

'Valuing Diversity': New Directions, Approaches

Fact: Of the additional workers entering the US labor force between now and the year 2000, only 15 percent will be nonminority, American-born men; the rest, either nonminority women, minority-group members, or immigrants.

Fact: The current US scientific and engineering work force is eroding because of retirements and declining student interest.

Fact: The educational pipeline — from pre-kindergarten through PhD — is failing to produce qualified workers needed to meet future demand, especially in science and engineering — upon which

US technological, economic, and military leadership depends.

These — and other — sobering realities about the changing face of the US work force now and into the 21st century have caught the attention of companies around the nation, Sandia included.

Dramatic Change in Employment Picture

"If you look at only demographic facts, it's clear that Sandia's employment picture is likely to change dramatically during the next 10 years or so," says

VP Dan Hartley (6000), chairman of Sandia's Affirmative Action Council and a discussion leader in recent management briefings on "Leading a Diverse Work Force" (see "A Strong Commitment").

"There's no question that many more women and minorities will be working at the Labs," Dan continues. "That development can enhance and enrich the way we do business."

"Sandia prides itself on its problem-solving capabilities — capabilities that depend on a wealth of good ideas, creative thinking, new approaches. People of different backgrounds — whether the differences be cultural, gender, whatever — are very likely to come up with fresh ideas, given the opportunity; in some cases, those ideas may fly in the face of convention, but they may also open up brand-new pathways to problem-solving."

"We can't afford to overlook that potential; diversity among employees is a valuable asset. Capitalizing on it, though, means that we have to do a better job of listening [to employees]. We must recognize that people from different backgrounds reflect a variety of value systems and views of appropriate behavior."

Discarding an Established Idea

"If you're going to manage that diversity effectively — and have highly productive, satisfied people in your division or department — you're going to have to discard one of the basic ideas of many former affirmative action plans: All employees are equal; therefore, treat them equally."

"'Equal' does not mean 'the same,'" Dan continues. "What's needed is fair — instead of equal — treatment of employees. That may seem like a

(Continued on Page Six)

Diversity — Making It Work

The increasing diversity of Sandia's work force doesn't mean that the Labs is compromising quality or accepting people any less qualified, says VP Dan Hartley (6000). "We have always sought and hired only highly qualified people, and that will continue," he says.

"In the future, we will be more diverse, but that certainly doesn't mean we will be any less capable. In fact, during the past 10 years, the grade-point averages of newly hired MTS minorities and females have been equal to or better than those of our new-hire Anglo males. This is basic proof that we haven't lowered our standards."

Dan continues, "The Labs will benefit by hiring the best people — no matter what their race, sex, or ethnic background — and by ensuring that they have the opportunity to contribute to the best of their ability and that they are rewarded based on the value of their contributions."

He points out that Sandia isn't starting from scratch in this area. "For years, we have had Affirmative Action and Equal Employment Opportunity programs that have made real strides and brought some very good employees to the Labs. Because we're located in a multi-cultural state, Sandia has long hired a significant number of minorities."

The change, Dan says, is really a new emphasis — turning the knob up a notch — to ensure that we have a work environment that not only allows every employee to contribute fully, but truly encourages them to do so.



DAN HARTLEY (6000): "We must be certain that all employees, regardless of cultural background or gender, have fair opportunities for promotion and fair representation at all levels."



LAB NEWS

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Sun-Speeded Process Destroys Water Contaminants

With more than 200 million tons of water contaminated yearly in the US, and the demand for pure water continuing to increase, Sandia researchers are now combining chemistry and concentrated sunlight to destroy organic contaminants in seconds.

The Sandia experiments are bringing solar-driven detoxification out of the laboratory and into engineering-scale trials. The first tests, which began late last year, used water containing salicylic acid.

That chemical was first because it's easy to measure and behaves much like more-hazardous substances. But it's only a start.

"We believe this process will destroy most

Solvents, PCBs, dioxins, pesticides, munitions chemicals, dyes, and cyanides are among the contaminants that the process could destroy.

organic materials," says project leader Craig Tyner (6216). "Continuing to reduce the reaction time with concentrated solar energy is a key to making it cost-competitive."

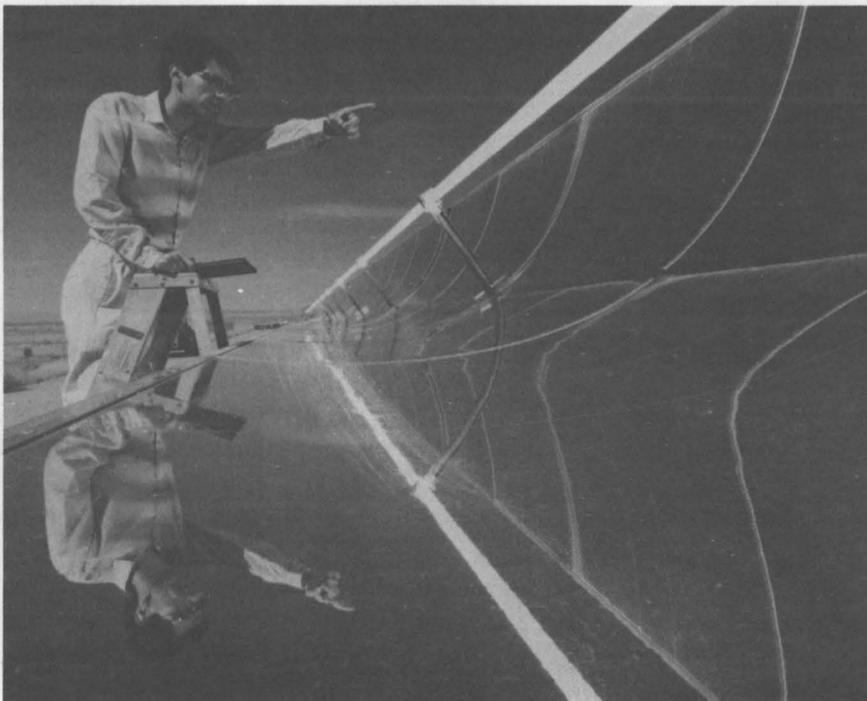
Solvents, PCBs, dioxins, pesticides, munitions

chemicals, dyes, and cyanides are among the contaminants that the process could destroy.

Sandia investigators are working with the Solar Energy Research Institute (Golden, Colo.), where laboratory-scale experiments are carried out. The pro-

cess is photocatalytic: It uses light and a chemical catalyst, titanium dioxide — which is frequently used as a paint pigment and is also an ingredient in some toothpastes, cosmetics, and sunscreens.

(Continued on Page Four)



JIM PACHECO (6216) points to the tube that carries contaminated water through a parabolic-trough system. The trough-shaped mirror focuses sunlight on the tube, providing the energy needed to decontaminate the water.

This & That

Why So Technical? -- Occasionally, we get asked why the LAB NEWS prints so many technical articles. The question's often followed by, "I just don't read them."

Every Sandian isn't going to read every tech article -- we know. But the same goes about other parts of the paper -- employee-honors stories, supervisory appointments, ads, administrative stories, and -- this hurts -- yes, even this column. We Sandians are diverse -- in background, education, interests, available time, and other areas. And we all read selectively -- from the LAB NEWS and other publications.

Back to the basic question: Why so many technical articles? Because technology is what Sandia's all about. Some of the finest science and engineering R&D in the world is done right here, by some of the most capable scientists, engineers, and support people in the world.

Our challenge at the LAB NEWS is make our tech stories informative and interesting. Our writers spend lots of hours at it, and we're always trying to get better at it. Right now, for example, we're trying to write shorter, crisper, easier-reading articles that more Sandians will read and, we hope, enjoy.

It may surprise you -- frankly, it surprised me -- but a LAB NEWS readership survey done last year shows that the tech stories are the best-read items in the paper. Ninety-two percent of survey respondents said they read them, and more than 50 percent of these folks rated the tech stories "outstanding."

* * *

Life at Forty -- In this issue, we're printing a copy of President Truman's May 13, 1949, letter to Leroy Wilson (then AT&T President) asking AT&T to direct Sandia. (A similar letter went to Bell Telephone Labs President O. E. Buckley.) AT&T agreed, but the details took a while, and the agreement became official that fall. Some special events are now being planned to commemorate the 40th anniversary this fall.

* * *

Picture Our Fame Spreading -- along with our pictures. Spurgeon Norman, former Sandian (1978-83) who lives in Lebanon, Ill., recently mailed four matted, framed color photos of Sandia's Solar Thermal Test Facility to the Labs. He says his mother, knowing that he had worked here, found the photos at an estate sale in Kansas City and bought them.

Spurgeon paid to mail them here, frames and all, with a note saying he thought we might want to hang them somewhere in the Labs. He added, "Perhaps you might be able to determine the origin of the pictures." Anyone have a decent guess?

* * *

The Problems of Translating -- Translating languages is a tough job -- if it's done well. We just got a new cassette tape recorder at the LAB NEWS. Wanna guess what it's called in the instruction booklet? "Portable Dictator." I thought those were the ones in exile.

* * *

Got Story Ideas? -- We've got a LAB NEWS story-idea list that's three typewritten pages long, but we're still looking for more stories. We can't guarantee to pursue every idea soon or even that we can use them all, but every serious idea and suggestion will be considered. One favor, please -- if you've got a story idea, jot it down and mail it to Div. 3162. This phone's driving me crazy! ●LP

Predict Your Time — Win a Prize

Fitness Day Is May 19

It comes but once a year, and here it is for the ninth time: Sandia's Annual Fitness Day, set for noon Friday, May 19. The action will be on Hardin Field, KAFB's parade ground. (Rain date is Thursday, May 25.)

Invited are Sandians, DOE and KAFB personnel, retirees, spouses, and dependents.

For entertainment, there'll be a visit by the Armijo Elementary School's Police Athletic Jump-rope Team. And, in a show that may or may not rival those of the Paris fashion world, Sandians will model the latest in sports clothing to show what the well-dressed windsurfer — and other sporting types — might be wearing this year.

Care to Prognosticate?

In what has become a tradition (a short one — it's in its second year), bikers, joggers, and walkers can try predicting their times. Bikers will go three miles; walkers and joggers, a mile and a half.

Those most closely estimating their elapsed time will win prizes: an "Eat Right Cook Book" from HealthNet, a SERP windbreaker, a TLC T-shirt, or a lunch for two from the Sandia Cafeteria or Coronado Club. Preregistration is at 11:50.

Emceeding the festivities will be Larry Clevenger (3300). Bob Banks (3531) and his trio will make music. The first 200 folks with \$2 can get a pita sandwich — or you can bring your own brown bag and get free juice and water on the spot. ●

Attention, Retirees

Sandia retirees, their spouses, and surviving spouses of retirees will get together for gab and grub at the Annual Picnic on Thursday, May 25, from 4 to 7 p.m. in the Coronado Club patio area.

The tuneful "Old Cooters" provide music from start to finish, and partygoers can watch videotapes of last year's picnic from 5 to 6. (On-the-spot video footage of this year's gathering runs after 6.)

Special "remember-when?" displays downstairs at the C-Club preview Sandia's 40th anniversary observance, coming up later this year. Members of Large Staff will be on hand to chat with picnickers.

Casual dress is recommended. And, as in the past, this one's for adults only; don't bring the grandchildren.

Parking: Use parking areas at the Coronado Club, Base chapel, Que Pasa Recreation Center, Base hospital, or Sandia Base Elementary School; avoid parking in residential areas. (A shuttle bus will run between the Club patio entrance and the parking areas on "B" Street.) A block of parking spaces for the handicapped is available near the Club's main entrance, which may be used only by handicapped persons; all others should use the patio entrance.

Sandia retirees and surviving spouses now number more than 3700 in 40 states and two foreign countries.



Sympathy

To Ken Paul (2613) on the death of his father in Albuquerque, April 17.

To Dale (2857) and Darlene (2522) Leonard on the death of his father and her father-in-law in Clearfield, Pa., April 20.



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Recent Patents

Editor's Note: The LAB NEWS will periodically list all new patents issued to Sandians. We begin with the first quarter of FY89 (October-December 1988).

Ron Hill (7556): Source Replenishment Device for Vacuum Deposition.

Bob Bastasz (8347), Bob Hughes (1163), and Bill Wampler (1112): Detector and Energy Analyzer for Energetic-Hydrogen in Beams and Plasmas.

Bill Benedick (dec.), Bob Graham (DMTS, 1153), and Bruno Morosin (1153): Shock-Activated Electrochemical Power Supplies.

Larry Bacon (1235), Bill Ballard (1232), Collins Clark (1235), and Barry Marder (1241): Magnetically Insulated Transmission Line Oscillator.

Clyde Layne (8171): Gradient Index Retro-reflector.

Peter Esherick (1164) and Del Owyong (1160): Polarization Feedback Laser Stabilization.

Livermore Chemist Is Creative Cook and Creative Writer

When Tim Shepodd of Inorganic and Physical Chemistry Div. 8313 goes home, his experimental work isn't over. He continues to produce new concoctions — not for the sake of science, but for the palate.

