

Steel Containers For Weapon Parts Sent to Russia

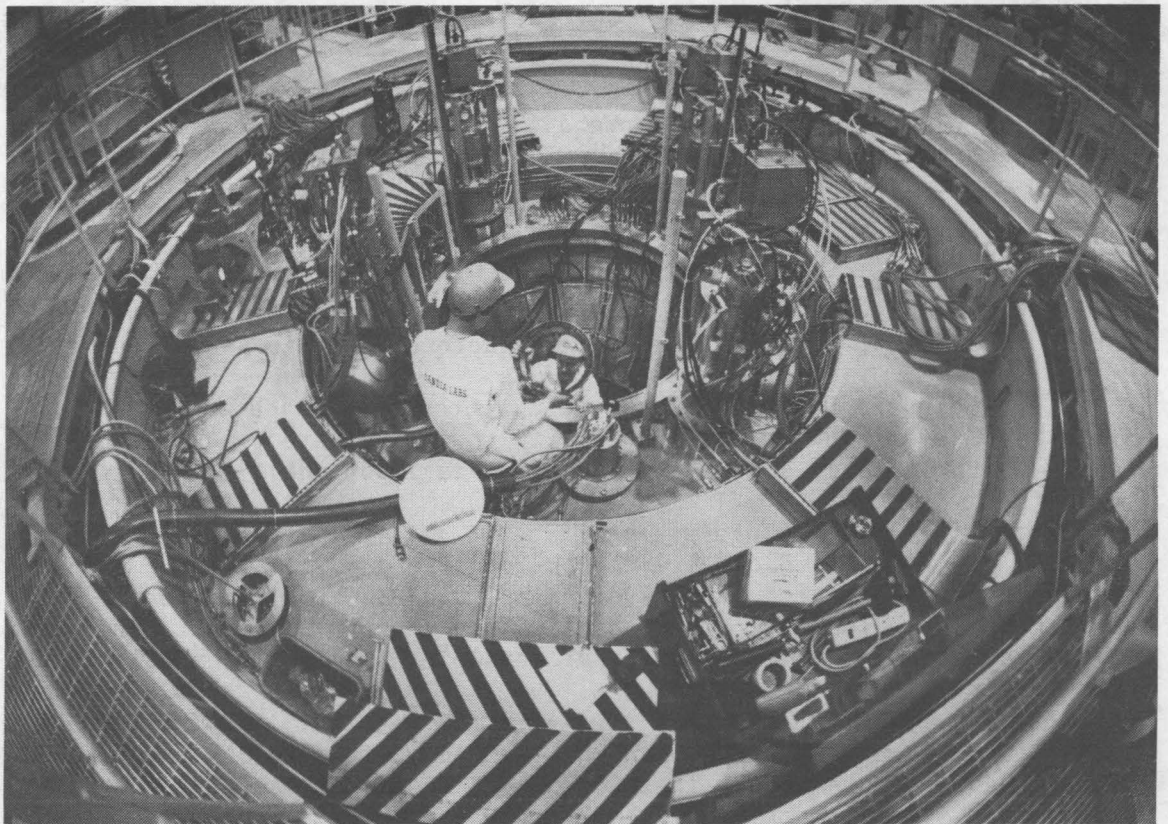
Prototypes of special containers designed to safely transport and store components of dismantled nuclear weapons made in the former Soviet Union have been shipped from Sandia to Moscow for evaluation.

"Though I don't know everything that will be involved in the Russians' evaluation," says Dave Nokes, Manager of Surety Program Office 5801, "I'm sure they'll check how well the containers fit their logistics operations and equipment, and they'll probably do some welding tests."

The US will manufacture 10,000 of the units in a project managed by the Defense Nuclear Agency (DNA) for the Assistant to the Secretary of Defense for Atomic Energy.

Sandia is providing design and testing to support DNA and DOE in early stages of the project. Sandia also has responsibility for technical support of the procurement phase by helping DNA prepare technical information for companies bidding on the fabrication contract.

The shipment of 10 test units, which occurred last month, marks a major step outlined in a June
(Continued on Page Four)



LIFE AT THE TOP — the top of Particle Beam Fusion Accelerator II — is what LAB NEWS photographer Randy Montoya captured on a recent visit to Tech Area 4. Working on PBFA II are Shane Speas (back to camera) and Jimmy Ryan (inside the big machine). Shane and Jimmy are contractors who make up part of the PBFA II operation crew in Fusion Accelerator Dept. 1236.

LAB NEWS

VOL. 45, NO. 10

SANDIA NATIONAL LABORATORIES

MAY 14, 1993

Eliminates 'Human Touch'

Powder Dispenser Makes Handling Explosives a Hands-off Proposition

Hazardous explosive powders that were once dispensed by hand at the Mound Plant in Miamisburg, Ohio, can now be handled by a Sandia-designed automated system, virtually eliminating worker exposure to accidental explosions.

The system measures and dispenses the powders with greater consistency and accuracy than is humanly possible. It improves productivity by removing the need for cumbersome safety barriers and barricades.

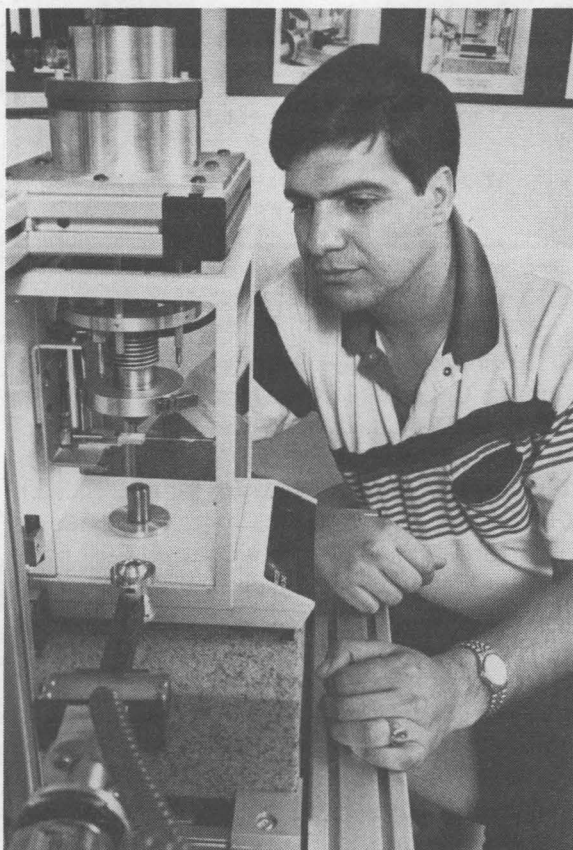
The Automated Dry Powder Dispenser is part of an effort by Sandia and EG&G Mound Applied Technologies to automate the entire fabrication process for explosive actuators and igniters. The resulting agile manufacturing system would be capable of processing a wide range of explosive components for DOE.

"Sandia's automated powder dispensing system has opened the door to the complete automation of explosive component manufacturing," says Pablo Garcia of Intelligent Systems Dept. II 1671, who was team leader for the system's development.

Other team members were Al Jones (1672), Mike Martinez, Mike Saavedra (both contractors), and John Salmonson (DOE).

Reduces Exposure to Hazards

Hand assembly of explosive components is a significant safety concern at the Mound Plant. At
(Continued on Page Four)



AUTOMATED Dry Powder Dispenser, for measuring out precise amounts of explosive powders, is viewed by Pablo Garcia (1671).

Not Music — Chromium

Sonic Drilling Rig Hits Heavy Metal At Closed Landfill

A field demonstration of sonic drilling technology at Sandia's closed Chemical Waste Landfill in Tech Area 3 is helping researchers characterize a plume of chromium and other metals, according to Bob Floran of Environmental Restoration Technologies Dept. 6621. Bob is project leader for the Characterization Technology Demonstration, part of 6621's Mixed Waste Landfill Integrated Demonstration Project.

"This chromium contamination was found while we were demonstrating an innovative drilling technology that uses sonic vibration," Bob

The contamination poses no immediate threat to human health.

says. "According to preliminary data, the highest concentration of chromium that we encountered beneath one of the disposal trenches within the landfill was 200-300 times background levels, as measured by field analytical techniques."

However, the contamination poses no immediate threat to human health unless it were to be ingested or inhaled, a remote possibility since the metals are buried well below the surface, says Bob.

Landfill Cleanup a Top Priority

The Mixed Waste Landfill Demonstration Project is funded by DOE's Office of Technology Development to assess, demonstrate, and transfer new and emerging environmental technologies. It has used Sandia's Chemical Waste Landfill as a major study site since the project began in 1991. A variety of chemicals, including chromic acid, were disposed of in the landfill during the '60s and '70s. The landfill was closed in 1985.

Chromium is a toxic metal and has the potential to migrate through the soil, Bob says. The chromium plume was discovered about 25 feet below the landfill. The water table is about 500 feet deep in this area.

Other metals, including copper, cadmium, lead, zinc, and possibly nickel are also present in
(Continued on Page Four)

What's Happening in Lab Development Div. 4000 — Page Six
Fitness Day Coming Up May 19, Hardin Field — Page Eight

This & That

Un-Intel-ligent Oversight - We didn't help Rio Rancho's identity crisis, according to several Sandians who called after the April 30 LAB NEWS hit employee desks. In our story about how Sandia helped Intel determine the cause of a recent acid tank accident there, we said the Intel semiconductor plant is located in Albuquerque. We know it's in nearby Rio Rancho, but somehow we blew this one. Our apologies to all of you Rio Ranchhands, or whatever you fine folks call yourselves. For the rest of this month, you may refer to Albuquerque as a Rio Rancho suburb.

* * *

Sign Language Doesn't Count - Last sentence in a job announcement in the May 3 *Weekly Bulletin*: "An ability to communicate quickly and clearly, both in words and in writing, also is important."

* * *

Sorta Settled - Things are starting to get back to normal after our move from "lovely" old Bldg. 814 to Mobile Offices 172-173, but I somehow miss the thick layer of dust on everything. Old 814 is slated to be demolished before long, but rumor has it that the *Hysterical* Preservation Society may try to save it as a classic example of slightly upscale 19th Century dairy-barn architecture.

As I'm writing this, our fingers are crossed that this issue's photos will look OK, because our new black-and-white darkroom facilities weren't ready when we moved. Therefore, we had to shoot several photos in color and have our printer make black and white printing negatives from them. The darkroom delay is also why we don't have a Milepost page (service anniversary photos) in this issue. We hope to publish some long-delayed Milepost photos in the next issue.

* * *

Tech Transfer Center Revisited - My comment in the last issue about Sandia having two Technology Transfer Centers - one a building and one an organization - prompted a call from retiree Charlie Winter, who directed the Management Staff (now reorganized and renamed) for about 14 years before retiring in '86. Charlie reminded me that the Technology Transfer Center (825) is so named primarily because funds were available for tech transfer projects when the building was constructed in the early '80s, but not so for projects such as auditoriums.

OK, but is there any reason we can't now rename the building to keep folks - especially our visitors - from confusing it with the Tech Transfer Center organization that's somewhere around a mile away? We need to be as user friendly as possible if we are to prosper in these rapidly changing times. Maybe it's time to establish a Quality Action Team to ensure that we really are as user friendly as we claim to be.

