, AM/FM cassette, excellent condition, \$12,200. Danneels, 292-1548.

REAL ESTATE

3-BDR. CUSTOM HOME, Sandia Park, 1-3/4 baths, 2-car garage, 2-1/4 acres, long porch w/ mountain view, 1,567 sq. ft., steel roof, \$140,000. Salazar, 281-0560.

TOWNHOUSE, near Ladera Golf Course, 2 master bedrooms, 2-1/4 baths, approx. 1,400 sq. ft., beautiful condition, upgrades, \$98,000. Owens, 836-7802.

3-BDR. HOME, 1,200 sq. ft. home plus shop, mountain views, private wooded lot, immaculate, 1-3/4 baths, Sandia Knolls, \$92,000. Swanson, 281-2735.

3-BDR. HOME, 2 baths, 1,890 sq. ft., end of quiet cul-de-sac, near Paseo del Norte & Wyoming, \$165,000. Jones, 823-1397.

3-BDR. HOME, 1-3/4 baths, double lot, oversize garage, 17-1/2' x 47' covered patio, additional brick patio, parkview, excellent area, \$115,000. Crawford, 881-3812.

3-BDR. HOME, 1,870 sq. ft., 2-car garage, large master, country kitchen, pantry, quiet neighborhood by escarpment, landscaped, solar panels, \$129,900. Williams, 897-1807.

4-PLEX, 1-bdr./1-bath units, \$125,000, \$15,000 down, owner financing, positive cash flow, good tax benefits. Pullen, 291-1555.

WANTED

CAT DOOR INSERT for sliding glass door. Knighten, 293-3997.

GOOD USED CAR for working high-school student, must pass emissions & run, can only afford \$900 or less. Wright, 293-9599.

CARNUEL AREA PROPERTY south of old Highway 66, 1/4-1 acre; covered storage area for boat and RV, secured or uncovered. Pierson, 299-9693.

MICROSCOPE PARTS, optics, and accessories, especially Lietz. Simmons, 281-3590.

PARTNERS for pond liner purchase, wholesale sizes are approx. 30' x 100', only need 30' x 35'. Hertel, 345-1088.

SWAP 21.1-cu.-ft. GE upright freezer (largest top-of-the-line model, new in 1978, working well) for 10-cu.-ft. to 14-cu.-ft. upright in good condition. Leisher, 281-5258.

HOUSEMATE, share 2-bdr. trailer near Osuna and 2nd, large yard, wash-

(Continued on page 12)

Sandia News Briefs

Air Transport Association NDT Forum in Albuquerque Nov. 1-3

This year's Air Transport Association of America NDT Forum will be held Nov. 1-3 in Albuquerque at the Marriott Hotel and at the Aging Aircraft Nondestructive Testing (NDT) Validation Center, operated for the Federal Aviation Administration (FAA) by Sandia. The facility tour on Wednesday afternoon, Nov. 3, will feature a continuous bus shuttle between the hotel, the NDT Validation Center (at Albuquerque International Airport), and the National Atomic Museum. The Validation Center will have operational displays of many new NDT techniques. Forum participants will be able to observe the equipment in action and discuss its operation with vendor representatives. Contact Pat Walter (5226) on 844-5226 (fax, 844-8711) for more information.

Government, industry, national labs, and university reps play prosperity game in D.C.

A global prosperity game played Sept. 7-9 at the Electronics Subcommittee, Electronics Partnership Project in Washington, D.C., pitted companies and governments with and against each other and revealed a high degree of cooperation between government and industry. According to a Sandia announcement, it also revealed encouraging opportunities for electronics manufacturing and for boosting economic competitiveness in electronics through greater cooperation between government and industry. Participants included approximately 60 representatives of government, industry, national research laboratories, and universities. They were divided into four teams — the US, Europe, Japan, and the rest of the world. The game focused on options related to electronics manufacturing. The event was sponsored by Sandia in collaboration with the Naval War College, Lawrence Livermore National Laboratory, the Electronic Industries Association, the Institute for Interconnecting and Packaging Electronic Circuits, and the American Electronics Association — an industry-government partnership. Pace VanDevender, Director of Sandia's National Industrial Alliances Center 4700, developed the model for "Prosperity Games," basically an economic war game, at the suggestion of Lee Buchanan of the Advanced Research Projects Agency, to help address issues originally posed by US Sen. Jeff Bingaman of New Mexico. The Electronics Industries Association and the American Electronics Association separately prototyped the game earlier this year. Prosperity Games explores the interactions among government, industry, national laboratories, and universities to enhance economic competitiveness.