It's paid off — he's entered three recipe contests recently and has placed near the top in two. One was a nationwide cereal recipe competition. Tim captured third place in the breads and baked-goods category with his recipe for a bran-cereal bread loaf. Then he took second place for his hot-sausage soup in a recipe contest sponsored by a major newspaper.

"As an added challenge, I enter only original recipes that I've just composed and never actually made, if there is nothing in the rules that requires an entrant to produce the finished dish," Tim explains.

"It's sort of a creative writing exercise for me. First, I try to come up with something in which exact proportions might not be crucial. Second, I try to combine different foods that I like so the finished product sounds out of the ordinary, yet appealing," he says. "Third, I follow the contest rules to the letter; many great recipes are probably disqualified because the entrant didn't read the fine print."

Cooking and Chemistry — Similarities

Tim thinks his degree in organic chemistry ties in well with his cooking hobby: "It's similar to what we do in the lab. We have a goal, choose ingredients, and put them together in some order, using pre-

cise preparation times and temperatures. Cooking is just an extension of chemistry — only you have the advantage of getting to eat what you make."

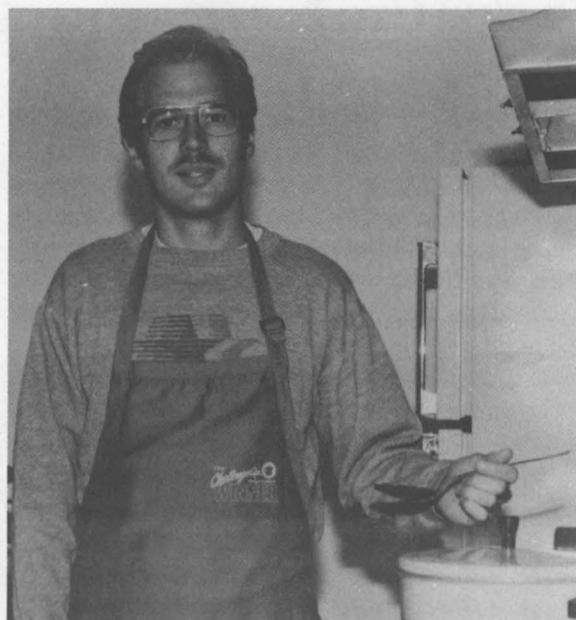
Tim's bent for the culinary arts comes from his childhood, when he and his older brother sometimes fended for themselves in the kitchen. He also recalls special dishes prepared by the family cook. "She prepared the best classic Southern foods you could imagine, and her hot spoon bread was superb," he says. It's still one of his favorite dishes, which he also enjoys making.

Just one year out of Caltech, Tim splurged with one of his first Sandia paychecks and bought a top-of-the-line combination microwave/convection oven and broiler. "The oven is really nice — the microwave feature cuts the time on baked goods, yet they come out with high-quality crusts."

Best Ingredient Is Creativity

But Tim believes creative cooking depends much more on the cook and the ingredients than it does on gadgetry: "You can spend lots of dollars to make your pasta look super, but if it doesn't taste good, what's the big deal?" One of his specialties is a vegetable lasagna.

Because he lives alone and travels frequently, Tim often makes a large pot of something (like a stew) and stretches it out over several meals. "After I ride my bike home from work, I can heat up my food and enjoy a good meal, instead of turning to



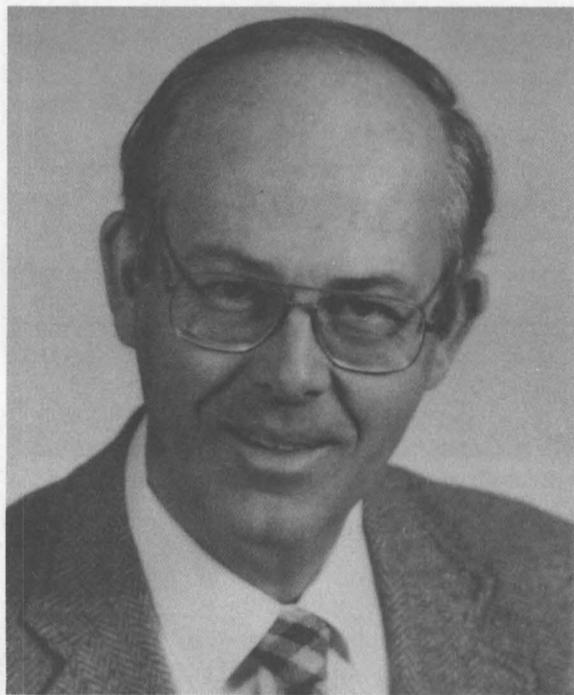
TIM SHEPODD (8313) whips up a creative concoction in his apartment kitchen. The Sandia Livermore chemist says cooking is an "extension of chemistry — only you have the advantage of getting to eat what you make."

fast foods, a bag of chips, or cookies."

He thinks many people prepare food strictly by the cookbook when they could be creative and experiment with a recipe to give it a new twist or flavor.

And he encourages people to try their hand at recipe contests. "It's fun to delve into the unknown," he says. "But, unlike me, most cooks will want to try out their creations before entering them in a competition." ●

Supervisory Appointments



DICK FINN to supervisor of Design Definition Div. 8271, effective April 1.

Dick joined Sandia Livermore in 1959 as a designer/draftsman in the drafting organization. He has remained with that group except for a stint in the Computer-Aided Design Engineering Division, where he was one of the first CAD-CAM operator-designers.

He received an associate of arts degree in industrial drafting and design from Laney College and two AA degrees in supervision and business administration from Chabot College. He has taught drafting and CADs on the part-time faculty at Las Positas College for the past three years. He was recently inducted into Epsilon Pi Tau, honorary society for technical education teachers.

Dick serves on the drafting advisory committee for Chabot and Las Positas colleges and on the Amador-Livermore Regional Occupation Program drafting advisory committee for the Valley school districts. His other activities include volunteer service in youth and church work, rent mediation for the Southern Alameda County Rent Mediation Service, and raising cattle on the ranch near Livermore where

he and his wife Wanda live. They have a daughter and a son.

* * *

LARRY BRANDT to supervisor of Systems Research Div. 8173, effective April 16.

He joined Sandia Livermore in 1968 as a firing-set development engineer for the W62 program. Three years later, he transferred to the systems analysis group to do studies on the nuclear weapons program, including maneuvering reentry vehicle and ABM issues. After he participated in the Doctoral Study Program at Stanford University, he was assigned to the Systems Analysis Department, where he worked on the solar thermal program.

During the past year, he has been on assignment in Washington working with the SDIO Phase I Engineering Team.

Larry received a bachelor's degree in electrical engineering at Oregon State, a master's in the same field at Stanford, and a PhD in engineering economic systems at Stanford. He was named Distinguished Member of Technical Staff earlier this year.

His outside interests include downhill and cross-country skiing, running, and summer backpacking. He lives in Menlo Park.



LARRY BRANDT (8173)



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STATE SENATOR BILL LOCKYER (second from left) took part in a recent Sandia Livermore seminar on "Valuing Diversity — Managing Differences." His talk covered California demographic trends and the state's response to the changing work force. With him (from left) are Mike Robles (8520), seminar organizer Denise Robinson (8526), and VP John Crawford (8000). Manuel Perry, manager of Human Resource Planning and Development at LLNL, also spoke at the seminar.

(Continued from Page One)

Solar-Driven Detoxification

Tests at Sandia started with exposure times of about 30 minutes under normal, "one-sun" light. Exposure times are decreased by increasing the concentration of sunlight to as much as 60 suns, adding small quantities of hydrogen peroxide, and varying the amount of catalyst.

World-Class Detoxification?

If this solar-driven technique proves economical for detoxifying large quantities of water, it could be valuable worldwide. Global studies indicate that the need for water-purification technology will increase, but most current techniques are inefficient, costly, or not adaptable to large volumes of water.

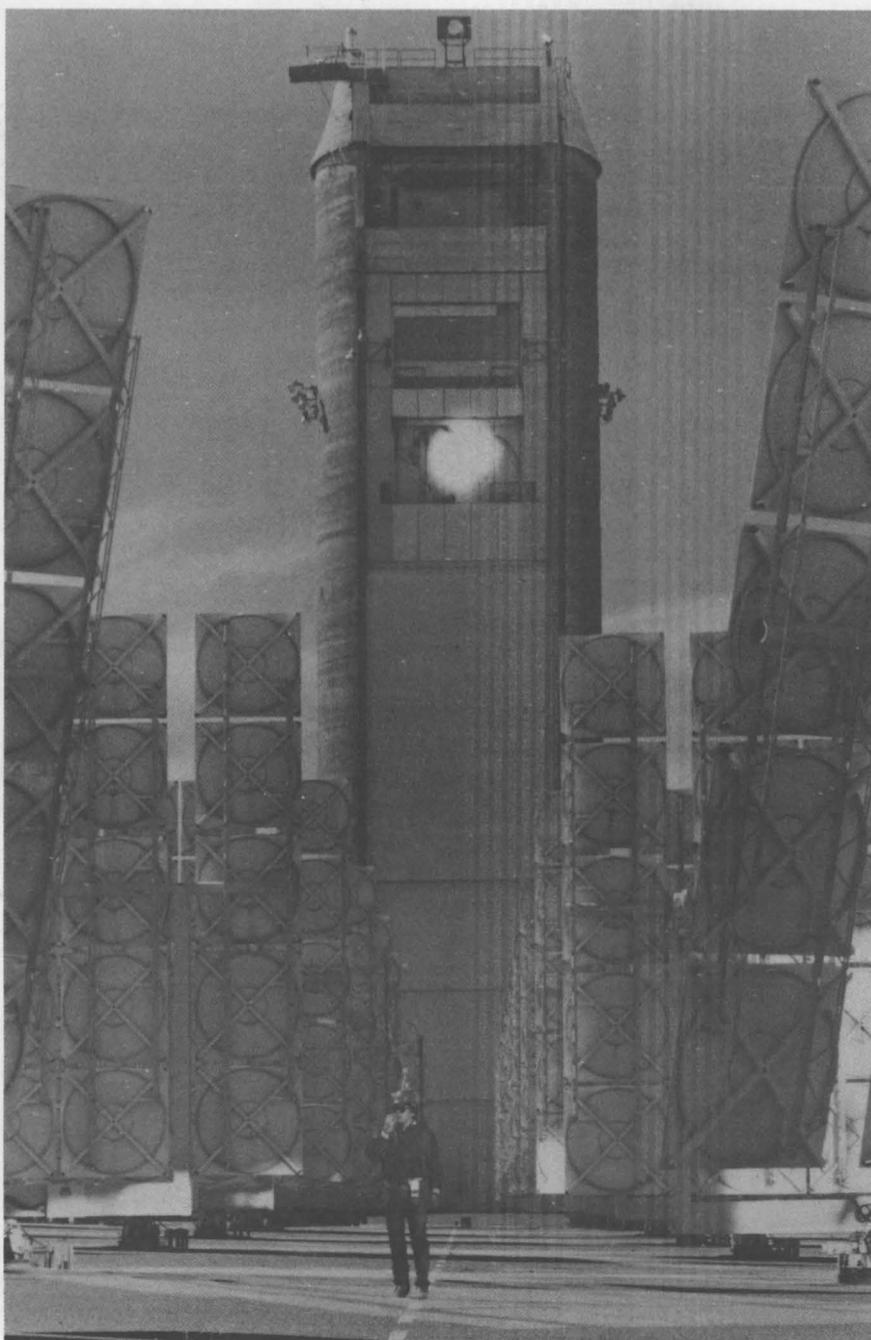
In the US, wastewater accounts for three-fourths of all hazardous waste.

The cheapest purification methods now in commercial use, says Craig, remove contaminants from

"Continuing to reduce the reaction time with concentrated solar energy is a key to making [the decontamination process] cost-competitive."

water but don't actually destroy them. So a disposal problem remains. The process being tested at Sandia, however, converts harmful organic compounds into carbon dioxide, water, and low concentrations of simple acids. If necessary, residual acids can easily be neutralized.

IN FRONT OF the Central Receiver Test Facility is Larry Yellowhorse (6216). The CRTF is being used to concentrate light on a "falling-film reactor" water-detoxification system.



Bad Water + Sunlight + TiO₂ → Good Water

Sandia's solar-assisted water decontamination process (being developed in collaboration with the Solar Energy Research Institute) is driven by the sun's ultraviolet (UV) light. Water that contains contaminants plus a catalyst, titanium dioxide, is pumped through a transparent pipe along a parabolic reflector or over a "waterfall" in the Solar Tower.

As sunlight is focused on the liquid, high-energy photons in the UV spectrum strike the catalyst. The photons are absorbed by electrons

in the catalyst, knocking the electrons free and leaving positively charged "holes."

Next, the holes (and to some extent the free electrons as well) react with dissolved oxygen, hydrogen peroxide, and water molecules to produce highly reactive species, including hydroxyl radicals and peroxide ions. These species in turn attack organic contaminants and, by oxidizing them, break them into environmentally safe components.