* * *

Larry's Lessons, Part 2: - Continuing from the last issue with a few things I've learned during my four-year sentence - I mean, uh - tenure as LAB NEWS editor:

- Ninety-nine percent accuracy in school gets you an "A." In this business, it gets you grief. Readers aren't shy about pointing out our occasional mistakes (see first item in this column). Actually, that's just fine. It keeps us on our toes, striving for perfection - continuous improvement and all that stuff, you know.

- Never, ever say that women "chat." In a photo caption several years ago, we said some Sandia women were chatting with a visitor before a meeting. My ears are still ringing!

- Finally, most Sandians are genuinely nice folks - friendly, hard-working, and helpful. I'm glad I work here, most days at least. ●LP

No Word on Future Plans

DOE/HQ Withdraws From Technical Safety Appraisal

A DOE Headquarters group's participation in a long-planned Technical Safety Appraisal (TSA) has been "suspended" due to DOE reorganization and the "probable reassignment" of that group within the Headquarters operation.

Bill Mairson of ES&H External Interface Office Dept. 7026 says Sandia was notified April 28 that this aspect of the Technical Safety Appraisal (TSA) for Sandia - both New Mexico and California - was suspended.

Bill says the meaning of "suspended" was not clarified but that representatives from DOE's Defense Programs (DP-67) Office of Inspections do not intend to be at Sandia on the dates previously announced.

DOE/AL's Safety Programs Division plans to conduct its portion of the TSA as scheduled - May 17-21 for Sandia/California and June 14-25 for Sandia/New Mexico - although DOE/AL says that because of the lack of DP-67 participation, its appraisal will be reduced in both scope and effort.

Bill says the ES&H External Interface Office will keep Sandians updated as additional information becomes available, but that anyone with specific questions or problems should contact Dept. 7026 on 848-0400. ●

Take Note

The Armed Forces Communications and Electronics Association's next luncheon meeting on May 18 will feature guest speaker Stan Wernick (Motorola Federal Government Division), who will speak about "Radio Frequency Intrusion Detection Systems for the Federal Government." The meeting is at the Kirtland AFB Officers Club. The pay-as-you-go lunch begins at 11:30 a.m., followed by chapter business and the presentation at noon. Members and non-members can call Capt. Dan Shaffer on 6-4203 or Eugene Boyd on 888-1527 for more information.

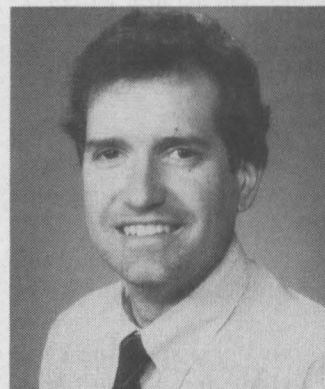
Supervisory Appointment

LEONARD NAPOLITANO, JR., to Manager of Scientific Computing Dept. 8117, which includes the Center for Computational Engineering.

Leonard joined Sandia in 1979 in the Applied Mechanics Department. He left in 1983 to work on a doctoral program at Stanford, then returned to the Imaging Technology Division in 1986 (that group merged with another and became the Exploratory System Division in 1992).

Leonard holds three bachelors degrees, in humanities and science, art and design, and civil engineering, all from the Massachusetts Institute of Technology (MIT); an MS in civil engineering from MIT; and a PhD in computer architecture for computational mechanics from Stanford.

He is a member of the scientific research honor society Sigma Xi, the IEEE Computer Society, and the Association for Computing Machinery. He is a licensed civil engineer in California.



LEONARD NAPOLITANO

Welcome

Albuquerque - Deanna Beaver (21-1), Richard Calvert (184), Marsha Deal (21-1), Shirley McDonald (21-1), Cynthia Padilla (21-1), Donna Pettit (21-1), Carolyn Quinn (21-1), Debbie Saavedra-Campos (7615), Lisa Sanger (7057), Meredith Thompson (21-1), Dianna Trujillo (21-1). **Other New Mexico** - Angie Morales (21-1), Charlotte Perry (181), Eleanor Shirley (21-1).

Elsewhere: *California* - Ireena Erteza (9136); *New York* - Deanna Springer (21-1); *Virginia* - Todd Jones (6411).

Congratulations

To Naomi (331) and Adolfo Olivas, a son, Cork-Joseph, March 31.

To Michelle (7600) and Allen (6211) Sault, a son, Daniel William, April 17.

To Rebecca (6904) and Raymond Bennett, a daughter, Alyssa Marie, April 28.

Sympathy

To Charles Stone (1561) on the death of his father in Albuquerque, April 30.

LAB NEWS

Published Fortnightly on Fridays by
Employee Communications Department 7162

SANDIA NATIONAL LABORATORIES
An Equal Opportunity Employer

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LIVERMORE, CALIFORNIA 94550
TONOPAH, NEVADA
NEVADA TEST SITE
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Sandia National Laboratories, a prime contractor to the US Department of Energy, is operated by Sandia Corporation, a subsidiary of American Telephone and Telegraph Co.

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Become Parents' 'Shadows'

Daughters of Sandians Learn It's All in a Day's Work

"The whole day was neat," exclaimed Sara Vorpahl, one of the daughters who visited Sandia/California on April 29. That pretty well sums up the reaction of all the girls who took part in the Labs' version of National Take Your Daughters to Work Day.

Celeste Rohlfling (8353) and Trish Larson (8453) organized the day under the auspices of the Sandia Women's Committee with backing from Education Outreach. Even though only six daughters took part in the first workday-with-a-parent at the Labs, Celeste believes the event will become an annual affair and include many more parents and daughters.

The Ms. Foundation for Women organized the event nationwide this year for the first time to permit daughters to shadow a parent during a typical workday, introducing them to the adult world of business and industry. "Recent studies show that young girls suffer a loss of self-esteem upon entering their teen years, and this exposure to their mothers' careers provides a great morale boost," says Celeste.

Visiting Labs, Lunching on Pizza

Because her children are too young to fit into the 9-to-15-year-old range covered by the day, Celeste hosted two other girls for part of the day, Frank Tully's (8353) daughter Katie, and Cynthia Whitfield's (8353) daughter LaShondra. She showed them Frank's laser lab and other highlights of the Combustion Research Facility.

LaShondra then helped her mother in the office area, loading software onto a Macintosh computer and creating a printout, as well as handling some mail. An eighth-grader at East Avenue Middle School in Livermore, LaShondra says she

would like to become a lawyer someday.

Livermore Montessori School fifth-grader Sara Vorpahl, daughter of Beth Fuchs (8746), says she was pleased with the experiments and labs she got to visit. Her mother was working on a hologram experiment in the interferometric diagnostics lab, and Sara

"Young girls suffer a loss of self-esteem upon entering their teen years."

helped set up some of the optics for it. Sara and Beth then went to the welding research lab to discuss some planned experiments there. After a lunch of pizza and burgers with the other five participating girls, Sara went to a two-hour briefing on the Technical Safety Appraisal with Beth.

Other girls participating included Danielle Gomes, who worked with her mother Diane (1951) in the Central Computing Facility; Heather Jensen-Miguel, who shadowed her mom Cindy (8100) and met VP John Crawford (8000) in the course of the day; and Elizabeth Falcone, who spent the day with her mother Pat (8101) in Bldg. 910.

Nationwide, thousands of girls were introduced to the world of work in laboratories, offices, factories, and businesses, many of them

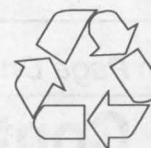


WHAT'S A BUCKYBALL? Two participants in Take Your Daughters to Work Day, LaShondra Whitfield (left) and Katie Tully, learn from Celeste Rohlfling (8353) about buckyballs. They're looking at a greatly enlarged model of one of these molecules of pure carbon.

seeing their parent in a work environment for the first time. The aim of the special day was to show young girls what they can expect in the adult world and how they can set their sights on any career they want, and to improve their sense of self-worth. At the same time, employers had the opportunity to interact with youngsters who will make up a sizable percentage of the 21st-century work force.



SANDIA CALIFORNIA NEWS



This newspaper can be recycled with Sandia office paper



VOLUNTEERS — Four Sandians received certificates from VP John Crawford (8000) during the annual Corporate Volunteerism Council luncheon. Here, John gets a carnation from Carmella Orham (8716); also seen are Sally Raubfogel (8642), Joan Bersie (8200), and Alan Pomplun (8275). Carmella provided more than 1,600 hours of volunteer service at a VA medical center. Sally co-chaired Expanding Your Horizons in Math and Science. Joan volunteers at the Family Crisis Center and organized a program to provide necessities to family shelters. Alan produced a multilingual video for new students at a local school.



RUSSIAN VISITORS — Three Russian nuclear lab leaders visited Sandia/California recently for a day of briefings, a tour of the Combustion Research Facility, and discussions of possible collaborations. Looking at one of Sandia's Hardened Accident-Resistant Containers designed for the safe transport of nuclear weapons are (from left) Yuri Trutnev, Deputy Scientific Director for Arzamus; Vladimir Mordvinsev, representing the Committee of International Relations at MINATOM, Moscow; Rob Rinne (8104); Jim Wright (5300); Evgeny Avrorin, Chief Scientist at Chelyabinsk; and John Crawford (8000).

(Continued from Page One)

Drilling Demo

high concentrations. All related information has been provided to DOE and the New Mexico Environment Department. The Chemical Waste Landfill is one of Sandia's top priorities for environmental restoration.

Bob believes this is the first time that sonic drilling technology has been used to drill under a hazardous waste site. Sonic drilling uses no drilling

Sonic drilling eliminates the possible spread of contamination by fluids and minimizes contaminated drill cuttings.

fluids and produces almost no cuttings, which eliminates the possible spread of contamination by fluids and minimizes waste.

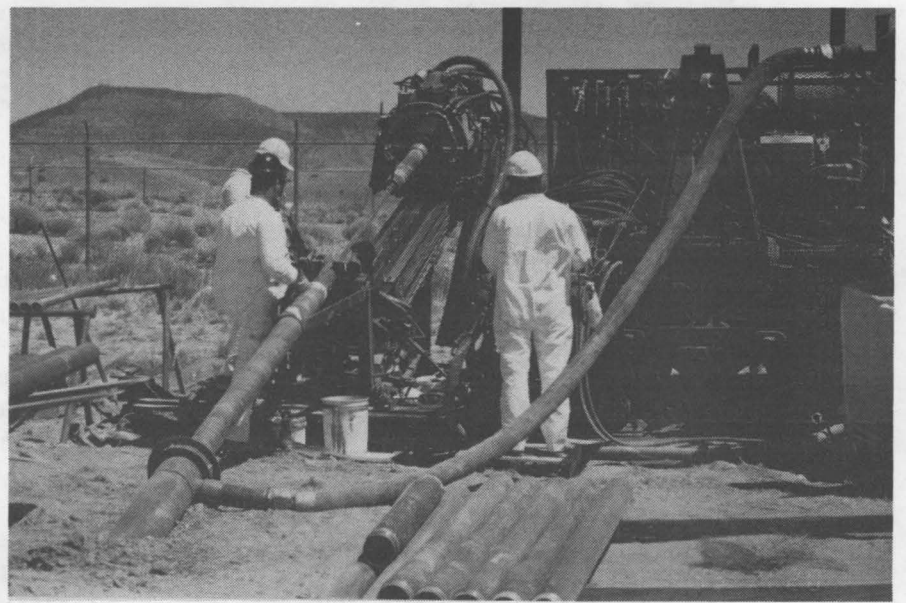
Another advantage, Bob says, is that sonic drilling can be used to drill shallow, near-horizontal boreholes. A drilling rig was used to drill two 15-degree-angle boreholes that are 150 feet long and

about 30 feet apart. Samples were obtained from the contaminated zone and analyzed quickly within a mobile laboratory using two different field techniques.