Send potential Sandia News Briefs to Lab News, Dept. 12660, MS 0413, fax 844-0645.

Coronado Club

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

Oct. 16 — Sunday brunch buffet, 10 a.m.-2 p.m. \$6.95 for members, \$7.95 for guests, \$1 for children ages 4-12, free for 3 and under. Tea dance, 1-4 p.m., music by Los Gatos. Reservations recommended.

Oct. 20 — Bingo night. Card sales and buffet, 5:30 p.m., early birds' bingo begins at 6:45 p.m.

Oct. 21 — Friday night dinner/dance. Dinner served 6-9 p.m. T-bone steak (14 oz.) or fried shrimp, \$11.95; all-you-can-eat buffet (ham, beef, turkey, fish), \$6.95. Music by the Isleta Poor-boys, 7-11 p.m.

Oct. 27 — Bingo night and costume contest; cash prizes to the three most popular costumes. Card sales and buffet, 5:30 p.m., early birds' bingo begins at 6:45 p.m.

Oct. 30 (Sunday) — Children's Halloween party, 6-9 p.m. Appearances by Dracula, Frankenstein, witches, and ghosts. Lots of games and activities. Hamburgers, hot dogs, BBQ beef, chicken, pizza, and corn dogs available. Admission is \$1.50, guests \$2.50, moms and dads free.

Take Note

Sandia dietitian Lisa Herzig (3335) will give kids ages 8-14 hands-on kitchen experience with after-school snacks at a "Kitchen Survival Guide" class Saturday, Oct. 29, 10 a.m.-noon, at the Sandia Laboratory Federal Credit Union's Juan Tabo office. Parents are welcome too. The class includes plenty of taste-testing, and the kids can take home a copy of a cookbook they'll produce themselves. For reservations, call Sandia's Total Life Concept program office on 844-8238.

Albuquerque Association for Gifted and Talented Students will hold its 16th conference on Saturday, Oct. 15, at Albuquerque Academy's Simms Auditorium, 8 a.m.-4 p.m. Conference topic is "Understanding Gifted Children from the Inside Out: Social and Emotional Components of Giftedness." This year's featured speaker is James Delisle, professor of education at Kent State University. He is a former class-

room teacher of both gifted and challenged students, an adolescent counselor, and author. The conference is open to the public. For information, contact Connie Molecke on 296-5850.

Retiring and not shown in Lab News photos: Tommy Priddy (6448), 31 years; James Guthrie (1143), 34 years; Herman Stein (1111), 38 years; and Robert Wood (10210), 14 years.

Fun & Games

Clowning — Sandia Clown Club is offering clown classes in 10 sessions beginning at 6 p.m., Tuesday, Oct. 18. Topics covered include makeup, costumes, magic, balloons, character development, and more. Call Cindy Gregory (3030) on 275-3855 for registration information.

Sandia Classified Ads

(Continued from page 11)

- er/dryer, \$300 including utilities. Gonzales, 344-6742, leave message.
- BABY JOGGER STROLLER, reasonably priced & in good condition. Nelson, 828-2755.
- CAMPER, 8- or 8-1/2-ft., for full-sized pickup, slide-in, over-cab, pop-up. Ghormley, 831-1991.
- OLD SINGER HEAD from antique treadle sewing machine, must be Singer, functional or not. Graham, 836-2752.
- WOMEN with little or no knowledge of stock investments, forming lunchtime investment club to meet at Coronado Center. Frye, 294-7357.
- HOUSEMATE, male, nonsmoker, to share home near Copper & Tramway, \$350, 1/2 utilities, deposit. Rose, 889-9681.
- PROPANE TANK, 500 gal. Davis, 384-5376.
- JOGGING STROLLER, good condition, 30-50 pounds. Pullen, 296-0230.

LOST & FOUND

- SOFTBALL BAT, Louisville TPX, 28-oz., 34-in., black, lost Aug. 9 at Airguard Fields coed tournament. Misak/Aragon, 892-3033.
- PRESCRIPTION SUNGLASSES, in brown case, lost somewhere in Tech Area 1 or in parking south of cafeteria on Sept. 16. Rieden, 844-4894.



A QUALITY GUY — Paul Stanford, Vice President for Business Management and Chief Financial Officer 10000, greets Sandians outside Bldg. 800 with reminders about National Quality Month. A variety of activities to mark Quality Month are still ahead, including "Lunch-n-Learn" sessions Oct. 17, Oct. 21, and Nov. 11, and the Sandia President's Quality Awards Ceremony Oct. 20. See the Sept. 30 *Lab News* or call Quality Tools Dept. 12911 for details.