So far, the economics of the process look favorable. "Although chemical reaction rates suggested in the literature would probably lead to solar reactors that cost more than conventional systems," says Craig, "we've been able to speed up those rates dramatically for some contaminants, by making simple changes in the system and its operation. We're optimistic that these refinements — plus an optimal system design — will make the solar detoxification of water as attractive economically as it is technically."

Two Sandia systems are being used in proof-of-concept testing. In one, a parabolic trough at the Solar Thermal Test Facility focuses sunlight on a long glass tube. Water containing catalyst and organic chemicals is pumped through the tube and into a measuring tank.

The other system, called a falling-film reactor, uses the Central Receiver Test Facility (the "Solar Tower"). The mixture is pumped over an 11-foot sheet-metal "waterfall" in a thin film, on the tower 120 feet above ground, while sunlight is focused on it by up to 20 heliostats (sun-tracking mirrors).

"Our goal is to reduce the concentration of contaminants to less than a few parts per billion," says Jim Pacheco (6216), who has engineering responsi-

bility for the parabolic-trough system. "That's the level needed to meet most Environmental Protection Agency standards."

Although many people have contributed to the tests so far, Craig especially credits three: Larry Yellowhorse (6216), who has done much of the analytical and experimental work; Earl Rush (6215), who got the trough system built and operational; and Matt Matthews (6215), who assembled much of the test apparatus.

Tests on the solar destruction of industrial dyes are taking place now. Though only slightly toxic, if at all, the dyes discolor surface water if they are discharged from factories.

Craig expects to begin tests soon on a widely used solvent (and widely occurring contaminant), trichloroethylene. This will require special care — such as a tightly sealed system — because trichloroethylene is so toxic and volatile.

All tests with toxic materials will be done in cooperation with Sandia's Environment, Safety, and Health organization (3200). "For a while, we'll probably have our detoxified water picked up in drums and checked to make sure that it's within the limits for releasing into the sewers," says Craig.

"We hope eventually to have a permit allowing us to pour it on the ground," he continues. "After all, cleaning up the water so it's safe for the rivers or the earth is what our work's all about."

●CS/WKeener(3161)

What Can't It Do?

Although potentially a great improvement over current water-detoxification processes, the solar-driven method being tested at Sandia isn't a cure-all.

It's limited to organic chemicals, for one thing — compounds such as those mentioned in the main story. So it's not effective against heavy-metal contamination — waste chromium from a plating shop, for instance. Similarly, problem metals such as mercury and cadmium would still be in water after this process.

A few organic contaminants would also survive. Examples are carbon tetrachloride and long-chain alkanes (alkanes are a class of hydrocarbons).

Even so, the ability to destroy many organic chemicals makes the process commercially attractive if the economics are right, because those chemicals account for a large fraction of water contamination. Where necessary, two processes might be used in tandem: one to destroy organic chemicals and another to remove metals.

Now We Know . . .



Does this describe anybody you know . . . introverted, antisocial, extremely prolific, ambitious, a frequent target of criticism, and an irregular churchgoer? Those qualities, according to [professor of psychology] Dean Simonton of the University of California at Davis, are what make a scientific genius. Simonton has studied the lives and careers of more than 2500 scientists.

Geniuses frequently fail more often than they succeed, says Simonton, but "it is their tenacity in taking risks with unorthodox and challenging ideas that eventually makes profound differences in the way people think and live."

Orval Jones Named ASME Fellow

Executive VP Orval Jones (20) will be inducted as a Fellow of the American Society of Mechanical Engineers (ASME) at a regional meeting of the society on May 13 in Colorado Springs. He is the tenth Sandian to be so honored by the Society.

The ASME designates as Fellows only about one percent of its members who demonstrate "exceptional engineering attainments and contributions to the engineering profession." The 120,000-member technical and educational organization conducts one of the world's largest technical publishing operations and sets many industrial and manufacturing standards.

Orval is being cited for excellence in engineering research and analysis, for his innovations in increasing the security of nuclear weapons, and for significant contributions to engineering education.

Since 1986, he has been Sandia's Executive Vice-President responsible for planning and leadership of numerous weapon and energy programs.

Before assuming his current position, Orval served as Vice-President of two other Sandia organizations — Defense Programs and Technical Support.

He joined the Labs in 1961 after receiving his PhD in mechanical engineering and physics from the California Institute of Technology. He was promoted to supervisor of Dynamic Stress Research in 1964 and to manager of Physical Research in 1968. From 1971 to 1982, he headed four directorates: Solid State Sciences Research, Nuclear Security Systems, Nuclear



DRESS REHEARSAL: John Andersen (DMTS, 5161), who nominated EVP Orval Jones (20, left) for election as Fellow of the American Society of Mechanical Engineers, hands Orval a "preview copy" of the citation. The president of ASME will make the formal presentation at a regional meeting of the society on May 13 in Colorado Springs.

Waste and Environmental Programs, and Engineering Sciences.

In 1974, he initiated — and subsequently directed — a program to improve the technology for physically protecting the facilities and transportation of nuclear weapons and materials. Largely as a result of this program, Sandia is the recognized leader in such technologies.

Orval was nominated by John Andersen (DMTS, 5161), who is himself an ASME Fellow and serves as ASME's Vice-President of Government Relations.

Other Sandians who are ASME Fellows: Arlyn Blackwell (400); Mike Forrestal (DMTS, 9122); and Er-Ping Chen (1523). Retired Sandians who are ASME Fellows include Dick Bice; Art Clark, Jr.; Bob Henderson; John McKiernan; and Ralph Wilson.

Events Calendar

May 5 — Lecture: illustrated talk by Richard Hildreth (director of the Utah State Arboretum) on Utah University's Red Butte Botanic Gardens, sponsored by Friends of the Rio Grande Botanic Garden, Inc.; 7:30 p.m., St. Timothy's Lutheran Church (Copper and Jefferson NE), 268-7738.

May 5 — 6th Annual KNME-TV Wine Tasting, wines provided courtesy of California Wine Institute and New Mexico Wine Growers, gourmet and imported food; 5:30-7:30 p.m., Albuquerque Convention Center (Ballrooms A & B), 277-2121.

May 5 — Subscription Concert V: Chamber Orchestra of Albuquerque and UNM Chamber Singers, with guest conductor George Zack (music director of Warren, Ohio, Chamber Orchestra and the Lexington, Ky., Philharmonic), music of Skalkottas, Bach, Haydn, and Francaix; 8:15 p.m., St. John's United Methodist Church (2626 Arizona NE), 881-0844.

May 5-7 — "Spanish Fly," La Compania de Teatro de Albuquerque interpretation of Machiavelli's romantic comedy "Mandragola"; 8 p.m., Menaul Theatre (301 Menaul NE), 242-7929.

May 5-7 — "Tango" by S. Mrozek, an absurd comedy dealing with the implications of bucking tradition; 7 p.m. Fri.-Sat., 6 p.m. Sun.; Vortex Theatre, 247-8600.

May 5-14 — "Centennial Exhibition of Polaroid 20" x 24" Photographs," experimental works by UNM art faculty and invited artists created with the 20" x 24" format Polaroid camera; 9 a.m.-4 p.m. Tues.-Fri., 5-9 p.m. Tues.; Van Deren Coke Gallery, UNM Art Museum, 277-4001.

May 5-14 — Annual MA/MFA Exhibition: The Centennial Class, UNM Centennial event, annual exhibit of works by graduate studio candidates of MA and MFA degrees in UNM's Dept. of Art and Art History; 9 a.m.-4 p.m. Tues.-Fri., 5-9 p.m. Tues.; upper-level galleries, UNM Art Museum, 277-4001.

May 5-14 — "Steel Magnolias," bittersweet comedy by Robert Harling about six Louisiana women in a beauty parlor, presented by the New Mexico Repertory Theatre; 8 p.m. Tues.-Sat., 2 p.m. Sat. & Sun.; KiMo Theatre, 243-4500.

May 5-21 — "The Seven-Year Itch"; 8 p.m. Wed.-Fri., 6 & 9 p.m. Sat., 2 p.m. Sun.; Albuquerque Little Theatre, 242-4750.

May 5-July 16 — Exhibit, "Carthage: A Mosaic of Ancient Tunisia," organized and sponsored by the

American Museum of Natural History (New York City), featuring mosaics, sculpture, and recently discovered artifacts; 9 a.m.-5 p.m. Tues.-Sun. (special museum hours); Albuquerque Museum, 242-4600.

May 6 — Musical Extravaganza: annual barbershop show, featuring the New Mexichords; 7 p.m., Popejoy Hall, 298-3355.

May 7 — "Ode to Spring": Albuquerque Civic Chorus performs light classics by Mozart and Hayden, colonial folk songs, poems with Vaughan Williams tunes, plus special four-part women's music; 7:30 p.m., St. Mark's on the Mesa Episcopal Church (431 Richmond Pl. NE), 262-2484.

May 7 — "Danzas y Romances de España" (Dances and Romances of Spain), medieval and renaissance music performed on authentic period instruments, Musica Antigua de Albuquerque; 4 p.m., St. Thomas of Canterbury Episcopal Church (425 University NE), 842-9613.

May 7 — Spring Swap Meet: autos and automotive items, sponsored by Route 66 Rodders; 8 a.m.-4 p.m., UNM Pit parking lot, 292-1327.

May 10 — "The Great Italian Dinner and Auction," benefit for Martineztown House of Neighborly Ser-

vice; 5-7:30 p.m., Albuquerque High School cafeteria, 344-3677.

May 11-12 — Classical Concert #9: New Mexico Symphony Orchestra with the NMSO Chorus, featuring works of Brahms and Shostakovich; 8:15 p.m., Popejoy Hall, 842-8565.

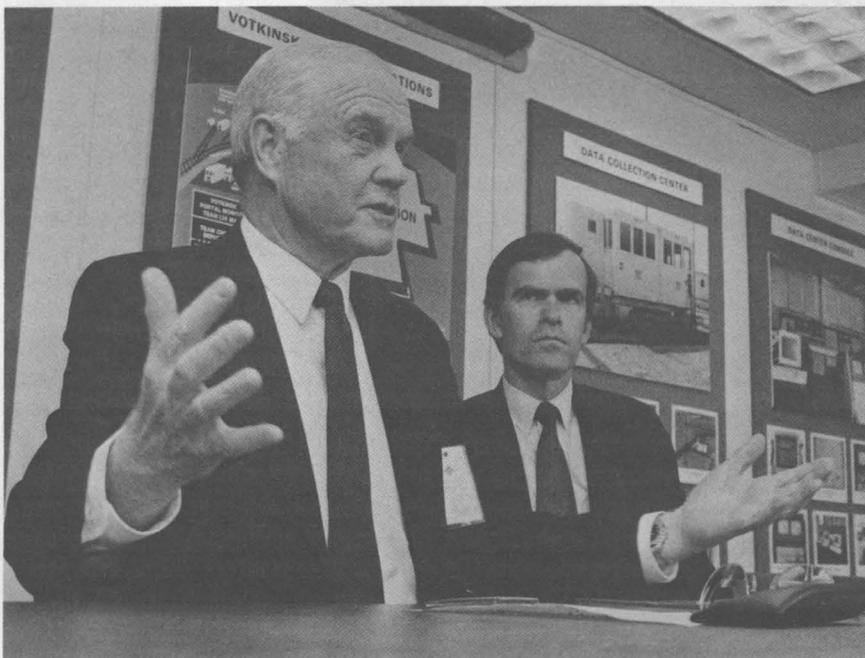
May 13-14 — New Mexico Iris Society Show and Sale; 4-7:30 p.m. Sat., noon-6 p.m. Sun.; Albuquerque Garden Center (10120 Lomas NE), free, 296-6020.

May 14 — Mother's Day Celebration: varied activities, Indian dances, fashion show; 9 a.m.-5:30 p.m., Indian Pueblo Cultural Center, 843-7270.

May 14 — Mother's Day at the Zoo, New Mexico Symphony Orchestra annual event, featuring program of light classics, proceeds benefit the zoo's animal-acquisition fund; 2 p.m., Rio Grande Zoo, 843-7413.

May 16 — "Autobahn with the Adaptors," satire on America's love affair with technology; 8 p.m., KiMo Theatre, 848-1370.

May 16 — 16th Annual Strawberry Festival: street fair for children and adults; food, entertainment, more; 11 a.m.-7 p.m., Serendipity Day School (801 Girard NE), free admission, 255-7336.



DURING A WEEK'S information-gathering tour of the US, Sen. John Glenn spent most of a day recently at Sandia, where he was accompanied by NM Sen. Jeff Bingaman. Glenn is chairman of the Senate Committee on Governmental Affairs; Bingaman is a member of that committee. Among other comments, Glenn said during a press conference at the TOSI site, "Some of the nation's best technical work is being done in the national laboratories. These laboratories are resources of stellar national interest."