"Because slant boreholes were drilled instead of conventional vertical holes, the drilling site was located outside the boundary fence of the landfill, enhancing employee safety," Bob says.

The project crew also used a new technique to collect soil samples. Bob explains that samples are obtained ahead of the drill bit to keep the samples relatively cool. Elevated temperatures encountered during sonic drilling can present problems when volatile organic compounds are involved.

Another innovative technology in use at the

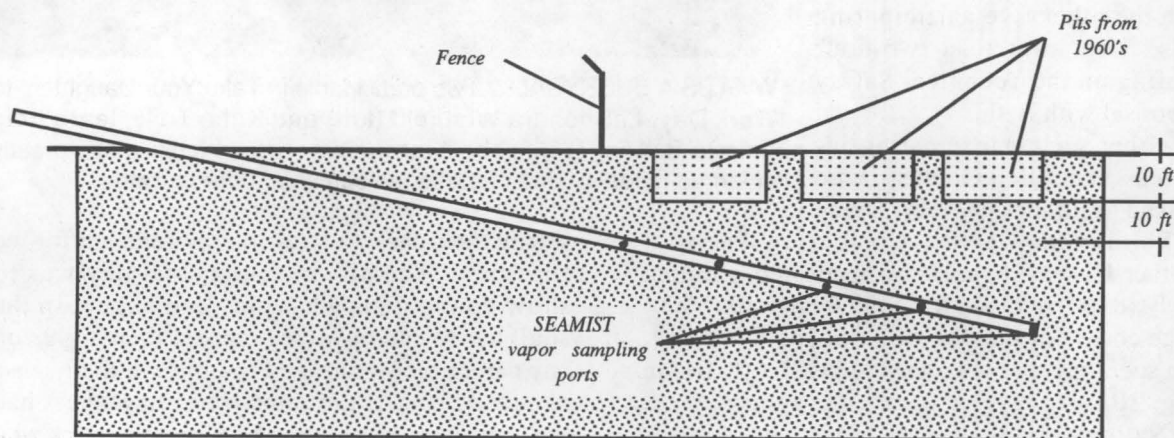


WORKERS drill into soil at the closed Chemical Waste Landfill in Tech Area 3, where researchers demonstrating a new sonic drilling technique identified a plume of chromium and other metals.

landfill is a tubular membrane deployed pneumatically in the boreholes that allows for installation of vapor sampling devices and downhole instrumentation. Named SEAMIST™, the membrane is manufactured in Santa Fe, N.M.

Work continues at the site to test various geophysical and geochemical sensors for environmental site characterization. The goal is to identify better, cheaper, faster, and safer technologies that can be transferred to private industry and used in systems for characterizing similar waste sites.

●AStotts(7161)



SONIC DRILLING can be used to drill shallow, near-horizontal boreholes, such as the two 15-degree-angle boreholes drilled under the Area 3 Chemical Waste Landfill.

(Continued from Page One)

Weapon Containers

1992 agreement between the US and Russia. The stainless steel containers were identified by Russia as a key element in support of its weapon dismantlement activities. The containers protect against the release of radioactivity in the event of an accident during transport or long-term storage.

First Step in Fast-Moving Program

"This has been and continues to be an extremely fast-moving program," says Jerry Freedman, Manager of Advanced Systems Dept. 5165. "There is much to be done; this is just the first step."

Sandia engineers began with a design for the containers provided by their Russian counterparts last summer. Since then, the project has included modifications of the preliminary design, fabrication of prototypes, initial testing, and a detailed review by the Russian engineers and scientists involved with dismantlement work.

Sandians involved include those in Technical Fabrication Coordination Dept. 2486, Mechanical Measurements Team 2483-1, Environmental Testing Dept. 2761, Quality Assessment Dept. 336, Drafting Dept. 2858, and Purchasing Dept. 7414. Dave Nokes has oversight responsibilities that include liaison with DOE headquarters and DNA program managers.

Under provisions of 1992 Congressional legislation sponsored by Senators Sam Nunn and Richard Lugar, Congress has authorized \$50 million for the container project. The Nunn-Lugar legislation, as amended, authorizes the US to provide up to \$800 million in assistance to republics of the former Soviet Union to help in destroying nuclear and other weapons; transporting, storing,

and safeguarding weapons to be destroyed; and establishing verifiable measures against weapons proliferation.

The containers are made of stainless steel surrounded by polyurethane foam for impact and thermal protection and an additional stainless steel overpack drum. The inner vessel, which will hold weapon components or nuclear materials, can be welded closed for long-term storage or mechanically sealed for use in transportation. The Russians will load the containers at weapon dismantling facilities and transport them to permanent storage locations.

Sandia's modifications to the Russian design were based on experience with similar designs for US transportation containers. The Sandia designs also reflect changes to take advantage of US manufacturing processes apparently not available to the

"It was amazing how similar our ideas and approaches were."

Russians. "The speed of our response and our ability to incorporate some of the Russian ideas into the container impressed the Russians," Jerry says.

The containers are designed to meet safety standards established by the International Atomic Energy Agency and additional requirements set by Russia. Some of the Russian engineers involved with the project visited Sandia late last year to review testing of the prototypes.

Although all the visiting engineers read and spoke some English, the formal work was done with translators. "It was amazing how similar our ideas and approaches were to some problems," says Jerry.

●WKeener(7161)/CS

(Continued from Page One)

Powder Dispenser

present, employees dispense and weigh sensitive explosive powders by hand, exposing themselves to the danger of spontaneous ignition due to friction or static discharge. During each dispensing procedure, workers are exposed to the powders for four to five minutes. Three to five minutes of additional exposure may occur during component cleaning, inspection, and handling.

The purpose of the automated system is not to increase production rates, says Pablo, but to make a

Automated production modules will use small robots for component and powder handling.

safer process possible and preserve a manufacturing capability that now depends on the specialized skills of only a few workers.

Sandia's computer-controlled system dispenses the powders to within an accuracy of 0.1 milligrams, a significant accomplishment considering the powders have the consistency of finely ground flour. Separation of different powders is minimized when a mixture is used, eliminating a drawback of most commercially available powder feeders.

The system also automates the quality assurance process, a feature designed to improve product safety and quality by reducing data input errors.

The Automated Dry Powder Dispenser was delivered to Mound in January and is the keystone of the Agile Manufacturing Explosive Components project. When completed, automated production modules will eliminate operator exposure by using small robots for component and powder handling. Four modules are planned: powder weighing; component loading and pressing; component cleaning, inspection, and welding; and electrical and electrostatic discharge testing. The first two modular workcells are currently being integrated with a master controller that synchronizes module activities and component flow.

●JClausen(7161)/CS

feed **back**

Q: Why won't the emergency phone number 911 work from Sandia phones? I would guess that 99 percent of Sandians are not aware of this fact.

We are taught in Sandia CPR courses to "call 911," and certainly visitors to Sandia would do this. In a true emergency, valuable time would be wasted trying to call 911.

I would think that in this age of high-tech electronics, voice mail, etc., that Sandia/Kirtland AFB could solve this problem — by having a message that informs 911 callers to dial another number, among other possibilities.

A: We have investigated this possibility several times, and it is impossible to do on Kirtland. As you know, "9" is the number dialed to access off-base numbers. As soon as this number is dialed, the call is routed directly to US West and bypasses the base switch. We know of no way to "trick" the system into accepting 911 and routing the call to our emergency line.

We are currently installing our own telephone switch for the "4" prefix, which may make this possible at some point in the future. A team is looking into that possibility.

Jim Martin (7400)

Q: Has Sandia improved the Choiceflex (Reimbursement Spending Account, RSA) program yet, to include medical insurance premiums as reimbursable? Last year the benefits staff said they were looking into this. Since the first tax deductible medical expense listed by the IRS is medical insurance premiums, I don't understand why you don't allow this reimbursement. When I asked IRS technical staff members, I was told that it was up to each company to decide what was reimbursable, and that the IRS doesn't prohibit reimbursement of insurance premiums under RSA plans.

A: Sandia's new Pretax Premium Plan has been in effect since Jan. 1, 1993. Employees with Class II premium deductions, employees with HMO premium-difference deductions, or part-time employees (less than 25 hours a week) with partial premium deductions are now having those deductions taken from their paychecks on a pretax basis.

The Pretax Premium Plan is separate from the RSA plans. While the IRS allows you to deduct healthcare premiums on your 1040 tax forms, it does not allow you to pay for them through an RSA plan. Because of the many requests to pay for healthcare premiums on a pretax basis, the benefits organization's continued research gave us the information needed to set up this separate Pretax Premium Plan. The new plan also saves you the hassle of filing a claim form to be reimbursed for healthcare premiums.

Since these pretax deductions are taken out before Social Security taxes are computed, there may be a small impact on your Social Security retirement benefit calculation. You should consult your tax advisor for more specific information on this.

In addition, if you also participate in the company savings plan, you could possibly be affected by a section of the IRS code that limits additions to both employer and employee after-tax and pretax plans.

Barbara Jones (7543)

Q: Both the city and the military have increased their recycling efforts, but not Sandia.

How about containers for aluminum cans, etc.? Maybe we could have "recycling centers" near the gates so people could drop off recyclables and avoid custodian complaints.

DOE Headquarters recycles, by the way.

A: Recycling is a volunteer project and the effort is expanding every day. Sandia is currently recycling paper, cardboard, and shipping materials.

The recycle paper collection boxes are made

in-house, using scrap cardboard, reducing the cost of each box by 56 percent. The last 1,000 boxes made were down-sized to make two additional boxes from each scrap cardboard sheet, thus keeping the boxes small enough to comply with the maximum full weight requirement. When completely full, each recycle box weighs about 25 pounds.

I would like to remind all participating employees to carefully sort their scrap paper, fold the lids, and tape each box securely. Cardboard boxes should be emptied, broken down, and placed in a cardboard-designated dumpster or cage.

The Recycling Committee is looking into collecting aluminum cans and wood pallets in the near future. However, there are ES&H issues that have to be addressed concerning collection of aluminum cans; cans need to be rinsed, removed daily to prevent attracting rodents and insects, and collected in cans-only containers.

KAFB/Recycling Center (south of the post office) is expanding its recycle drop-off and collection program, to include all base tenants. Hopefully, we will be able to combine our recycling effort with the Air Force's. Look for more recycling information in the *Weekly Bulletin* and LAB NEWS.

As recycle coordinator, I thank you for your interest and comments. The Recycling Committee is always interested in new ideas and new ways to improve and expand the recycling program.

Louise Bland (7617-2)

Q: A number of attempts to call the Mutual of Omaha representative, Mary Blanford, resulted in a repeated busy signal. I finally called the Dept. 7543 secretary, who agreed to give Mary a note. She also confirmed that Mary's line is very busy.

Why not give Mary a backup line to take messages?

A: Thanks for your suggestion, but while providing Mary with a backup line would allow you to leave a message, it wouldn't give Mary any extra time to work employee issues.

The on-site Mutual of Omaha representative is available to employees, but customer service for the Medical Care Plan is actually 1-800-753-6078. (There are also toll-free numbers for the Vision and Reimbursement Spending Account plans.) This phone line is staffed by several customer service representatives and should never have a busy signal.