Valuing Diversity

revolutionary idea to some, but that's the way it has to be. In a nutshell, I'm talking sensitivity. If you don't know where an employee is 'coming from,' and don't understand — or attempt to understand — how his or her background may affect behavior and attitude, you can kill motivation and/or contributions that might have been.

"The video shown at the management briefing made an apt analogy: When you're planting a flower garden, you don't give all the flowers the same amount of water and sunlight or the same kind of soil. Rather, you tailor conditions to give each the best possible environment for nourishment according to its needs. The same is true for people.

"Some, for instance, have been taught not to challenge their elders; others, not to speak until their thoughts are fully developed. Their ideas could be lost in the shuffle unless the supervisor understands that and encourages them to speak up — maybe on a one-to-one basis instead of in a group situation."

Dan makes it clear that "Valuing Diversity," an initiative begun last year by Equal Employment Opportunity and Affirmative Action (EEO/AA) Dept. 3510, does not just pay lip service to a perceived problem. Small Staff, he says, is unanimous in its

" 'Valuing Diversity' is not a 'personnel' program; it's a Labs-wide program in which line organizations must take the lead."

commitment to the issue, and expects Sandia management to be discerning enough to recognize employee differences and to help employees grow in different ways. And to start now, before valuable ground is lost.

Adds Maureen Baca (3510 manager), "'Valuing Diversity' is not a 'personnel' program; it's a Labs-wide program in which line organizations must take the lead. Although it builds on our past EEO/AA initiatives, it is not compliance-driven; it's not in response to any law. But it makes good business sense: People-differences provide many positive aspects, and capitalizing on them is a matter of corporate survival.

"To accomplish its technical mission," Maureen continues, "Sandia needs the best brainpower available — regardless of cultural background or gen-



VENKY NARAYANAMURTI (1000): "I challenge each Sandian personally to make a pledge to help turn on kids to science and engineering careers."

der. And once that brainpower is recruited and on roll, it's our job to create a workplace atmosphere that's conducive to retaining it. Accepting and understanding differences is a key to that atmosphere."

In the face of competition for the best and brightest of a diverse group of employment candidates, two problems must be addressed, notes Dan. One is attracting more candidates — especially minorities and women — to Sandia.

"Our current recruiters are doing a good job, but adding more women and minorities to our recruiting teams might give us a real edge. They [women and minorities] are the ones that can best establish that much-needed 'personal connection' with candidates. So fine-tuning our recruiting program could be called a short-term goal.

"Over the long term, we need to expand our outreach activities at predominantly minority universities. In connection with that, we've proposed to DOE that Sandia become the lead lab for science and engineering programs at Hispanic colleges and universities in the Southwest. If that became reality, our activities would include strengthening the schools' science and engineering curricula, providing more summer-employment opportunities for faculty and students, and making available adjunct faculty for specialty courses."

Maureen notes, too, that Sandia will become more involved with pre-college science programs, with the aim of encouraging more minorities and women to choose science and engineering careers.

Retaining Productive Employees

The second problem, according to Dan, is retaining productive employees once they are on roll. "We must be certain that all employees, regardless

of cultural background or gender, have fair opportunities for promotion and fair representation at all levels," says Dan. "If they perceive limited career opportunities for themselves, they won't stay."

The Affirmative Action Council, established earlier this year, provides executive management focus and action on issues involving women and minorities. Council members, besides Dan, include four other Sandia vice-presidents — Venky Narayanamurti (1000), Dennis Roth (3000), Everet Beckner (5000), and John Crawford (8000) — and advisory member Ralph Bonner (3500).

"Recognizing people's special needs is also a factor," Dan continues. "Take, for instance, a part-time employment option for parents of very young children — or for those who must tend to the needs of parents. Having such an option might make the difference in whether a person stays at — or leaves — the Labs.

"That's just one example of a special-need situation; there are others, too — for instance, child-care issues. We must make progress in this area, and we will. I guarantee it. Some changes will be rapid; others will occur further down the road.

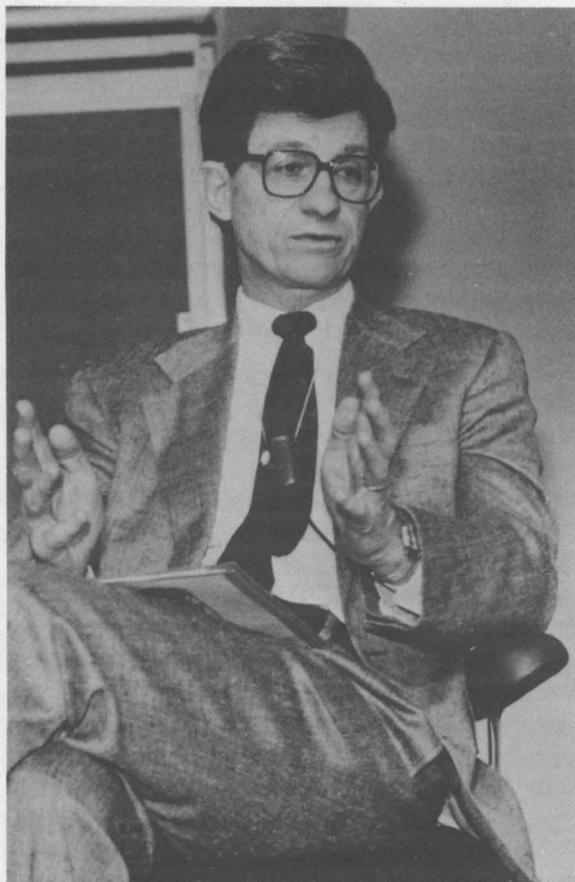
"Career counseling is another vital part of the retention picture. Representatives from Sandia's Outreach committees, without exception — American Indian, Black, Hispanic, Asian, Women — have expressed the need for better guidance on career development. Ev Beckner has taken the lead on this concern in the 5000 Organization. He has provided written guidelines outlining his expectations on career

(Continued on Next Page)

| | 1985 Labor Force | Projected Additional Workers, 1985-2000 |
|--------------------------|------------------|---|
| Total | 115,461,000 | 25,000,000 |
| Native Nonminority Men | 47% | 15% |
| Native Nonminority Women | 36% | 42% |
| Native Minority Men | 5% | 7% |
| Native Minority Women | 5% | 13% |
| Immigrant Men | 4% | 13% |
| Immigrant Women | 3% | 9% |

Source: Hudson Institute
(Percentages have been rounded)

CHANGING FACE OF THE WORK FORCE — Chart above shows actual composition of the US work force in 1985 and estimated additions in various background categories between 1985 and the year 2000.



EVERET BECKNER (5000): "We must focus on career development and make it happen in the best possible way."

Diverse Work Force Means More Change

A Strong Commitment From Top Management

"Small Staff is unanimous in its commitment to make changes that must occur," says Dan Hartley (6000) as he discusses the implications of an increasingly diverse work force (see main story).

That commitment is readily apparent from the statements of members of Small Staff and other top-management representatives at recent management briefings on the valuing-diversity concept. A sampling:

Venky Narayanamurti (1000) — "Setting moral issues aside, Sandia must continue to make changes, or we can't do our job. . . . Understanding our work force is in our own self-interest. . . . Excellence is rewarded, regardless of background. . . . I challenge each Sandian personally to make a pledge to help turn on kids to science and engineering careers. . . . If you invest your time and effort in people early on [in their careers], it will pay off forever."

Everet Beckner (5000) — "We must focus

on career development and make it happen in the best possible way. Just letting it evolve will not get the job done. . . . People-skills don't come naturally. We [management] have to work at bettering them. . . . Mentors are important in career development. It may sometimes take intervention on the part of supervisors to help the process along. . . . It is time — in fact, *past* time — to get on with the business of looking to the future."

Dan Hartley (6000) — "Small Staff needs to focus on the virtual absence of minorities and females on the Large Staff picture chart. . . . Small Staff recognizes and accepts these problems, and has taken steps to address them."

Ralph Bonner (3500) — "Optimizing talents is one of our strengths, and we must continue to do that. . . . The issue of minorities and women in Sandia's work force is of utmost importance."

counseling to his directors and department managers. The rest of us [VPs] will be following similar plans.

"Ignoring the career needs of your employees is damaging — to them and to the company.

"The valuing-diversity concept is a snowball that's just beginning to roll; it will grow much larger between now and the year 2000," Dan continues. "I — and the rest of Small Staff — want to see San-

"Ignoring the career needs of your employees is damaging — to them and to the company."

dia rolling that snowball, not being run over by it. That means action now — not later.

"It simply makes good business sense for Sandia. And it makes good sense for our staff and management.

"One supervisor said during the recent management briefings, 'I feel like a weight has been lifted off my shoulders. Now I have a license to deal with problems as I see fit — to treat employees differently if need be to bring out their best.'

"Maybe that says it all."

●PW

Fun & Games

Archery — Manzano Archery Club will hold an animal-target archery shoot May 13. Registration is \$5/adult, \$2.50/youth under 14. Registration is from 8 to 8:30 a.m., with the first arrow flying at 8:30. The public is invited; club membership applications will be available there. Members only can use the club ranges. For information, contact MSgt. Dewey Reed on 4-4558 or 265-2687.

* * *

Golf — SGA members competed in the Chet Fornero Memorial Golf Tournament April 8 at Los Altos Golf Course. Format was individual stroke play. There were four flights, each with a low gross and a low net champion. Winners and long-drive champion for each flight included: Flight A — Leon Chapman (ret.), low gross; David Strong (9243), low net; and Clark Dohrmann (1524), long drive; Flight B — John Davis (ret.), low gross; Larry Seamons (DMTS, 7823), low net; and Dan Williams (7841), long drive; Flight C — Bob Varga (7542), low gross; Tim Coffee, low net; and Lou Paulson (ret.), long drive; Flight D — Norm Grandjean (6321), low gross; Carl Schuster (5234), low net; and Cass Gowins (5144), long drive.

The Rail Classic Golf Tournament was held April 22 at the Tierra del Sol Country Club in Belen; format was two-man best ball. SGA winners include: Flight A — Pres Herrington and Charlie Salazar (both 9243); Mark Grohman (1524), long drive; Flight B — Luis Abeyta and Kevin Babb (both 7531); Tom Ashwill (6225) long drive; Flight C — Luis Abeyta, long drive; and Flight D — Bud Gauerke (ret.), long drive.

* * *

Mountain Biking — Tom Mayer (5249) and a group of fellow biking enthusiasts get together Thursdays after work in the open area between Four Hills and KAFB to ride mountain bikes for fun and practice. They invite all interested riders to join them. Call Tom on 294-3368 for information.

* * *

Volleyball — Women's professional beach volleyball comes to Albuquerque May 6-7 when the Women's Professional Volleyball Association holds a sanctioned tournament at the Albuquerque Sportsplex (9704 Louisiana NE). Top-ranked pros will compete for \$15,000 in prize money. Competitive-rated local players are invited to enter this open tournament, which includes a doubles grass competition. Food and live entertainment will also be provided. Half the gate proceeds will be donated to UNM's Women's Volleyball Program. Admission is \$2/day. For information, call Roberta Malcomb on 889-4589.

Celebrating Diversity

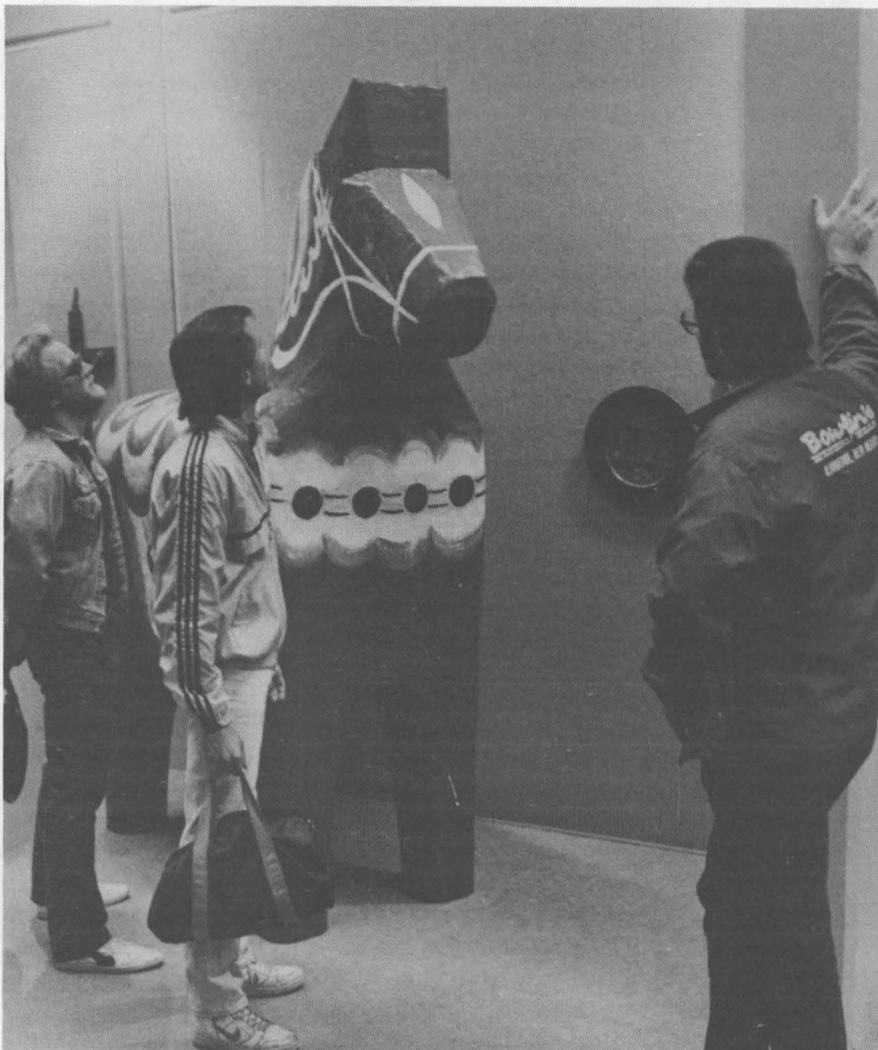
The myriad of cultural backgrounds represented by SNL employees will be on colorful display at Sandia International Day, sponsored by Equal Employment Opportunity and Affirmative Action Dept. 3510 May 12.

Events at the Bldg. 891 mall and the area south of the Bldg. 861 Cafeteria from 11:30 a.m. to 1 p.m. include a native-costume parade, folk dances and music, international food, and opportunities to see your name in Armenian, Chi-

nese, Greek, Hebrew, Hindi, Japanese, or Russian at a scribe's booth located just inside Gate 6.

Multilingual Sandians will also be present to teach other employees to speak some common phrases — in 10 different languages.

Ethnic arts and crafts exhibits, as well as collections of cultural items furnished by Sandians, are on display through May 12 in the Bldg. 802 lobby and the Tech Library.



DALA HORSE MAKES TALL MEN LOOK UP TO IT. This sculpture, other ethnic arts and crafts, and collections of cultural artifacts are on display in the Tech Library and the Bldg. 802 lobby now through May 12 in conjunction with Sandia's International Day celebration May 12. The 8-ft.-tall horse was sculpted by Neal Nelson (2336) out of plywood, hardware cloth, and fiberglass. It's based on traditional horse sculptures from the Swedish province of Dalarna. Neal is of Norwegian and Swedish descent. Admiring his work are (from left) Tim Mitchell, Dan Hughes, and Mike Gilbert (all 7481).

Take Note

Sally Douglas (1845) was named Technician of the Year for 1988 by the Central New Mexico Chapter of the American Chemical Society. A plaque was presented to Sally by 1989 chairman Ralph Tissot (1822). The selection was based on job skills, reliability, safety, and relationship with co-workers.

HealthNet New Mexico and the New Mexico Dietetic Association have published the "Eat Right Cook Book." The book contains about 400 low-fat, easy-to-fix recipes by registered dietitians of the New Mexico Dietetic Association. Calorie, cholesterol, sodium, fat, protein, and carbohydrate analyses are given for each recipe. Ordering information is available by calling 256-9861.

Sandia Colloquium

William Fowler (W. K. Kellogg Radiation Laboratory, Cal-Tech) will talk about "Early Nucleosynthesis in an Inhomogeneous Universe" at the Technology Transfer Center (Bldg. 825) May 12, 9 a.m. Orval Jones (20) is the host.

Qualified Manufacturing List Meeting

Jim Keathly (VP Product Assurance, Harris Corp., Melbourne, Fla.), Frank Ruttenburg (QML Program Manager, Harris Corp.), and Robert Thomas (Chief, Product Evaluation, RADC, Rome, N.Y.) will present a colloquium on "Qualified Manufacturing List" and "Circuit Design for Manufacturing" May 18, 9-11:50 a.m., at the Technology Transfer Center (Bldg. 825). The presentations directly affect the future design, production, and quality assurance of high-reliability electronic components and subsystems. Contact co-hosts Dave Bushmire (7252) on 4-6572 or Doug Weaver (2130) on 4-7736 for information.

The American Society of Mechanical Engineers' (ASME) monthly meeting is May 11 at the Bella Vista Restaurant (in Cedar Crest). Charles Howard (ASME Western Regional Office) will speak on "Dimensions of ASME." Awards will be presented to UNM and high-school students for outstanding projects related to mechanical engineering from the NM Science Fair competition. The meeting includes a social period at 6:30 p.m., dinner (\$8/person) at 7:15, and speaker at 8 p.m. Contact Joe Koski (6514) on 6-0138 for reservations.

* * *

Twenty-five French students, sponsored by Euro-languages — a nonprofit student exchange organization — will be visiting Albuquerque Aug. 2-23. Host families are needed for students ranging in age from 14 to 18 for this three-week program. For information, call Dyne Macha on 298-6583.

Don't Probe the Priesthood, Peon



"There's still a kind of caste system in many places in which the journalist is riff-raff who gets to hobnob among the politically powerful to record their moves, under an understood form of self-censorship," says Mack Laing [U. of Western Ontario Journalism School]. "The scientific community does little to discourage this, regarding itself as a priesthood whose workings could never be understood by the peons of print."

David Spurgeon, *The International Popularization of Science*

Sandia Flight Attendants Serve Safety

Male flight attendants — rare several years back — have become fairly common today. But one airline — Ross Aviation — has used male flight attendants *exclusively* for more than 15 years on one of its flights, and they are all Sandia employees. That's right — Sandia employees.

Twelve Sandians with other regular job duties at Sandia's Tonopah Test Range (TTR) work several extra hours a month as flight attendants on the chartered Ross DC-9 that flies round-trip four days a week between Las Vegas, Nev., and the TTR on Nellis AFB.

TTR normally operates 10 hours a day, four days a week. Because the range is isolated in the desert, most of the employees live in Las Vegas and take the 160-mile Ross flight to and from work those four

“... most of us fly the round-trip about 175 times a year . . .”

days. The 10-hour work period and round-trip flight make for long days, but the arrangement offers Sandia and TTR employees certain benefits — longer productive periods on the job, fewer flights, three-day weekends, and the opportunity to live in the city.

Before they can work as part-time flight attendants (FAs), the Sandians must be trained in a week-long course taught by certified instructors. To remain an FA, they must attend a one-day refresher course in Las Vegas once a year.

Even though they are full-fledged, qualified attendants, the Sandia FAs don't welcome passengers aboard with a smile, serve them snacks and drinks, or fluff up their pillows. That isn't why they're there. It's for safety and to comply with Federal Aviation Administration (FAA) regulations requiring flight attendants trained in safety regulations and procedures for planes carrying more than 19 passengers.

The 12 attendants rotate the duties, with two working each day on the flight up and back, meaning that each normally works the FA job about once every six working days.

Early Birds for the Early Bird

The attendants get overtime pay for their efforts, but they earn it. The DC-9 usually leaves Las Vegas for the range about 6 a.m., but it sometimes leaves as early as 3 a.m. if early-morning tests are scheduled at TTR. (Many TTR weapon tests are done in early morning when the air and light are best for photographing the tests.)



TTR FLIGHT ATTENDANTS — These 12 Sandians at Tonopah Test Range (Dept. 7170) take turns serving as flight attendants on the Ross Aviation DC-9 that flies round-trip between TTR and Las Vegas four days a week. They are (from left) Terry MacDonald, Roland Phillips, Jim Enlow, Roy Johnston, Mike Sychala (coordinator), Ron Taylor, Diwiatt Barker, Andy Jones, Bert Tate, Marty Konkell, Ron Haines, and Jerry McCorkle.

(Photo by Lance Wilson, 7174)

No matter what time the plane leaves, the FAs arrive 30 minutes before, to check the safety equipment, make sure that necessary supplies are on board, and check boarding passengers to ensure they are on the manifest for the flight. They also make standard safety announcements over the public address system, see that passengers buckle safety belts, and ensure that regulations are followed during flight.

Jim Enlow (7173), one of only two TTR employees who have worked as part-time flight attendants ever since the arrangement began in 1973 (Jerry McCorkle of Div. 7174 is the other), says it benefits Sandia and the FAs. “It gives us an opportunity to make a few extra bucks. And, if we didn't do it, Ross would have to pay some of their employees to work the flights and Sandia would have to foot the bill for that,” he explains.

Jim says the traditional all-male FA crew has nothing to do with discrimination against females. “Very few female employees have worked at the range

over the years, and none has ever expressed an interest in being an FA.”

‘Don't Call Me an FA’

The attendants take some occasional ribbing from a few of their fellow TTR employees, but it's all in good fun and taken in stride, Jim says. “For one thing, FAA regulations require that we wear something to distinguish us from the other passengers so we can be spotted quickly in an emergency. For years, we wore hats with bold, white FA letters on them. It doesn't take very much imagination to

“These guys take their duties seriously and do a thoroughly professional job.”

come up with several uncomplimentary terms that can be abbreviated with FA,” he says with a laugh.

Another of the attendants, Roland Phillips (7171), heard more than enough FA-hat comments. He and Doug Whitehead (contractor) designed new hats for the group. The bold FA letters are history.

“These guys take their duties seriously and do a thoroughly professional job,” says TTR Dept. Manager Ron Bentley. “We've had a few minor problems, but never a major emergency. However, a few situations looked like they could turn into one, and the guys handled every one in a calm, confident manner.

“Because most of us fly the round-trip about 175 times a year, we're especially appreciative of everything the FAs do to keep safety paramount,” Ron continues. “And our appreciation certainly extends to the Ross pilots and ground crew, who do an outstanding job of keeping the flights safe, comfortable, and on time.”

Twelve long-time TTR employees have accumulated well over a million air miles between the range and Las Vegas, and three are approaching 1-1/2 million miles: Lloyd Young (7173) leads with 1.45 million, followed by Lance Wilson (7174) and Don Anderson (7172), both with more than 1.44 million.

●LP



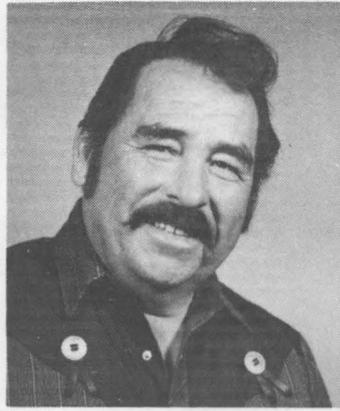
SANDIA WAS VISITED recently by the North Atlantic Treaty Organization's Assistant Secretary General for Defense Planning and Policy, J. Michael Legge; and by the Assistant Chief of Staff for Policy, Supreme Headquarters Allied Powers Europe, Air Vice Marshall Anthony A.G. Woodford. They were accompanied by US and NATO officials. Shown here, along with Sandia hosts, are (standing, from left) Lt. Col. Frank G. Klotz of the US Mission to NATO; Ev Beckner (5000); Orval Jones (20); Rolland L. Watenpugh, Office of the Secretary of Defense, International Security Programs; (seated) Merrill B. Walters, Director of Nuclear Planning for the NATO International Staff; Mr. Legge; and Air Vice Marshall Woodford. The Sandia visit was part of a week-long tour of US defense-related facilities, demonstrating the variety of ways US installations support NATO.