Also, the customer service representatives in Omaha have more information available to them than Mary. Often, when an employee speaks to Mary, she has to obtain additional information from the customer service representatives in Omaha. By calling the toll-free number directly, the issue may be resolved in less time.

If your questions do not require looking up information on Mutual of Omaha's claims system, members of the Benefits staff may be able to help you. Feel free to call them: Richard Garcia, 5-9704; Suzanne Moya, 5-9702; and Jann Levin, 5-8524.

Ralph Bonner (7500)

Q: As I understand it, all Sandians with cars registered in the Labs system are being required to obtain 1995 stickers by bringing copies of their vehicle registrations to the Badge Office. This is being required by Kirtland AFB.

If that is true, I suggest the following: Since there are considerable costs involved in implementing this policy, DOE and Sandia should require a transfer of funds from the Air Force to cover the cost of material and time.

Another alternative would be for all employees who live in Bernalillo County, and who, therefore, already have completed necessary emissions

testing and certification to call the Badge Office to initiate verification of vehicle testing. The new stickers could then be distributed by mail. This would save Sandians time and considerable congestion at the Badge Office.

A: You have correctly described the current vehicle registration process being required by Kirtland.

The costs of reregistration are a real concern, especially when employees' time away from work is considered. We explored options similar to those you suggested, but within our time constraints, none of them met the base commander's requirement that we visually inspect each registration and emissions certificate before issuing a decal.

The suggestion of transferring funds from the military to DOE and Sandia is inappropriate. The cost is a condition of obtaining base access for Sandians and properly belongs to us.

Thanks for your suggestions.

Jim Martin (7400)

Q: I'm concerned about the possibility of the Sandia/Fidelity tax deferred plan providing limited investment options. I know that Los Alamos National Lab, through the University of California, has an investment plan with Fidelity, and the LANL staff can invest in almost all the many Fidelity funds.

I believe that our arrangement with Fidelity should provide us with as wide a range of investments as possible, enabling us to invest in gold, foreign currencies, etc. I hope we are heading in that direction, and if we are not, please explain why and justify the decision.

Thank you.

A: We checked with Los Alamos and found that the arrangement you referred to is a 403(b) deferred compensation plan available to public schools/universities as defined by Internal Revenue Code (IRC), Section 501(c)(3). The Sandia Corporation Savings Plans are 401(k) qualified plans for corporations. Each vehicle is governed by different sections of the IRC. Although, as you stated, the LANL plan offers many investment options with multiple vendors, it does not provide for employer matching contributions like the Sandia plan does.

As to your question on the rationale for not offering the full spectrum of Fidelity options, Fidelity does not offer all of its funds to 401(k) plans. Many "retail funds," including the Select Funds, are not offered because of the special fees and loads on those funds. Funds with tax-deferral and tax-exemptions, as well as funds with special withdrawal features, are also eliminated. Thus, approximately 40 no-load institutional type funds exist as alternatives.

The Sandia Corporation Savings Plans offer six investment options, covering a broad range of risk and return alternatives. According to surveys, the majority of 401(k) plans offer fewer than six alternatives to their participants. Sandia was committed, however, to providing funds similar to those of the AT&T Savings Plans and to adding three funds with different investment characteristics, to increase the variety.

Implementation of the new plan has been on a very tight schedule in order to have it in place before the AT&T/DOE contract expires. Administrative complexities, including record-keeping, education, communications, and enrollment, limited the investment options initially offered, and we also had to consider Sandia's fiduciary responsibility to offer and monitor a reasonable set of investment options.

Ralph Bonner (7500)



What's Happening in the Laboratory Development Division

By Paul Robinson (VP-4000)

Editor's Note: This is the eighth in a series of LAB NEWS articles by Sandia's vice presidents, discussing what's happening in their areas. The next, and final, scheduled article is by Heinz Schmitt (2000).

Laboratory Development 4000 became a Sandia division when we went to a business-sector approach in 1991. While it was clear we could benefit from an enhanced focus on customers by creating sectors [Defense Programs, Energy and Environment, and Work for Others], one worry was that these new units might begin to operate as independent companies. Some of the roles envisioned for 4000 were to help to keep a single-laboratory focus in the new structure; to be a clearinghouse for many of the issues facing Sandia; to promote cross-sector, Labs-wide initiatives; and

"One role we have assumed is what we call the 'Somebody' mission. . . 'Somebody ought to. . . .'"

to help President Al Narath and all other Sandia managers and employees as we undergo significant changes in our external missions and customer base.

One other role we have assumed is what we call the "Somebody" mission. Division 4000 often gets the call to take on suggestions that "Somebody ought to . . ." These tasks typically involve addressing new requirements imposed on the Labs, or helping to "beat back" some of the bureaucratic practices we as a laboratory inflict upon ourselves. I hope Sandia employees can already see some positive differences we are making in this regard.

Rather than covering the activities of Division 4000 "by-the-numbers," I'll focus on some of our more significant recent achievements. (Our new Corporate Communications Center 4700 was discussed in an April 30 LAB NEWS article, and our "Standards" areas will be discussed in a future article.)

Information Systems

The new information age has arrived at Sandia. Some significant results have taken place since we formed our Information Architecture Center 4400 to guide and accelerate new processes and then worked with many of you to develop related plans and principles.

All of the Labs' major electronic mail systems [CC:Mail, All-in-1, and Office Vision] are now joined into an interconnected system. Any of the more than 4,300 Sandians connected to this larger system can now communicate with each other just by entering their addressee's name. This includes both Sandia/New Mexico and Sandia/California, and should be a real boon for bringing our two sites "closer together" and for really improving the way we do business. (The full menu of options is not yet available for UNIX-based systems, but this should be resolved this summer.)

We also have routes to connect to computer users all over the country, such as through Internet, and we should take advantage of opportunities to communicate more quickly with our external customers and partners. This could be a big time-saver and reduce the piles of paper we now send to each other. We recently tested the new system by transferring text we were developing jointly with Los Alamos and Lawrence Livermore national labs, and it worked great.

Last year we brought on line a computerized employee directory. It will become the single data base for Sandians' phone numbers and addresses, and employees can now even change their phone numbers in the data base using voice mail [via Sandia Line, 5-6789]. Training for using the new

system began with secretaries, who are the most important links in implementing the process. The next Sandia phone book (directory) will be published in early summer using the on-line data base. We have also begun work on a directory of project and program managers that will be available on line and included in the new phone book.

A major event in the history of Sandia's phone service will take place this summer. We're now installing a new AT&T 5ESS central office switch that will handle all Sandia calls [LAB NEWS, April 16], meaning that Sandia/New Mexico folks will no longer be dependent on the Air Force for phone service. The system will provide universal hookups for computers at a limited bit rate of 64 kilobits/second. This Integrated Services Digital Network (ISDN) will provide the first universal capability for computer communication throughout the Labs and, in time, will be upgraded to a fiber-optic system at a gigabits/second rate. It will then be possible to transmit graphics at useful speeds. We are producing a new universal briefing viewgraph set (Eagle Book) to brief visitors about Sandia. We plan to make it available electronically

"We plan to make [a new universal briefing viewgraph set] available electronically so users can download the graphics to their own computers."

so users can download the graphics to their own computers. Users can even customize the charts for their own presentations.

A benefit of the new phone system will be that voice mail will become available for 844- prefix phones as well as 845-. Voice mail provides both a phone-answering service and an integration of information services such as faxes, broadcasts, and corporate data base updates and queries.

Sandia has made a big commitment to spend \$5 million a year to install optical fibers within our buildings and "optical backbones" between buildings. Sandia/California already has fiber installed within, and between, most buildings. In March, we had the first operation of a major information network between our California and New Mexico sites. The link uses an AT&T DS3 line, operating at 45.4 megabits/second. We anticipate testing a gigabits/second computer link at Sandia/New Mexico this summer and anticipate eventually achieving this speed in the intersite linkage.

Sandia is positioned to be the nation's leader in demonstrating both the operation and the ultimate value of such information networks. We should see enormous improvements in all of our efforts as each of us learns to enhance our work with assistance from the "information revolution."

Technology Transfer

Sandia continues to lead in the area of technology commercialization and industrial partnerships. Since we began signing cooperative research and development agreements (CRADAs) with industry partners only about two years ago, we now have 96



PAUL AND THE PRESIDENTS — Paul Robinson, VP of Laboratory Development Div. 4000 (right), watched last September as Sandia President Al Narath explained some of the Labs' technology transfer work with the microelectronics industry to President Clinton (then candidate Clinton) when he visited Sandia. Tech transfer is one of Paul's responsibilities.

of them with a total value of more than \$343 million, counting the 50/50 cost share from our partners [see related story on next page]. Paraphrasing the late US Senator Everett Dirksen, "This is starting to look like real money!" We continue to have a large number of potential agreements in the pipeline.

The agreements range from one year to three years and, so far, our industrial partners are "delighted customers." Many are now pursuing other agreements with us. More and more of the agreements are with industry consortia, such as SEMATECH or the US Advanced Battery Consortium, although we still work hard to form partnerships with individual companies. We signed six major agreements with General Motors [LAB NEWS, April 16], and we expect to sign several more large agreements in the near future.

One of our CRADAs has already produced remarkable results — the one with Motorola for an environmentally conscious manufacturing process to produce printed circuit boards without exhausting ozone-depleting chlorofluorocarbons (CFCs) into the atmosphere. This has the potential to eliminate more than 25 percent of the worldwide release of CFCs. The work included some support from Los Alamos National Lab. Motorola is now making this technology available to companies worldwide, *royalty-free*.

Technology Transfer Center 4200 has begun assembling a quarterly progress report on CRADAs, with inputs from both the Sandia principal investigators and the industrial partners. The

". . . letters from small businesses about how valuable Sandia's help has been — a few going so far as to say that 'Sandia saved our business.'"

comments from our partners are in general very favorable, although our partners express frustration about the bureaucratic processes involved in writing CRADA documents and getting DOE approval for them. We have identified this process as a principal area for improvement through a rigorous quality analysis, and DOE has agreed to help improve it.

Sandia's efforts to work with small- and medium-sized businesses to improve their competitiveness has started to yield some important successes. Begun under the name TRED (Technol-

ogy for Regional-based Economic Development), the program is now being expanded under the title NSTEP (National Small-business Technology Exchange Program). Los Alamos, Lawrence Livermore, and Oak Ridge national labs are joining us in this effort, and we recently received funding to expand our efforts.

The needs of small businesses center on quickly finding solutions to manufacturing or production problems they are experiencing. There is a premium on finding the right laboratory expert who can help solve the problem, for example, suggesting a substitute material or a different adhesive that better meets a particular situation. We are beginning to amass a nice file of letters from small businesses about how valuable Sandia's help has been — a few going so far as to say that "Sandia saved our business."

Our greatest challenge in the NSTEP effort is distributing our expertise to the many businesses that could use our help. There are more than 400,000 small US businesses in the manufacturing sector alone. Therefore, we have begun partnering with both universities and state agencies to serve as extension centers to interact with small businesses to help identify their problems. Then we can find the right expert to assist them. To date, we have worked with the Univ. of New Mexico, New Mexico State Univ., Univ. of Texas at El Paso, Colorado State Univ., the Univ. of Arizona, and Pennsylvania State Univ.