MILEPOSTS

LAB NEWS

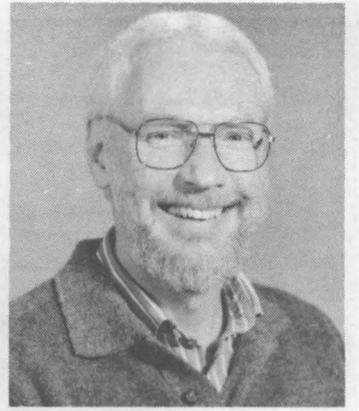
MAY 1989



Willie Lucero (7813) 15



Abbie Williams (3154) 25



Oscar George (9142) 25



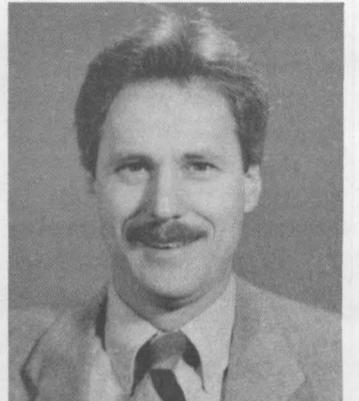
Frank Gallegos (3428) 15



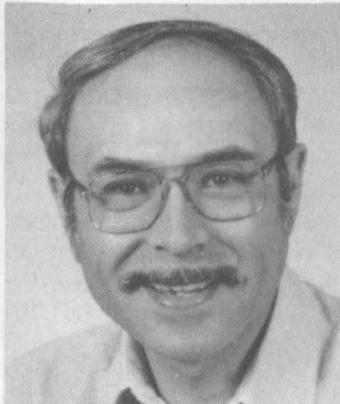
Ted Simmons (8284) 20



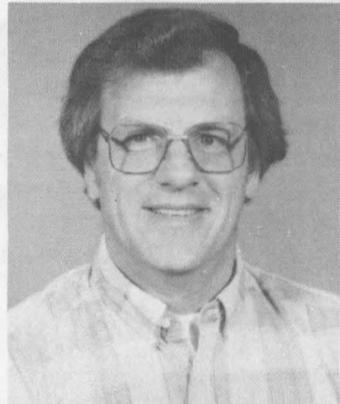
Jim Wolcott (7213) 15



Bruce Bulmer (9142) 20



Ron Amaral (8164) 25



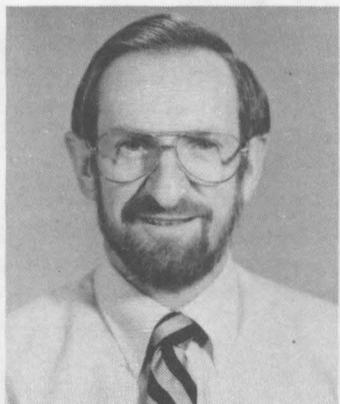
Dan Puetz (5265) 15



Sandy Ferrario (8534) 15



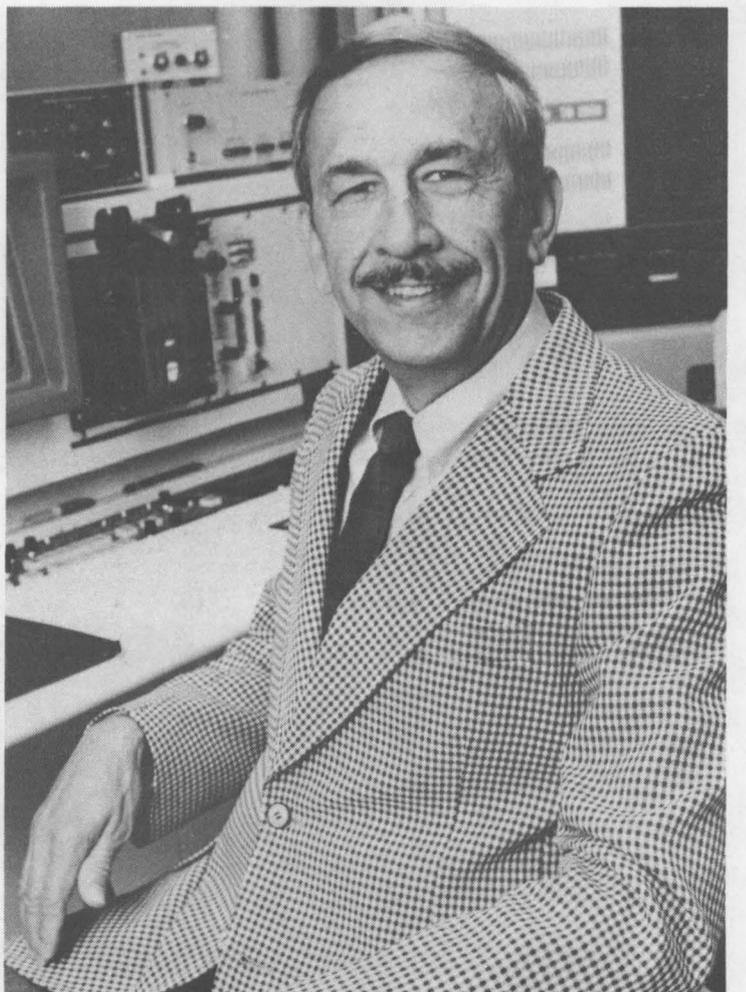
Patrick Tamayo (8284) 15



Stan Meyer (5115) 25



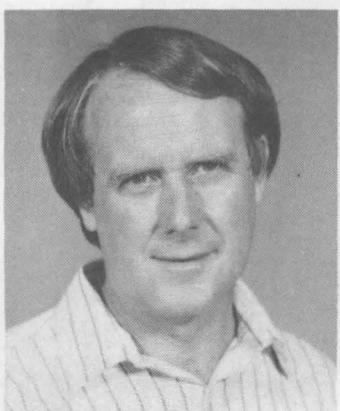
Bill Wilson (8230) 20



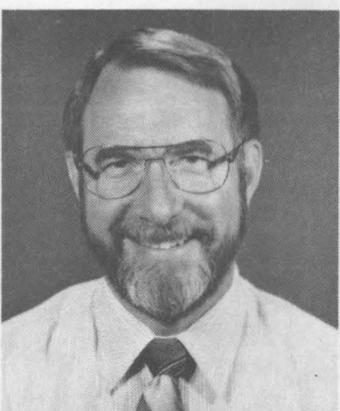
Gilbert Cano (6454) 25



Terry Stalker (1415) 15



Bill Boyer (9133) 20

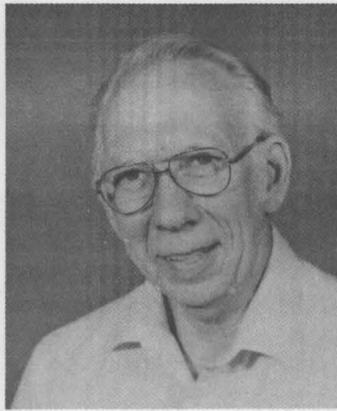


Frank Thome (6515) 20

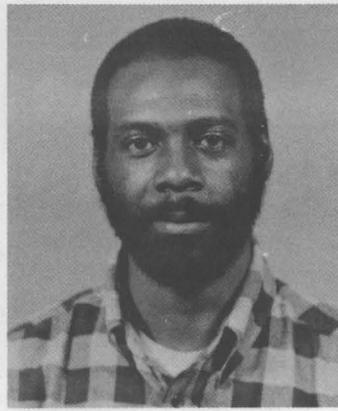
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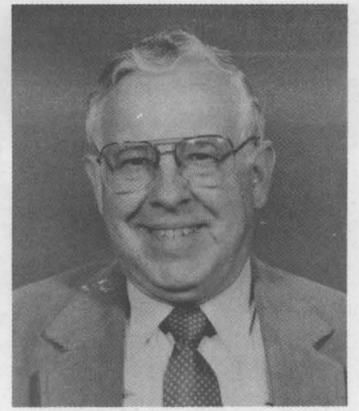
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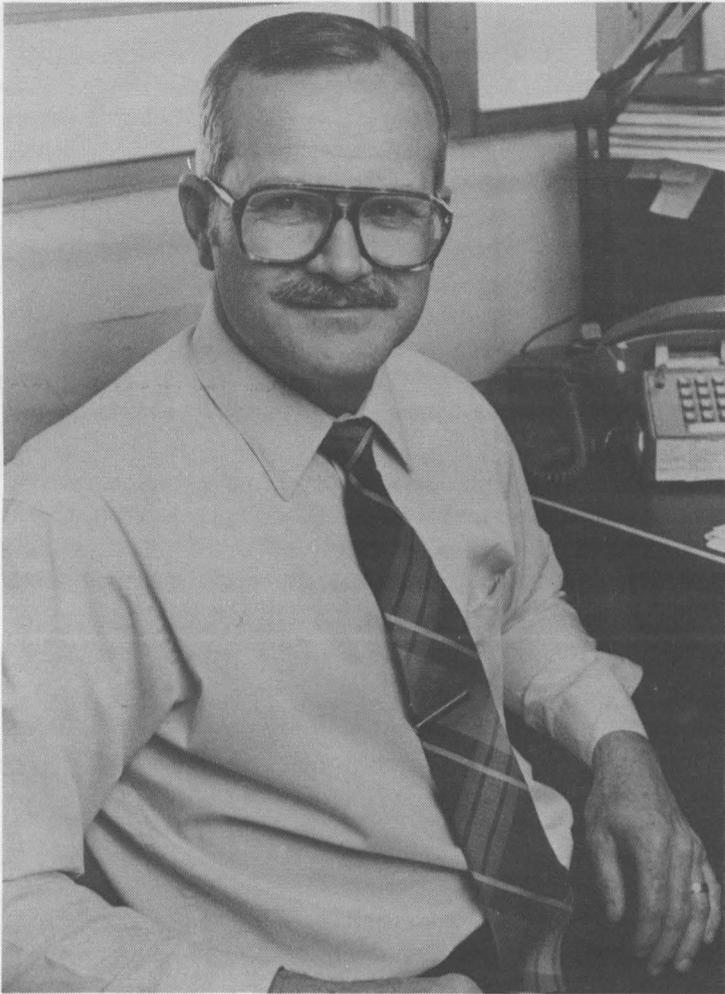
Edwin Beauchamp (1845) 25



Parris Holmes (7555) 15



Mickey Sanchez (3412) 35



Joe Honest (3724)

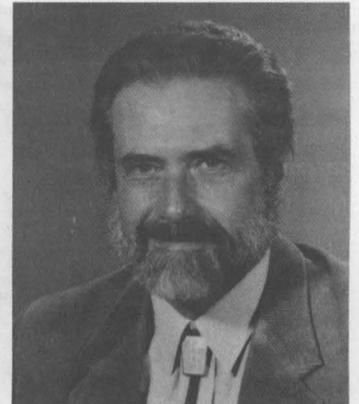
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Alice Morgan (4020) 25



Dennis Miyoshi (5240) 20



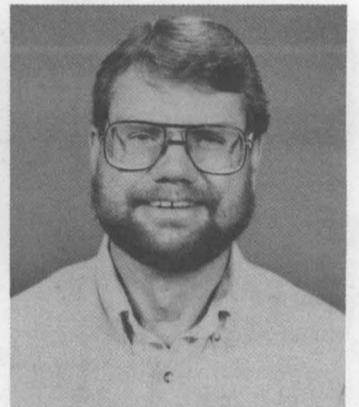
Bob Workhoven (5267) 30



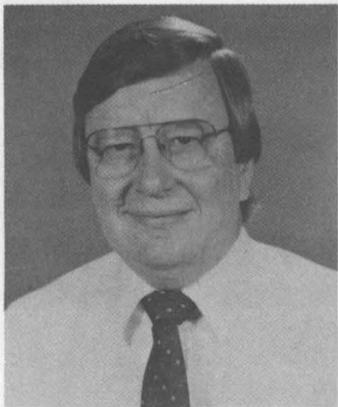
Al Heckes (6215) 30



Arthur Key (6454) 25



Kevin Babb (7531) 15

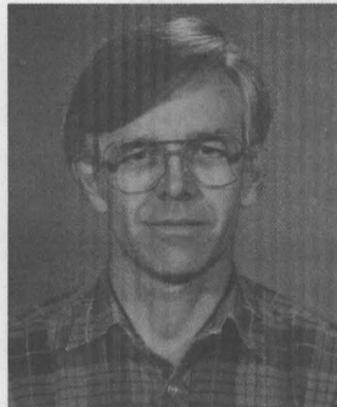


Alan Stemm (9222)

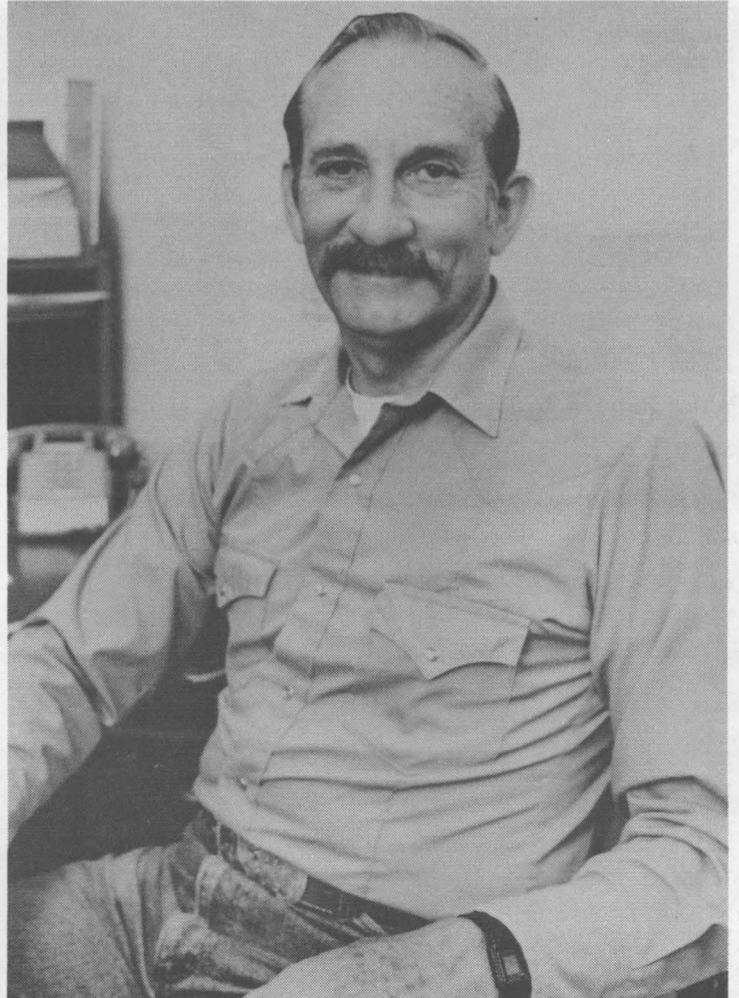
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Clarence Carter (5113) 35

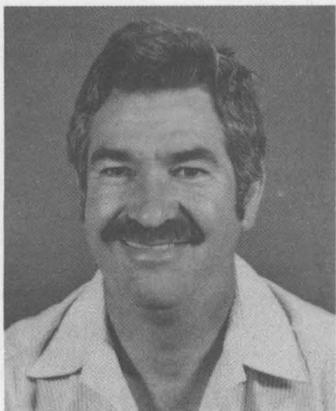


Donald Overmyer (1151) 20

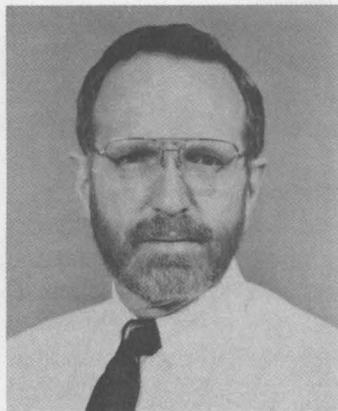


Lester Harris (5231)

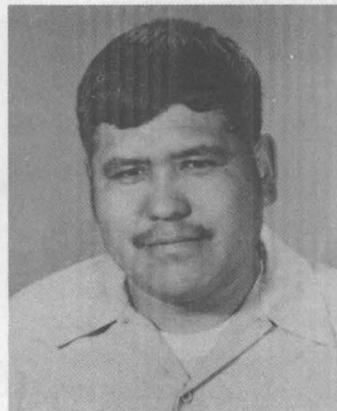
30



Donald Tipping (7523) 20



David Bennett (9015) 20



Johnson Morgan (7472) 15

Retiree Deaths

| | | | |
|-------------------------|---------|------------------------|----------|
| Gunner Scholer (71) | Jan. 3 | Stanley Eastman (72) | Feb. 12 |
| John Sullivan (66) | Jan. 6 | Guy Pearson (78) | Feb. 12 |
| Webb Shafer (81) | Jan. 10 | Ben Seely (74) | Feb. 14 |
| James Wentz (62) | Jan. 11 | George Smith (70) | Feb. 14 |
| Candido Montano (80) | Jan. 14 | James Park (61) | Feb. 16 |
| Ina Orr (73) | Jan. 17 | John Ingram (63) | Feb. 20 |
| Kenneth Smith (72) | Jan. 17 | Ernest Kersten (90) | Feb. 20 |
| Don Shuster (67) | Jan. 22 | John Chavez (71) | March 9 |
| Daniel Callahan (72) | Jan. 25 | Raymond Hanson (75) | March 14 |
| Nicholas Tarnawsky (82) | Feb. 2 | Efren Apodaca (79) | March 16 |
| Orlando Garcia (74) | Feb. 3 | Mary Houston (82) | March 17 |
| Albert Clamp (66) | Feb. 11 | Clarence Johnson (65) | March 25 |
| Charles Freund (68) | Feb. 11 | Vincent Strascina (69) | March 30 |

Welcome

Albuquerque

James Calderone (7535)
 Craig Callahan (3426)
 Doretta Darden (3426)
 Raymond Gonzales (7821)
 George Libman (4050)
 Jayne Sobering (2131)
 Mary Wolf (3426)

Arizona

David Clements (5111)

New Mexico

Teresa Dickey (3151)
 Michael Norte (7821)

South Carolina

Richard Pryor (6418)

UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS

Deadline: Friday noon before week of publication unless changed by holiday. Mail to Div. 3162.

Ad Rules

1. Limit 20 words, including last name and home phone.
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.

MISCELLANEOUS

WATER LILIES and water iris for outside pond. James, 294-6837.
 UPRIGHT PIANO, black Hardman, made in 1889, \$800 OBO. Tafoya, 865-9816 after 5.
 MINOX ULTRA CAMERA, flash, leather cases, \$150. Ginn, 883-0004.
 SLALOM WATER SKI, Jobe SR, glass, \$100; Connelly shorty wet suit, \$60. Pletta, 281-4277.
 BABY SWING, bathinette, crib mattress, high chair, van seats, love seat. Lanes, 291-0324.
 WASHER AND DRYER, portable compact, Montgomery Ward, \$250/set. Sisneros, 256-0857 or 265-2429.
 '76 STEURY POP-UP CAMPER, sleeps 8, stove, sink, refrigerator, 2 tables, screen door, surge brakes, propane, \$1000 OBO. McConnell, 831-0471.
 CURTIS MATHES COLOR TV, 19", \$100; Strollee car seat, w/cover, \$25. Shrouf, 821-0765.
 FIVE-PIECE DINETTE SET, 42" round table, w/2 extra leaves, \$175. Adam, 265-9105.
 AUTOMOTIVE AND PICKUP PARTS, call for complete list, will mail list to you. Chavez, 842-6374.
 NEW BARBECUE GRILL, \$25. Campbell, 888-3135.
 BALDWIN PIANO, 2 yrs. old, \$2300; dinette, \$50; rugs, brown or green, \$75/ea.; baby items. Mak, 298-2479.
 DINETTE TABLE, w/5 padded chairs (w/casters), \$100. Brewster, 884-8312.
 LAWN MOWER, Briggs & Stratton power reel, no catcher, \$45. Tilgner, 821-7551.
 PANORAMA CONSOLE STEREO, \$50. Crawford, 883-5545.
 WOODEN GUN RACK, \$10. Brion, 298-1761.
 POP-UP CAMPER, 7' Viking, truck slide-on, stove, sink, icebox, heater, jacks & stand, 110/12-volt converter, sleeps 3, \$1200 OBO. Ater, 822-9697.
 GERRY TWIN STROLLER, dual wheels, w/canopies and seat belts, folds, umbrella handles, \$24. Barr, 821-5870.
 THREE MADAME ALEXANDER DOLLS: Algeria, Indonesia, Israel, boxed, discontinued, \$40/ea. or \$110/all. Van Deusen, 291-8196.
 VEMCO V-TRACK DRAFTING MAC-

HINES, fit 36" x 60" table, one right-handed, one left-handed, \$125/ea. Davie, 296-3950.

QUEEN-SIZE SOFA SLEEPER, \$25; child's dresser & chair, \$25/set; 4-drawer chest of drawers, \$20; 3 sets of queen-size sheets, \$7/set. Averill, 898-5259 evenings or weekends.

TOY FOX-TERRIER PUPPIES, black & white males, parents are 10" tall and weigh 7 lbs. Miller, 299-6067.

OLYMPUS OM10 35mm CAMERA, w/28-50mm zoom lens, T-20 Olympus flash, case, \$150. Gregory, 344-1436.

TELESCOPE, 8" Celestron, accessories, \$500 firm. Wischmann, 821-2966.

COUCH, 4-cushion, tapestry, shades of gold, green, red, black, blue/gray, \$100. Puhara, 255-7447.

NATURAL TAURELINE MINK COAT, jewelry, sterling silver (8- & 12-place sets), furniture, china, fur jacket, clothing, lamps. Alexander, 884-4930.

TRAVEL TRAILER, 32', loaded, '87 model, equalizing hitch, Road Ranger Elite, \$13,900. Riley, 344-1809.

STYLE HOUSE CHINA, blue/gray pinecone pattern, w/silver trim, \$50 OBO; Community silverplate, circa 1950, make offer. Stein, 299-8875.

BAR W/LIGHT, 2 bar stools, \$199 OBO. Campbell, 889-0961 or 275-0795.

LA-Z-BOY RECLINER/ROCKER, gold vinyl and fabric, \$75. Dunlap, 884-0232.

ANTIQUE TOOL COLLECTION, Fred Harvey rolltop desk, guns, Navajo rugs. Oravec, 266-9145.

USED BRICKS, 250+; edging & blocks; exercycle; 4-tube fluorescent lights; unfinished cherry lumber; new shelf unit; utility cabinet. Myers, 294-7316.

GREEN COUCH, 7' long, \$30 OBO; dinette table, \$12 OBO. Grafe, 291-9692.

LOG-SPLITTER HARDWARE: 8' I-beam, Hyd-Ram 6-hp motor, axle, \$350; aluminum and steel sash windows, \$10 & \$12; 12' galvanized-steel pipe, \$35. Garcia, 888-4735.

DOG HOUSE, for medium-size dog, \$25. Furaus, 293-9799.

IBM ELECTRIC TYPEWRITER, model C, w/long carriage, recently overhauled, \$75. Curzi, 296-5386.

LADY KENMORE WASHER and gas dryer, 3 yrs. old, white, \$600/set OBO. Weston, 255-1196.

QUEEN-SIZE BEDROOM SET (Santa Fe style): headboard, dresser w/mirror, nightstand, desk, \$395. Barger, 296-0676.

MCCORMICK INTERNATIONAL ALFAFA BAILER, 6" Wisconsin irrigation gas pump. Romero, 1-864-6157.

ELECTRIC CEMENT MIXER, heavy-duty, \$150; electric hedge trimmer, Black & Decker, 16", \$15. Bray, 292-2410.

METAL DETECTOR, Whit's Coinmaster 4000/D Series 3, nickel/cadmium rechargeable battery, battery charger, stereo headphone, \$165; 5' RV window awning, \$35. Allen, 298-9833.

LABRADOR/AIREDALE PUPPY, spayed female, 8 months old, has shots, \$30. Walker, 281-9587.

ROTTWEILER, 2 yrs. old, spayed female, free to home with good fence. Smith, 293-0216.

BEER-BOTTLE COLLECTION, approximately 50 empty bottles, domestic and foreign brands, free. Schubeck, 821-3133.

COURT SALE, 1600 Sagebrush Ct. SE (Four Hills), Saturday, May 13,

9 a.m.-1 p.m. Cochrell, 298-2068.
 SHOP SMITH, on roller base, accessories, \$650. Freyermuth, 299-2053.

SECTIONAL SOFA, \$150; rocker/recliner, \$75; oak coffee table, \$50; viola, \$100. Westfall, 884-8701.

POOL TABLE, 8', slate bed, dark oak, Spanish style, w/red cloth, accessories, \$500. Campbell, 296-8304.

SLUMP ROCK, new, cream, 4" x 4" x 16", 700 total, 35¢ ea. or \$200/all. Sanchez, 255-5515.

ROLLTOP DESK, \$200; baby stroller, \$25. Vigil, 293-5656.

CHEV. ENGINE, 6-cyl., 250-CID or 292-CID, \$40. Zirzow, 294-7296.

TRANSPORTATION

BICYCLE, Raleigh Grand Prix, 12-spd., Shimano 600EX components, \$100. Rutledge, 268-1405.

'83 CHEV. SILVERADO PICKUP, 1/2-ton, PS, PW, PL, AC, fiberglass shell, 41K miles, \$6000. Rivers, 836-6304 or 269-0741.

'85 KAWASAKI 600 NINJA, red/black factory paint, 6.2K miles, \$2000. Boissiere, 291-0159.

'74 CHEV. PICKUP, 350 engine, sliding window, \$1200; fiberglass topper w/vent, light, sliding windows, \$200. Andraka, 294-2618.

'84 OLDS. CUTLASS CIERA LS, PS, PB, PW, PL, AC, AM/FM stereo, V-6, \$1000 below book, sell for \$3300 OBO. Walston, 296-0372.

'59 FORD PICKUP, 1/2-ton, chrome wheels, AM/FM, new exhaust. Padilla, 873-1480.

'84 OVERLAND RV, 30', 10K miles, all extras. Otts, 884-5072.

'84 HOBIE CAT 16, champagne w/blue stripes, blue prism sails, extras, \$2600 OBO. Horton, 884-8989.

'79 PORSCHE TURBO, red, 5-spd., \$5000 OBO. Durkee, 255-4211 or 294-4074.

'87 KAWASAKI KX-125 DIRT BIKE, \$1600 OBO. Witkowski, 299-6402.

REPO: '65 Corvette, 2-dr. coupe, black hood, factory side-pipes, non-original engine, 4-spd., PW, bids accepted through May 7, we reserve the right to refuse all bids, subject to prior sale. Sandia Laboratory FCU, 293-0500 Sandy.

BICYCLE, English-made, w/Archer 3-spd. gears, \$30. Brion, 298-1761.

WOMAN'S BICYCLE, 24", \$25. Spire, 275-3655.

WOMAN'S BICYCLE, 10-spd. Lanes, 291-0324.

BOY'S BICYCLES: 24" Schwinn, \$25; 26" 10-spd., \$40. Adam, 265-9105.

BICYCLE, Fuji Royale, 12-spd., 19", \$50. Rosenberg, 296-1346.

'84 THUNDERBIRD, V-8, PS, PB, AC, tilt, cruise, Airdam package, chrome wheels, \$6300 OBO. Caldwell, 821-7110.

'86 PLYMOUTH CARAVELLE, 4-dr., PS, PB, AT, \$6600. Campbell, 275-1143 after 6.