All Sandia sectors are concentrating on identifying "dual uses" for our research and development (R&D) efforts. In addition to meeting our customers' goals, we try to utilize methods that can be passed on to US industry for its benefit. We provide our greatest service to our nation when we take on and succeed in complex, long-term R&D efforts that are beyond the resources or capabilities of any one company or industry, and we are developing new programs to solve key industry-identified problems. These come under the general heading of "national industrial challenges," and,



SPECIAL SANDIA PUBLICATIONS are produced by Corporate Publications Support Office 4526. Manager Lori Parrot (left) and Art Director Janet Jenkins (both 4526) are seen here discussing the design for a new general publication that will be used to familiarize Sandians and external customers with Labs-wide capabilities and facilities that can be used in various programs. The 4526 staff is working with other groups to produce similar customer-oriented publications that can be used to help market special Sandia facilities and capabilities.

again, we are working in partnership with our sister DOE labs, industrial consortia and advisory groups, and Congress to determine where we can best contribute. Some examples include development of electric vehicles, micromachines and sensors, and advanced process controllers that utilize computer simulations of the physical processes. We hope to make such efforts the next major thrust in our Technology Transfer program.

Planning

Besides helping the sectors develop their business plans and preparing the Sandia *Institutional Plan*, we devote much effort to developing and implementing the Labs' strategic thrusts, or initiatives. Selected by Sandia management as the most likely areas for major new program development, these thrusts include Advanced Manufactur-

ing, Transportation, Information Sciences and Technology, Environmental Science and Technology, Non-proliferation, Biomedical Engineering, and Space Sciences. In addition, we are reviewing a proposal for an enhanced Risk Assessment and Risk-based Decision Making program thrust. Most of these efforts cross-cut the entire Laboratories.

We're learning some valuable lessons in trying to advance these ideas to become major programs. The new, more stringent government accounting rules and practices have made it difficult for Sandia to move into some new programs. "Bootlegging" as a means of trying out new ideas has become nearly impossible. Thus, we have to develop better funding mechanisms to invest directly in new technical work in our strategic thrusts. The Labs' LDRD (Laboratory Directed Research and (Continued on Page Eight)

'Licensing, Stupid!'

Tech Transfer Works to Ensure That Nation Gets Maximum Benefit from Sandia Technologies

Scribbled on a marker board in Mike Dyer's new office are the words "Licensing, stupid!" He says the message reminds him daily to pay attention to licensing agreements, so that Sandia and the nation reap the biggest possible technology harvest from the Labs' intellectual property.

Mike was named Acting Director of Technology Transfer Center 4200 on April 2 when his predecessor, Dan Arvizu, became Director of Advanced Energy Technology Center 6200. Mike remains Manager of Technology Transfer Office 8101 at Sandia/California.

He describes his new assignment as "making deals that are good for Sandia, good for industry, good for the taxpayer, and, ultimately, good for the nation. Our job is to make sure the taxpayer gains the most benefit from every dollar spent on Labs R&D," he says. He believes tech transfer is a blend of technical, legal, and business skills.

These days, licensing agreements are becoming more and more important in the tech transfer world, says Mike. "We are finding that we must be cautious when we decide how intellectual property rights are going to be shared among industry partners and the Labs before we embark on any technology development project," he says. "This ensures that the nation gets the greatest long-term benefit from Labs technologies."

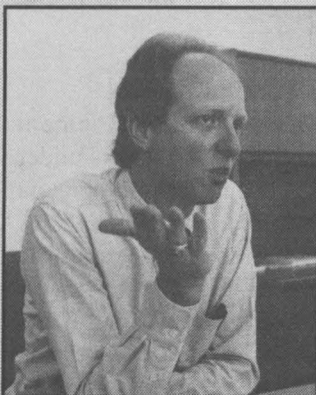
For example, if Sandia has a computer code that might help a pharmaceutical company design a new drug, Sandia must be careful to specify that

the code remains a corporate asset while any new drug resulting from the research belongs to Sandia's industry partner. An up-front licensing agreement ensures that Sandia retains the computer code for use in future cooperative projects with other industry partners, he says.

The main role of Sandia's technology transfer program, however, is to continue to help line organizations establish research partnerships and make deals. "Tech transfer is, and always will be, a line responsibility," he says.

Years of 'Experimental' Experience

Mike joined the Labs in 1975 as one of the first internal combustion engine researchers at Sandia/California's Combustion Research Facility (CRF). "The CRF was just an idea on paper then," he says. He spent his first year "writing



MIKE DYER

viewgraphs and waiting for a piece of equipment to arrive from Volkswagen," helping establish one of Sandia's first cooperative R&D agreements.

In 1981, he became Supervisor of the Combustion Applications group. In

July 1989, he was named Manager of Sandia/California's one-person Technology Transfer Office 8101.

"The CRF was one of Sandia's first 'designated user-facilities,'" says Mike. "From the beginning, our mission was to bridge the gap between the universities doing fundamental research and industry doing more applied development. In doing so, we explored virtually every way of teaming with industry. So really, I've been doing tech transfer my whole Sandia career."

To date, he says, Sandia has entered into 96 cooperative research and development agreements (CRADAs) worth \$343 million, more than any other DOE laboratory.

"Since 1989 we have shown that Sandians, along with the people at DOE's Albuquerque Office, are world-class deal makers," says Mike. "I know that will continue." ●JG

Tech Transfer Center 4200: New Location, Same Mission

Technology Transfer Center 4200 is now located in the northeast building of Research Park, just outside the Eubank gate on Research Road SE. Renee Zittel, office administrative assistant, can be reached on 271-7814 or 271-7888.

'Work Out Where You Work'**Walk, Jog, Stretch, Step Next Wednesday to Start Getting Fit**

It's hard to get fit just watching, so Total Life Concept (TLC) representative Michaeli Portman (7035) invites Sandians to start down the road to physical fitness by participating in introductory courses at Hardin Field (the Kirtland AFB parade ground) May 19.

Sandia's 13th annual Fitness Day activities will run from noon to 1 p.m. and include five

mini-classes — step-aerobics, low-impact aerobics, stretching, walking/jogging, and body toning. The classes, led by TLC instructors, will begin at 12:15; a second session of each class will be offered at 12:40.

Fitness Day activities — titled "Work Out Where You Work" — are being jointly sponsored by TLC, the Sandia Employees Recreation

Program, DOE, and KAFB. DOE and KAFB employees also are invited to participate.

Michaeli says the TLC program sponsors Fitness Day as a way of encouraging employees to exercise regularly. "Folks who are able to exercise regularly not only feel and look better, but generally are more productive and satisfied with their jobs, and have fewer work absences and lower health care costs," she says.

Sandia's Fitness Day coincides with National Employee Health and Fitness Day, which promotes regular physical activity as part of the US corporate culture.

Michaeli says that in case of rain, the activities will be postponed until May 26. ●

SPREADING THE WORD — Library staff members get an early start on Fitness Day activities, kicking up their heels during a midday break at Hardin Field. Taking advantage of a sunny day for a workout are (from left) Rhoda Yazza, Gertrude Gutierrez (both 7141), Kim Denton-Hill (7142), Dixie Alford, Imelda Martinez (both 7141), and Sally Landenberger (Manager, 7141).



(Continued from Page Seven)

Laboratory Development

Development) program is now tailored to preferentially fund proposals that support our strategic thrusts, and this process should soon begin to feed new ideas and capabilities to help advance the efforts. However, we believe that other discretionary program funds must be provided so program managers responsible for strategic thrusts can tailor their projects to achieve results that will help them obtain direct funding in the future.

Systems Studies

Our Strategic Studies Center 4100 has been diversifying its efforts as well, to expand from its primary customer base within the nuclear weapons and defense programs to focus on new initiatives. These multidisciplinary studies are invaluable in selecting which new initiatives we should be pursuing and to guide their development by identifying how they can make the greatest impact. [A future LAB NEWS article will discuss this area in more detail.]

Quality

Our corporate quality effort is gearing up to help DOE implement a major quality focus in all of its activities. One of our most significant accomplishments over the past year has been our work with DOE to "repair" the DOE Order/Directives processes. The number of DOE Orders that DOE laboratories must comply with has grown by more than a factor of eight in less than a decade. The process by which new orders were generated or old orders expanded was clearly broken. With support from Sandia's quality folks, DOE has committed to completely revise its processes for order development and to apply proven quality methods. DOE Headquarters recently approved a new plan to negotiate with stakeholders early in the process when a new order is being formulated. It also requires that budgetary impacts become a key criterion in determining whether or not a new order should be issued.

In the meantime, our Quality Improvement/Primary Standards Center 4300 is trying to "get our arms around" all corporate requirements with which Sandia must comply. We established a group to receive and evaluate requirements, and assigned a Sandian to be responsible for following our compliance. The terms under which the new Sandia management contractor will operate will demand an increased emphasis on understanding and meeting DOE requirements. We will be in position by the time of the changeover this fall to know where we stand.

Sandia's own efforts to incorporate quality into our activities continues. Remarkable achievements are beginning to occur throughout Sandia as quality methods are employed increasingly. We have been revamping our Quality Action Requests (QAR) project to get more participation from Sandians to suggest changes to improve work practices. One fact is becoming increasingly clear: Our complex Sandia jobs have become so complex that only the persons actually doing them know what the barriers to success are and how best to improve the processes that affect that work. Sandia is still overburdened with bureaucratic practices that impede our progress, and the quality perspective (root causes, customer/supplier viewpoints, negotiations, etc.) remains the best hope for breaking out of these bureaucratic handcuffs. We began to realize that our own suggestion procedure (the QAR process) was becoming too bureaucratic, and we are moving now to revamp it. I hope all Sandians will join in our continuous improvement efforts by submitting their suggestions for fixing what's broken.

Summary

In summary, Laboratory Development Division 4000 has a wide variety of efforts under way to help create Sandia's future, and I hope you are beginning to see value added from our efforts. Even with the many problems we face and the continuing need for improvements in the way we do business, our laboratory remains one of the greatest institutions in the world. We are positioned to provide an even higher level of exceptional service to the nation in the days ahead.

●PRobinson(4000)

For Your Benefit**Drug Plan Prices; Dental Plan Delay**

Customers of the Prescription Drug Plan network pharmacies — Smith's, K-Mart, Wal-Mart, and (in California) Long's — have raised questions about drug prices. (The Prescription Drug Plan applies to Medical Care Plan Participants only, not employees enrolled in health maintenance organizations.) Here are some questions and answers from Health Planning and Administration Dept. 7543:

The price charged by my regular pharmacy for a brand-name drug is lower than the network pharmacy's price. Is Sandia's discount saving the company any money?

The network pharmacies have agreed to match a competitor's lower price if the network pharmacist can verify the price by calling the other pharmacy. Each network pharmacy will sell any prescription drug at the lowest of (1) the Sandia/Caremark network discount, (2) the network pharmacy's usual store price, or (3) any competitor's lower price.

The Sandia discount negotiated through the Prescription Drug Plan administrator, Caremark, Inc., covers all prescription drugs — about 3,000 different ones. The 50 to 100 most-common brand-name drugs are sometimes used by pharmacies as "loss leaders." The prices of these drugs vary depending on the competition and each pharmacy's marketing strategy. Though Sandia's normal discount does not match loss-leader prices, the overall network discount plus mail-order sales results in a savings for the total volume of business.

Even though the network pharmacy will match my pharmacy's lower price, why should I transfer my prescriptions from my pharmacy if Sandia will save money with either purchase?

The network and mail-order pharmacies use a Caremark drug data base that alerts the pharmacist to potential drug-to-drug interactions. If you have completed a drug profile, the data base will also alert the pharmacist to your drug allergies or reactions.

If you have other questions about the Prescription Drug Plan, call Louise Loudon (7543) on 845-9706.

Dental Claim Delay — Although The Travelers became the Dental Expense Plan administrator on April 1, there was a delay in transferring the claims history data from the previous administrator. As a result, The Travelers did not begin processing claims until April 19. Claims will be processed in the order they were received, and the backlog should be cleared by May 21. If you are concerned about the status of a claim, you may call The Travelers' Automated Response System on 1-800-447-7020. ●

'Mysteries' of Process Explained**Majority of 'Q' Clearance Investigations Completed Quickly; Others Provide Employees 'Day in Court'**

It's been five years since your Q clearance was issued or renewed. During that five years you've had to deal with something you now fear will stir the attention of investigators delving into your background once again. And there've been all those stories. . .

Even though the anxiety may remain during the course of the reinvestigation, perhaps knowing something about the process will make it less fearsome.

Our thanks to DOE's Albuquerque Operations Office (DOE/AL) Personnel Security Division (PSD) for the following explanation of the process, times involved, and other information. The subject matter was suggested by a Sandia employee after publication of the April 30 LAB NEWS, which included a story about the Employee Assistance Program and Sandians' responses to a survey about how best to deal with personal problems when facing security clearance reinvestigations.

PSD analyzed or evaluated almost 20,000 background investigations — first-time applicant and reinvestigation cases — during the past 15 months. It granted or continued clearances with no further action in 76 percent of those cases, conducted personnel security interviews (PSI) in 13 percent, and issued interrogatory letters to individuals in 11 percent.

In almost all cases involving the latter two actions, the security concerns were considered resolved at the conclusion of the process, and clearances were granted or continued. There remained a serious question about clearance eligibility in less than one percent of the 20,000 cases received, resulting in initiation of the administrative review process.

Personnel Security Interviews

PSIs are conducted with applicants and cleared employees when there is unresolved, unfavorable information as outlined in Title 10, Code of Federal Regulations (CFR), Part 710.11.

The purpose of the PSI is to give individuals an opportunity to explain, extend, clarify, or mitigate information that has raised a question regarding clearance eligibility that cannot be resolved through additional investigation or an interrogatory letter.

Interviews are scheduled in accordance with DOE Order 5631.2C, and almost always resolve questions regarding clearance eligibility.

An audio tape recording of the interview is placed in the file and a duplicate of the tape will be provided to the individual upon request. Transcripts are not made unless the unfavorable information has not been adequately resolved and the case requires a review by a medical authority or is processed in accordance with the administrative review process.

If, during an investigation, DOE officials believe a medical interview might be helpful in resolving the case, a board-certified psychiatrist is given the individual's file and studies it before deciding either that the individual does need psychiatric evaluation or does not need such evaluation. If an evaluation is deemed necessary, the same psychiatrist who studied the individual's record will interview him or her.

An individual may be accompanied to the PSI by a personal counselor (legal, labor, etc.) and be advised by the counselor during the interview, but the counselor may not respond to questions on behalf of the individual. DOE regulations do not address the questions of having counsel present during a medical interview and recording such an interview; that is left to the physician and individual being evaluated.

Following are condensed highlights from Title 10, CFR, Part 710, the document that outlines the

process to be followed by DOE in questioning continuation of a clearance. These procedures apply equally to DOE employees and DOE contractor employees.

Substantially Unfavorable Cases

Administrative review procedures are initiated in personnel security clearance cases that are determined to contain unfavorable information that cannot be resolved by security interviews, psychiatric evaluations, or additional investigations.

The Director, Office of Safeguards and Security, Headquarters (SA-10), has been delegated the responsibility for authorizing the initiation of administrative review proceedings, and is charged with making such determinations within 30 days of receipt of a request from a DOE Operations Office Manager.

Upon receipt of SA-10 authorization, a DOE Operations Office has 30 days to prepare and

Interviews almost always resolve questions regarding an employee's clearance eligibility.

deliver to the individual a notification letter setting forth the substance of the specific allegations that raise a substantial doubt relative to the individual's eligibility for a clearance, with specific references made to one or more of the categories of the criteria listed in Title 10, CFR, Part 710.

The notification letter will request the individual's response in writing to each of the charges, within 20 days, and will inform him or her of the right to a hearing before a DOE-appointed hearing officer and the right to be represented by counsel of his or her choosing.

If there is no response, the processing office will try to contact the individual to determine his or her intent regarding a hearing. If contact cannot be made, the case will be referred to the Office of Security Affairs (SA-1) with the Operations Office Manager's recommendation as to the final disposition of the clearance action.

SA-1 will decide whether to grant, reinstate, deny, or revoke a clearance on the basis of the record to that point.

If the individual requests a hearing, the proceeding will be scheduled and held within 90 days of that request. All time frames for processing a case are DOE's desired time frames, but may be deviated from in practice.

DOE will be represented during a hearing by representatives of the Office of Chief Counsel, who will also advise the individual in the event he or she is not represented by other counsel. The individual may be present throughout the entire hearing and may confront and challenge any witnesses providing information unfavorable to his or her case.

Hearing 'Not a Trial'

The DOE hearing is conducted by the hearing officer as an administrative proceeding, not a trial, and, therefore, strict rules of evidence do not apply. The hearing must be fully recorded and a verbatim transcript must be provided to the hearing officer within 25 days of the end of the hearing.

Hearing officers are required to consider relevant evidence presented by both sides in the hearing, and submit a written report of findings and a favorable or unfavorable recommendation as to the final clearance determination to an Operations Office Manager within 30 days of receipt of the hearing transcript by the hearing officer.

The hearing record, with the hearing officer's report, will be transmitted within 10 days to DOE Headquarters. In the event of an adverse recommendation by the hearing officer, the individual will be notified within five days and will be informed of the right to request a review of the record and adverse recommendation by three DOE/Headquarters-appointed Personnel Security Review Examiners. The individual will also be afforded an opportunity to file a written brief in support of his or her contentions, for review by the examiners.

The Personnel Security Review Examiners are required to submit independent written reports of their findings, and a recommendation regarding the hearing record and hearing officer's recommendation, to SA-1 within 45 days of their receipt of the case.

A final decision on the individual's security clearance will be made by the Director of SA-1 and the individual will be notified in writing of the final determination. ●

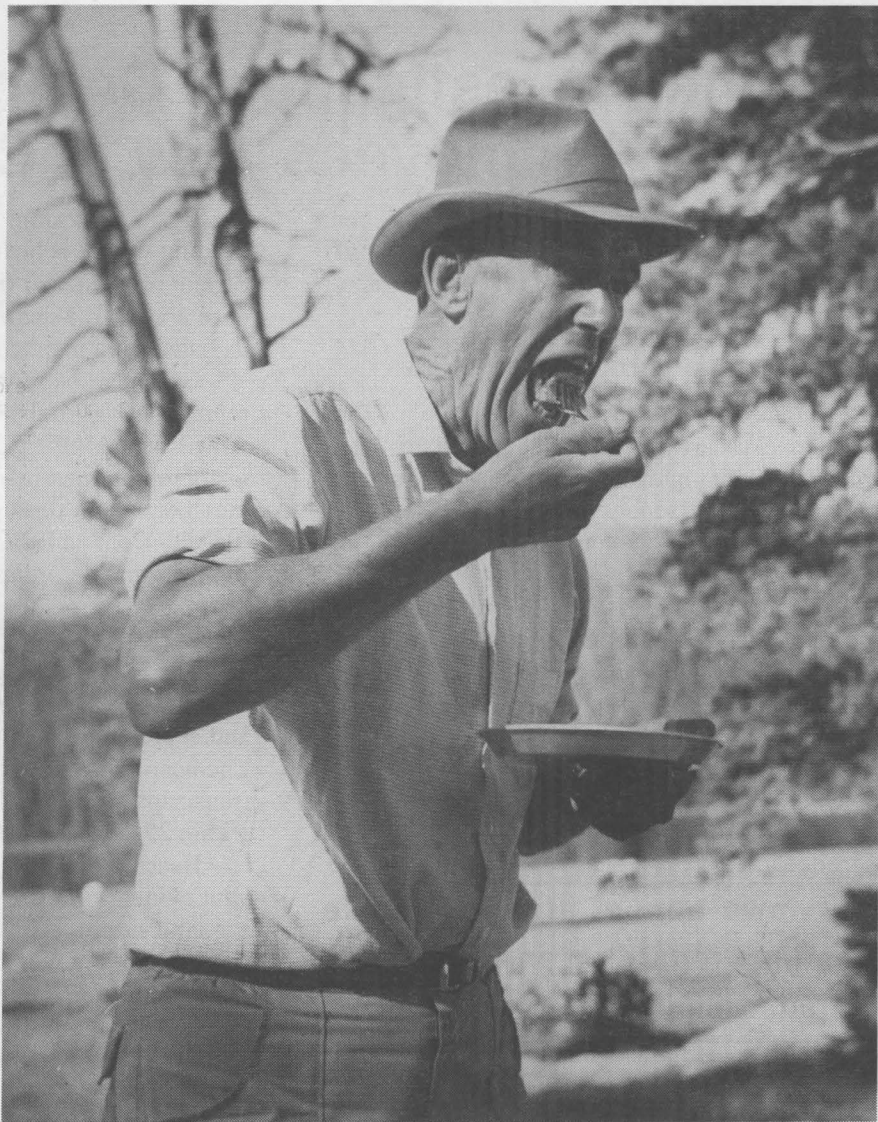


SECOND-GRADERS at Bel-Air Elementary School in Albuquerque get some tips from Susan Bender (1823) on operating a computer. A former teacher, Susan uses her contacts to match folks in Org. 1800 with classrooms that would welcome an old but still serviceable Sandia computer. Students seen here are part of a class that recently wrote letters to Jim Borders, Susan's manager, thanking Sandians for the computers. The loans are arranged through Education and New Initiatives Dept. 35. Susan says she often makes trips to deliver the computers on her own time, first making sure they're in working order. Although her schedule won't let her expand beyond Org. 1800, she says she would be glad to answer questions about getting used computers into classrooms — she's on extension 5-9436.

Favorite Old Photo

About 30 years ago, when I was a free-lance journalist, I invited myself along on a camping trip in the Uinta Mountains of Utah. One of my souvenirs is this picture of a big bite of baked beans going into the mouth of Sir Edmund Hillary, the New Zealander who in 1953 became (along with the Nepalese Tenzing Norkay) the first to reach the top of Mount Everest. Among the things I recall from the trip is trying to "sleep rough" among the cans of beans in Hillary's provisions tent.

Nigel Hey, 4524



Sandia News Briefs

Tech Transfer Paper by Arvizu and Narayanamurti Wins Award

A paper authored by Dan Arvizu, Director of Advanced Energy Technology Center 6200, and former Labs VP Venky Narayanamurti recently won an Award of Merit from the New York Chapter of the Society for Technical Communicators (STC). (Dan was formerly Director of Technology Transfer Center 4200.)

The paper, titled "Using Sandia Technologies to Improve National Competitiveness," was published in the November/December 1991 issue of *AT&T Technical Journal*. It was submitted for the STC competition by the journal's staff. STC is a society devoted to the needs and interests of technical communicators.