'80 KAWASAKI MOTORCYCLE, 650cc, windshield, luggage rack, adult-ridden, 15K miles. Pessetto, 299-8216.

BATAVUS "CHAMPION" 10-SPD. BICYCLE, 21" frame, \$75. Dalton, 293-6085.

'82 CORVETTE, collector's edition, 27K miles, completely original, loaded, \$13,750. Clevenger, 888-0201.

'68 MERCEDES, dark green, full power, other features, recently detailed, sheepskin covers, \$2000 OBO. Gar-

ner, 292-3859 leave message.
 '86 SAAB 900S TURBO, FWD, leather interior, electric sunroof, 28K miles. Lutgen, 843-9642 or 281-2095.

MOUNTAIN BIKE, Bianchi Forte, 21-1/2" chrome/moly frame, Shimano brakes, 18-spd. drive train, rear rack, \$250. Lagasse, 293-0385.

CATAMARAN SAILBOAT, 18' Prindle, carries 4, trapeze, harness, custom trailer, 2 cargo racks, \$3500. Blewer, 268-9019.

'78 CHEV. SUBURBAN, 4-WD, new paint, transmission, transfer case, and interior, \$6000 invested, sell for \$5000. Patton, 298-9987.

'63 DODGE POWER WAGON, w/'68 383 engine, winch, duals, cattle rack, best offer. Oravec, 266-9145.

'69 GRAND PRIX, model J, rebuilt transmission, new engine, upholstery, paint, vinyl top-breaks, \$3000 OBO, will trade for AT truck. Pimentel, 884-1669.

'82 PONTIAC J2000, 77K miles, AC, PS, 4-spd., emission certified, \$1950. Scott, 294-8627.

VIP 17' I/O OPEN-BOW BOAT, 175-hp Mercruiser, new upholstery and travel cover, \$6500. Patton, 298-9987.

'80 SUZUKI GS850G, matching Vetter bags and fairing, best offer. Furaus, 293-9799.

'85 OLDS. FIRENZA, 58K miles, V-6, 4-spd., extras, \$5500. Weart, 292-3167.

'81 FORD CUSTOM VAN, 6-cyl., new AT, AC, cruise, 71K miles. Bronkema, 821-2119.

'80 MAZDA RX-7, 4-spd., AM/FM cassette, new tires. Case, 299-0923.

'85 BRONCO II, V-6, automatic OD, priced at blue-book loan. Jones, 255-7924.

'77 FORD LTD LANDAU, loaded, 40K miles, \$4950 firm; '78 Honda motorcycle, 185cc, Twin Star, \$650 OBO. Sanchez, 255-5515.

REAL ESTATE

2-BDR. HOME, 1 bath, view, trees, FP, Jenn-Aire, on Ridgecrest, 7.8% assumable, \$73,000. Rutledge, 268-1405.

3-BDR. HOME, Four Hills addition, double garage, new carpet, hot tub, wrought-iron security, skylights, landscaping, 8 yrs. old, 10% interest, \$111,000. Gallegos, 294-0233.

3-BDR. MOSSMAN HOME, NE Heights, 1-3/4 baths, 1860 sq. ft., 7828 Hermanson Pl. NE, \$107,000. Delnick, 298-5276.

3-BDR. BRICK MOUNTAIN RETREAT, 2 FPs, recreation room, enclosed garage, 1 acre, landscaped, trees, La Cueva (Jemez Mtns.), \$99,500. Bassett, 898-1840.

12.8 ACRES, Amalia, NM, near Valle Vidal, Latir Lakes, Rio Grande, Ski Rio, 55 miles to TSV, \$7000. Stone, 298-4641.

3-BDR. HOME, La Cueva and Dennis Chavez school district, 2 baths, open house 1-5 p.m. Sunday or evening appointment, 8109 Irwin NE. Lautenschleger, 823-2015.

3-BDR. HOME, 2 full baths (jet tub in master bath), great room, formal dining, Sandia Heights, 1-1/2 yrs. old. Christensen, 294-6866.

2-BDR. HOME, 2 baths, 2-car garage, Ladera Heights, 2 x 6 construction, landscaped, alarm system, finished garage, patio/garden area, assumable 9.5% VA, \$71,400. Holman, 831-1311.

12.7 MOUNTAIN ACRES, So. Hwy. 217, utilities, \$36,000/cash or \$46,000 REC; 2-bdr. home, Manzano Springs area off So. 217, \$30,000 cash or assumable FHA loan. James, 281-3864.

3-BDR. HOME, 1500 sq. ft., remodeled, near UNM, 1-3/4 baths, FP, utility room, sprinklers, basement, extra storage, \$85,000. Stubblefield, 296-7733.

3-BDR. HOME, den, FP, shop area, 1675 sq. ft., \$60,500. Barger, 296-0676.

3-BDR. HOME, 2 baths, Taylor Ranch area, all brick, solar heated, 9-1/2 12-yr. FHA assumable, \$89,000. Faculjak, 898-6502.

2-3-BDR. HOME, red-oak kitchen, 400-sq.-ft. workshop, skylights, hardwood floors, woodstove, storage, \$64,500. Fessler, 294-8175.

3-BDR. HOUSE on .5 acre in North Valley, 1800 sq. ft., city water plus irrigation well & pump, van pool available, horses allowed, bridle paths to river. Averill, 898-5259 evenings or weekends.

3-BDR. MOBILE HOME, '86 Lancer, 16' x 80', extras. McClenahan, 275-9532.

MOUNTAIN CABIN, Pecos Wilderness area, Santa Fe National Forest. Edwards, 281-2743 evenings.

2-BDR. MOBILE HOME, 1 mile from Medical, '85 model, 2 full baths, vaulted ceiling, appliances, curtains, some furniture included. Spinello, 256-1597.

3-BDR. HOME, Taylor Ranch, 2 baths, FP, DR, oak cabinets, utility room, 2-car garage, 1750 sq. ft., 9-1/4% assumable loan, \$99,500. Zurzolo, 898-1175.

WANTED

HOUSEMATE, starting June 1, NE Heights, pool, male or female, references required, \$225/mo., utilities included. Smith, 291-9241.

REFRIGERATOR, almond color; washer & dryer, in good condition, reasonable. Tremi, 266-5412.

QUEEN- OR KING-SIZE MATTRESS and box spring, good condition. Liguori, 256-3613.

FORD F-150 PICKUP, '86 or newer, supercab, 6-3/4' bed, V-8, AC, AT w/OD, 3.5 or 3.7 axle ratio, light color. Coalson, 298-0061.

PONTIAC RALLY II RIMS (code "JW" stamped by valve stem), miscellaneous parts and literature for '70-'71 Firebird. Cowen, 296-5980.

CHROME WHEELS, two 14", 5-hole and four 16", 8-hole. Garcia, 298-7340.

STEP LADDER, 8'; extension ladder, 20'-24'; gasoline-powered cement mixer, reasonable. Stone, 298-4641.

RELIABLE TEENAGER TO WATER LAWN while owner on vacation, old Holiday Park area, near Hoover Middle School. Schamaun, 298-5192.

ROOMMATE, nonsmoker, approximately 1 mile from UNM. Clement, 265-1639.

COMPUTER DESK, printer stand, tall bookcases. Walker, 281-9587.

ATV FOUR-WHEELER, 200cc or larger. Hindi, 299-8996.

LOST AND FOUND

EYE GLASSES FOUND, left by person who bought our playpen on April 21. Kraynik, 294-1043.

SHARE-A-RIDE

RIDE WANTED, West Gate Heights area to Tech Area I. Ewen, 836-3563.

Coronado Club Activities**Cinco de Mayo
Celebration
Tonight**

A CALENDAR CHECK tells you today's May 5. And we all know what *that* means, right? The C-Club, as usual, is pulling out all the stops to ensure a rip-roaring Cinco de Mayo celebration this evening. Start the festivities with selections from a great New Mexican menu — chicken or beef fajitas, enchiladas, combination plates; you get the picture. Entrees are served with rice, refried beans, and appropriate accompaniments; a plate of chips, salsa, and sopaipillas/honey tops off each order. Special entertainment includes a Latin dance revue (7:30-8 p.m.) performed by the colorful Ballet en Fuego. Afterwards, it's variety music from Together for dancing from 8 to midnight. Para comida reservations, call 265-6791.

THE ONE AND ONLY BINGO OPPORTUNITY for the rest of the month is Thursday night, May 18. Cards go on sale at 5:30 p.m., and the early-bird starter game is set for 6:45. An inexpensive buffet is available from 5:30 on, so forget about cooking that evening; just concentrate on gaming.

MOTHER'S DAY BRUNCH (May 14) at the C-Club presents a perfect opportunity to treat Mom on "her" day. A scrumptious buffet's served from 10 a.m. to 2 p.m., and Bob Banks provides piano music from 11 to 1. Naturally, each guest of honor receives a flower as a reminder of this very special day. Prices: adults, \$10.95; children ages 4 to 12, \$5.95; and toddlers 3 and under, free. Early reservations are recommended; this one's always a sellout.

T-BIRD CARD SHARKS get together for fun and games this month on back-to-back Thursdays: May 11 and 18. The action begins at 10 a.m. and, as usual, free refreshments and door prizes accompany the card-playing.

A SPECIAL EVENING is in store for people attending the C-Club Dinner Theatre next Friday night (May 12). The dinner buffet (served at 6 p.m.) includes baked herbed chicken, baron of beef, rice pilaf, mashed potatoes and gravy, steamed vegetables, a salad bar, and cake for dessert. Then settle back and enjoy the play, "A Lion in Winter," presented by the Kirtland Community Theatre folks at 8 p.m. (Remember the 1968 movie version, starring Katharine Hepburn and Peter O'Toole?) The \$9.95 ticket price includes dinner and the show. Advance tickets are available, or you may buy them at the door.

AN OPEN HOUSE for prospective members is on tap from 4:30 to 6:30 p.m. at the C-Club Thursday, May 18. Come out for free refreshments and door prizes, a preview of coming events, and a look at the many advantages Club membership offers. Signing up for membership that night gets you an \$8 discount on a six-month membership or a \$16 discount on a one-year membership. Also, new members purchasing swimming or tennis season passes will receive a \$10/family discount on the passes.

Congratulations

To Laura (1552) and John Nance, a son, Niklaus James, April 12.

To Linda Harkins and Chris Robertson (5212), married in Pojoaque, April 22.

To Georgia Bowens (21-1) and Jim Matsu (7815), married in Albuquerque, April 22.

To Marcie (3712) and Tim (7818) Salvador, a daughter, Desirae, April 26.

**'Exceptional Service in the
National Interest'**

Forty years ago this month, President Harry Truman wrote to AT&T President Leroy Wilson requesting that AT&T take over direction of the "Sandia Laboratory" in Albuquerque.

At that time, Sandia was a branch of Los Alamos Scientific (now National) Laboratory. The University of California, which manages LANL, had asked to be relieved of responsibility for ordnance and manufacturing activities conducted at Sandia.

Sandia activities, President Truman's letter emphasized, were vital to national defense; he underscored the idea by adding that AT&T

would have an opportunity "to render an exceptional service in the national interest."

The rest is history. AT&T, after reviewing an extensive proposal from the Atomic Energy Commission (now DOE), agreed to manage Sandia on a no-profit, no-fee basis and began operating the Labs later that year. The latest five-year contract between AT&T and DOE to continue the arrangement was signed last fall (LAB NEWS, Nov. 4, 1988).

A copy of President Truman's letter appears below.

THE WHITE HOUSE
WASHINGTON

May 13, 1949

Dear Mr. Wilson:

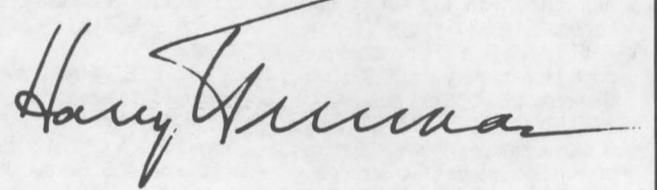
I am informed that the Atomic Energy Commission intends to ask that the Bell Telephone Laboratories accept under contract the direction of the Sandia Laboratory at Albuquerque, New Mexico.

This operation, which is a vital segment of the atomic weapons program, is of extreme importance and urgency in the national defense, and should have the best possible technical direction.

I hope that after you have heard more in detail from the Atomic Energy Commission, your organization will find it possible to undertake this task. In my opinion you have here an opportunity to render an exceptional service in the national interest.

I am writing a similar note direct to Dr. O. E. Buckley.

Very sincerely yours,



Mr. Leroy A. Wilson,
President,
American Telephone and Telegraph Company,
195 Broadway,
New York 7, N. Y.



FACILITIES DIRECTOR Ward Hunnicutt (7800) presided over ribbon-cutting ceremonies at the Product Development Laboratory (PDL) April 21. Here, he's reading a list of people who contributed to the project. The PDL will eventually house some 190 people from Materials Process Engineering and Fabrication Directorate 7400. About 25 percent of the occupants have moved in, with the rest slated to occupy the building by November.