DOE Announces Series of Four Renewable-Energy Partnerships

DOE recently announced a series of four partnerships between government and industry designed to encourage the commercialization of renewable energy technologies. The work will be funded jointly by the industry/government partners involved in the research.

Sandians in Advanced Energy Technology Center 6200 are now involved in one of the arrangements, a \$40 million partnership with a consortium led by Southern California Edison to retrofit the Solar One central-receiver solar thermal power plant in Barstow, Calif., with a molten-salt storage system. The change will allow the plant to store thermal energy during the day and release it several hours after sunset. Other announced partnerships include a \$40 million project to develop solar cells that do double duty as building materials; a \$9 million proposal to examine the possibility of turning sugarcane residue and other biomass products into energy; and a collaborative project between DOE and two power associations to help utility companies offer home solar water heating programs to consumers.

Annette Sobel Receives Award from Aerospace Medical Association

Dr. Annette Sobel of Occupational Medicine Center 7030 recently received the 1993 Julian E. Ward Memorial Award from the Aerospace Medical Association. The award recognizes "superior performance and/or outstanding achievement in the art and science of aerospace medicine during residency training."

As a resident at the Armstrong Laboratory at Wright-Patterson Air Force Base from July 1990 to June 1992, Annette conducted original research on the human-machine interface for automatic target recognition systems on military aircraft. She now heads Sandia's medical ergonomics and biomedical tech transfer programs. The award will be presented May 27 in Toronto.

Margie Whipple Wins Distinguished New Engineer Award from SWE

The Society of Women Engineers (SWE) has awarded Margie Whipple, Manager of Photovoltaic Technology Evaluation Dept. 6219, a Distinguished New Engineer award for 1993. The award recognizes women engineers with less than 10 years of engineering experience "who have demonstrated outstanding performance in engineering and leadership." Each year, a maximum of five women nationally receive the award.

The award will be presented June 25 during the 1993 SWE National Convention in Chicago, which takes place June 21-27. For more information about the convention, contact the SWE Convention Management Office on 800-892-2858 or Jan Williams (7013) on 844-9025.

Send potential Sandia News Briefs to LAB NEWS, Dept. 7162.



Aim: Get It to Market

Sandia, UNM Sign Agreement for Glucose Sensor

A licensing agreement signed recently between Sandia and the University of New Mexico moves the commercialization of a non-invasive glucose sensor for diabetics a step forward.

The agreement transfers Sandia's one-third ownership in the sensor and related patents to UNM, a co-developer of the technologies along with Dr. Ries Robinson, a UNM School of Medicine resident. UNM will have the sole right to license the patented technologies to companies interested in completing necessary development work toward marketable products.

The purpose of the agreement was to facilitate the technology transfer and commercialization process by consolidating ownership of the technologies.

"UNM's technical expertise and experience working with small businesses makes it ideal for serving as intermediaries in the process," says Paul Robinson, Vice President of Laboratory Development Div. 4000. "This arrangement should expedite the introduction of a technology that could benefit millions of diabetics."

More than 100 Companies Interested

UNM plans to license the patents to Rio Grande Medical Technologies, Inc. Dr. Robinson, with encouragement from UNM, formed the company to further develop the technology and ultimately market products and services. He is seeking partners to fund these efforts. More than 100 companies have expressed interest so far.

The patents cover methods used to analyze chemical substances in the blood that provide useful information for diagnoses and treating illnesses. Traditionally, such analyses require puncturing the skin to obtain a sample of blood.

The non-invasive glucose sensor uses infrared light shone through a finger to accurately measure blood sugar levels, providing diabetics with a painless alternative to pricking their fingers. Infrared spectroscopy and advanced statistical techniques developed at Sandia are used in the analysis.

Prototype devices have been used in patient studies to demonstrate the accuracy of the technology. Further development and engineering is required to make a device that is practical and reliable for clinical and home use. The sensor also requires approval by the Food and Drug Administration.

Sandia will support further development and commercialization of the technology through various types of agreements. It will receive a portion of all royalties and fees in accordance with the agreement, which was approved by DOE.

●JClausen(7161)

Take Note

The Central New Mexico Audubon Society is offering a scholarship worth \$650 for a teacher to attend the "Audubon Camp in the West" in Wyoming for a field ecology session. There are six week-long sessions: June 26-July 2, July 3-9, July 10-16, July 17-23, July 24-30, and July 31-Aug. 6. Cost of transportation to Wyoming is not included. For application forms, call or write Marge Carrick, 266-0191, 808 Dakota SE, Albuquerque, N.M. 87108. Beth Dillingham, last year's winner, can be reached on 344-5865 for information about her experiences at camp.

The Central New Mexico Audubon Society meets at 7:30 p.m. on the third Thursday of each month at St. Timothy's Lutheran Church (Copper and Jefferson NE). Non-members are welcome at all meetings, field trips, and special events. Contact Marge Carrick on 266-0191 for more information.

UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS

Deadline: Friday noon before week of publication unless changed by holiday. Mail to Dept. 7162.

Ad Rules

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

MISCELLANEOUS

PEAVY P.A. SPEAKERS, one pair, 4" x 10"; 12-string guitar; Meade binoculars; loveseat; 2 end tables; coffee table. Rhoden, 293-5301.

WATERBED, king-size, premium waveless mattress, liner, heater, frame w/headboard, 12-drawer under-bed dresser, \$200. Brooks, 265-8612.

WATER HEATER, 30-gal., 230-volt, 5 years old, single element, works fine, \$50; tire, P195/75R14, Firestone white wall, used 5K miles, \$25. Jackson, 281-8927.

CD-ROM SOFTWARE for PC compatibles: Loom, Secret of Monkey Island, & Sherlock Holmes Consulting Detective, \$30/ea. Miller, 883-0218.

SEARS KARRITE TRAILER, w/luggage box, used twice, \$200. Rader, 256-3069.

BEDROOM SET, solid oak, queen-size, 6 pieces, like new, paid more than \$4,000, will take \$2,200. Davie, 281-9136.

NIKON PROFESSIONAL/MANUAL CAMERA, FM2 body, auto rewind & flash, telephoto lens, case, brand new, asking \$550. Shay, 294-7624, leave message.

COUCH & LOVESEAT, off-white, muslin material, pillow back cushions, good condition, \$450 for both. Minton, 884-6992.

PARROT, blue front, Amazon, healthy, talking, w/cage, \$550. Babcock, 299-3121, leave message.

OAK CHINA HUTCH, sits in a corner, beautiful, \$400 OBO; water softener, Loral Automatic, \$100. Prairie, 265-8573.

SOFA, mock green w/white flower pattern, 83" long, \$75; color TV, 25-in., model RCAXL100, \$25; high chair, Casco, metal, \$25. Houghton, 299-3386.

TROY BILT "HORSE" ROTOTILLER, w/7-hp Kohler engine. Raines, 275-5854.

ELECTRONIC TYPEWRITER, Panasonic KX-R520, spell verifying feature, memory, correction, removable daisy wheel, 10/12/15 pitch, light weight, new condition. Valdez, 897-6399.

REAR WINDOW LOUVER, for '86-'89 Camaro, excellent condition, \$150 OBO. O'Brien, 892-2498.

SOMMA MATTRESS, California King, \$250; large RV luggage storage container, \$50 OBO. Sanchez, 831-4906.

GOLF CLUBS, 3-SW, Tour Model II, men's regular, steel shaft, \$130. Shields, 275-7945.

COMPUTER, Packard Bell, XT-equivalent, color CGA monitor, 20-MB hard drive, dual floppies, DOS 3.3, WordPerfect, \$300. Mauldin, 293-3763.

BOOTS, size 7-1/2, two pair, one black, one winter white, each worn once, paid \$50, will sell for \$35/ea. Island, 275-9444.

ADMIRAL WASHER & DRYER, white, electric, 6 months old, under warranty, extra-large capacity washer, cost \$912 new, sell both for \$500. Moss, 291-0516.

LARGE DOG HOUSE, aquariums, hamster cage, bowling balls, smoker, shelves, truck bedmat, bar stools, chair, dresser, stereo. Parr, 892-5618.

FURNITURE SET: sofa, loveseat, chair, coffee table, & end table, Autumn Wood, earth tones & oak, \$1,000 OBO. Zarick, 898-8840.

EPSON EQUITY II, 8088, 10 mhz, one 360K 5-1/4-in. floppy disk, 40MB hardcard, monochrome monitor, and printer, \$325. Bordlemay, 883-4926.

BED, twin-size, mattress, box spring, & frame, Sealy Posturepedic, excellent condition, \$85. Matthewson, 883-6649 after 5 p.m.

COMPUTER, IBM PC Jr., 640K, color monitor, some software, great for beginners, \$300 OBO. Brown, 884-6848.

COLOR TV, Sony, 52-in., 7 years old, w/remotes, excellent condition. Epperson, 268-4882.

FORD RIMS, set of 4, 8-hole, 16.5-in., w/mounted bald tires, \$30/ea. or \$100 for all. Zirzow, 281-9896.

COMPUTER EQUIPMENT: 4MB external memory card, \$250; Okidata 390 matrix printer, \$325; 1MB video SVGA card, 1076 x 768, \$60. Perkins, 296-4625.

BASKETBALL BACKBOARD, fiberglass, w/breakaway rim, \$50; fold-up ping-pong table, \$35. Connor, 268-1682.

YARD TRACTOR, w/blade, 7 hp, runs well, needs minor work, \$150. Roeschke, 266-8988.

COLOR TV, Heathkit, 25-in., walnut console, good condition, \$100 OBO. Smith, 275-1240.

AQUARIUM, 55-gal., w/custom heavy glass top, excellent condition, \$75. Wallace, 256-1643.

HOMEOWNERS ASSOCIATION GARAGE SALE, May 15-16, 8:30 a.m.-4 p.m., corner of Eubank & Academy, "El Paseo" townhomes. Wagner, 823-9323.

BUNNY CLARINET, in good condition, \$75 OBO. Chavez, 864-7003.

RACING BIKE WHEELS, one pair, Phil Woods hubs, Ambrosio rims, Clement Criterium sewups, free-wheel, \$100 OBO; 700C wheel, w/freewheel, \$15 OBO. Dreike, 299-6670.

CAMERA, Canon AE-1, 28mm Canon lens, 80-200mm Sigma lens, flash, leather case, \$230. Garcia, 293-2810.

STRING TRIMMER, Homelite gasoline-powered, 17-in. cut, includes two specialty trimming blades, \$100. Kercheval, 1-864-6549.

YAKIMA BIKE RACKS, two, upright GT mount, \$40/ea. Moore, 281-2480.

LABRADOR RETRIEVER PUPPIES, AKC-registered, excellent pedigree, 10 wks. old, black majestic female, black superb male, \$300/ea. Hamilton, 897-3441.

KOHLER VANITY SINKS, three, w/faucets; one double vanity top; one fiberglass shower pan. Baca, 262-0596.

MICROWAVE CART, w/storage cabinet below, cost \$100 new, asking \$50. Heald, 281-7885.

GE STOVE TOP, 4 burners, almond, w/matching exhaust hood, \$120; large glass terrarium jug, 24-in., \$15. Blackledge, 294-6030.

PORTABLE DISHWASHER, Kenmore, good condition, \$100. Creel, 265-2545 or 294-8291.

PACKING BOXES, 20; three mirror boxes; two wardrobe cartons; wrapping papers; "peanuts." Prices negotiable. Goldstein, 298-1243.

BAR STOOLS, 23-in., wooden, high-back, chrome foot bar, excellent condition, \$75/ea.; washer & dryer, old but working, \$60 for both. Knight, 275-3669.

ORGAN, Thomas Jester 132, excellent condition, cost \$1,400 new, giveaway at \$500. Lloyd, 889-8934.

BLOCK SALE, 917 LaCharles NE, May 22-23, 9 a.m.-4 p.m.: boys clothes (infant-size 10), toys, stereo, new women's clothes, miscellaneous. Kellogg, 299-3737.

REFRIGERATOR, Ward's Signature, 23 cu. ft., side-by-side, almond, adjustable glass shelves, 66"H x 33"W x 29-3/4"D. French, 298-9292.

CONCRETE MIXER, Sears' industrial, trailer mounted, 4 cu. ft. dry, 2.4 cu. ft. mixing capacity, powered by 3-hp gas engine or 3/4-hp electric motor, \$375. Snelling, 294-5751.

COLORADO ROCKIES TICKETS, 4 seats, directly behind home plate, Tuesday, June 22, 7 p.m., \$48 OBO. Bunker, 268-2364.

POWER LAWN MOWER, reel, \$30; sleeper couch, \$50; Tappan dishwasher, \$50; stereo console cabinet, \$20. Remund, 296-8427.

YARD SALE, Saturday May 15, 8 a.m.-5 p.m., 2304 General Marshall, 1 block NE Menaul/Wyoming, furniture, appliances, mowers, glassware, housewares, more. Fisher, 271-2045.

WENZEL TENT, 10' x 8', sleeps 4, two windows, screen/storm door, 6'2" center, used three times, \$40. Pitts, 293-5481.

SOFA, 90-in. length, antique gold reversible cushions, excellent condition, \$300; Zenith stereo console, \$100. Baker, 881-6344.

Feeling Rejected? Please Follow the Rules

Some "unclassified ads" are rejected because they do not meet requirements. LAB NEWS staff members do not have time to call people who submit ads, so non-qualifying ads are rejected *without notice*. The most common reason for rejected ads is that Sandians do not list their full names and organization numbers; this information is not printed, but it is necessary to verify that the ad was submitted by a Sandian. The rules are printed at the top of this page in each issue, and Sandians are encouraged to clip and save a copy.

PATIO SET, off-white, tubular steel, glass-top table w/cover, four comfy cushioned chairs, nice, \$150 OBO. Pfarrer, 299-6521, leave message.

COLOR TV, 19-in., fair condition, \$50 OBO. Winowich, 255-2611.

TRAILER, Ford short narrow bed, on Chevy axle, spare tire, \$275. Patterson, 299-1062.

YARD SALE, Saturday May 15, 8 a.m.-2 p.m., paint ball gun, tires, lots of misc., 3600 Espejo NE, near Eubank & Comanche. Komen.

BARCO CAMPER SHELL, for SWB, double barn doors, "pops forward" for 7' headroom, queen bed, down-cab height. McAllister, 281-5188.

YAKIMA ROOF RACK, rain gutter mount w/locks, 48" wide, new \$140, sell for \$85. Geuder, 255-2806.

COMMUNITY GARAGE SALE, May 15-16, Four Hills Mobile Home Park, Juan Tabo south of Central, 2nd left, Singing Arrow Center. Orand, 275-2255.

MANUAL TREADMILL, stainless steel rollers, \$75. Johnson, 299-5459 after 5 p.m.

BIKE TRAILER, for kids, Burley manufacturing, fits two toddlers, 100 lb. capacity, aluminum/nylon, was \$350, sell for \$275 OBO. Mooney, 281-2612.

TRANSPORTATION

'79 BUICK REGAL SPORTS COUPE, original owner, AC, turbo 3.8 liter V6, great vehicle for the student, \$800. Machin, 822-8125.

'67 MERCEDES 230SE, new tires, brakes, plugs, points, & wires, engine runs well, body & interior need work, \$650. Brooks, 255-7551.

'89 KAWASAKI JET SKI, mint condition, approx. 20 hours, high performance parts. Spencer, 292-8241.

'82 KAWASAKI 750LTD, 13K miles, one owner, excellent condition, \$1,250. Romero, 883-3736.

'71 TOYOTA MOTORHOME, 24-ft., fully self-contained, AC, heater, CB & TV hook-ups & antenna, sleeps 2 adults/2 children, new batteries, \$5,000. Smith, 344-8251.

BOY'S BICYCLE, 10-spd., 24-in., red frame, excellent condition, \$40 OBO. Witek, 296-5198.

'84 LINCOLN TOWNCAR, white, w/vinyl roof, 92K miles, very clean, \$3,500. Whittet, 281-2216.

'85 CAN-AM 500 ASE ENDURO, new sprockets, o-ring chain, Alumalite bars, garaged last 3 years, excellent open class bike, \$1,100. Zarick, 898-8840.

GIRL'S BICYCLE, 20-in., Blue Columbia, w/banana seat, excellent condition, \$30. Simon, 299-8468.

'82 SUZUKI GS850L, less than 3,500 miles, shaft drive, windshield, like new, \$1,700 firm. Shields, 275-7945.

'73 SCOUT II, 102K miles, 70K on 345 V8, trailer towing-equipped, AC, AT, PS, PB, AM/FM cassette, \$3,500. Barnette, 281-2154.

DODGE RAM 250 MINI-MOTORHOME CONVERSION, 37K miles, Cooper tires, self-contained, ready for your vacation, good condition. Miller, 281-3189.

'80 OLDS, 4-dr., nice body, must see, \$700 OBO; '76 Olds, 4-dr., CB, rides well, good tires, \$800 OBO. Both as is, cash only. Lake, 888-4581.

MAN'S MOUNTAIN BIKE, 26-in., 18-spd., Huffy Olympia, new in box, \$125. Flanigan, 299-0049.

'84 ITASCA MOTORHOME, "Sunflyer," 27-ft., 49K miles, fully equipped, exceptionally clean, \$21,500. Markwell, 821-5768.

BOAT, twin-hull, 12-ft., 9.9-hp electric start Evinrude, 22 hours steering wheel, lights, depth, new trolling motor, garaged, loaded, \$3,150. Meidal, 255-6690.

'84 BRONCO II, 4WD, 4-spd., manual, AC, AM/FM cassette, 73K miles, \$3,800. Mitchell, 281-0044.

BICYCLES: girl's 20-in. Huffy "Fancy Dancin'," pink & turquoise; boy's 20-in. Murray motorcross, red & black. Strascina, 294-0305.

'92 BOUNDER MOTORHOME, 32-ft., diesel pusher, 10.6 mpg, basement model, TV, VCR, roof AC, below book or consider trade. Hall, 892-7819.

'85 TOYOTA, AT, AC, reclining seats, rear defog, 73K miles, maintenance manual, great gas mileage, \$2,700 OBO. Knapp, 260-1822.

'88 LINCOLN TOWNCAR, Signature Series, light tan, all power, 55K miles, below book. Oglesby, 299-8174.

'93 TOYOTA CAMRY XLE, V6, loaded, almond beige, power everything including sunroof, mask & service warranty contract. Bishop, 299-8782.

MAN'S BIKE, Canopus, 58cm, handbuilt Columbia frame, all Campagnolo, Cinelli handlebars, Mavic MA 40 wheels, \$400. Apodaca, 294-8171.

BOAT, McGregor 25, 10-hp Honda, trailer, main & two head sails, lots of extras, exceptional condition, \$5,600. Feltz, 293-8732.

'84 VOLKSWAGEN RABBIT, 4-dr., diesel, AC, 4-spd., 68K miles, 40 mpg, very clean, \$1,800. Loucks, 281-9608.

'81 HONDA ACCORD, 4-dr., 5-spd., AC, AM/FM cassette, gray w/red interior, high mileage, \$700. Culler, 891-8537.

'78 BUICK LESABRE SPORTS COUPE, 115K miles, 3.81 turbo, AT, AC, AM/FM, good condition, \$1,400 OBO. Remund, 296-8427.

'76 MERCEDES 300, diesel, yellow, AC, sunroof, 125K miles, very good condition, \$3,000 OBO. Barger, 296-0676.

'79 BROUGHAM MINI MOTORHOME, 80K miles, good mechanical condition, \$4,000 OBO. Hughes, 265-1698.

'87 CHEV. ASTRO CL, 8-passenger van, front & rear heater/AC, V6, AT, loaded, excellent condition, 98K miles, \$5,200. Morgan, 897-2445.

'91 GEO STORM, 5-spd., AM/FM cassette, AC, yellow w/gray interior, 29K miles, great condition, \$7,000 OBO. Zagar, 867-3722.

'85 GRAND AM, 2-dr., AT, 76K miles, excellent condition. Schwoebel, 298-4295.

'80 MAZDA RX-7 GS, 5-spd., 79K miles, red, AC, sunroof, alloy wheels, AM/FM cassette, one owner, good condition, \$2,500 OBO. Miller, 281-9470.

ROAD BIKE, Schwinn Tempo, 12-spd., all Shimano, index shifting, Bio cam, SLR braking, custom wheels, computer, rack, \$275. McAllister, 281-5188.

'80 FORD 15-PASSENGER VAN, runs well, \$2,000 OBO. Yelton, 281-2893, or Burns, 281-3922.

'71 FORD MAVERICK, 88K miles, AT, AC, PS, 2-dr., 302 V8 engine, runs well, \$495. Rezac, 281-1816.

'88 TOYOTA CAMRY LE, white w/burgundy interior, 4-cyl., all power, AT, excellent condition, \$7,900. Brown, 881-0913.

'83 YAMAHA VENTURE, maroon, 1200cc, 16K total miles, CB radio, back rest, always garaged, adult ridden, excellent condition, \$2,395 OBO. Roady, 299-6084.

REAL ESTATE

3-BDR. MOUNTAIN HOME, 1-3/4 baths, Sierra Vista, 2,200 sq. ft., den, dining & living rooms, garage, solar, porch, sprinklers, owner finance, \$140,000. Whittet, 281-2216.

3-BDR. HOME, 2 baths, Cedar Crest, 2,750 sq. ft., attached heated shop, 2-car garage, fantastic views, paved roads, controlled-access development. Blankenship, 281-2257.

2-BDR. TOWNHOME, 2 baths, fireplace, wet bar, breakfast area, 2-car garage, landscaped yard, fully assumable FHA loan, \$107,000. Kerby Moore, 344-1982.

2-LEVEL COUNTRY HOME, Glenwood Hills, award-winning, mother-in-law/teen quarters, 3,600 sq. ft., 4436 Glenwood Hills Dr. NE, \$259,500. Key, 298-7988.

LOT & RUSTIC CABIN, Deer Lake Estates, east of Cuba, NM, surrounded by National Forest. Sublett, 884-4426.

WANTED

CHEAP TRUCK OR VAN, for loads to the dump. Roeschke, 266-8988.

BRICKS, any color, any condition; cinderblocks; landscaping materials; etc. Brooks, 255-7551.

HARD-SHELL CAR-TOP CARRIER; 3 steel rims, 14-in., for '84 Volvo. Zirzow, 281-9896.

SUMMER HOUSING, for visiting professor, small house or apartment near UNM/AML, June 1-Aug. 31. Martin, 272-7635 or 260-1952.

HOUSESITTING POSITION, experienced college junior, available June 1-Aug. 21, reasonable rates, reserve now to ensure availability. Caskey, 294-3218.

HARDY BOYS BOOKS, prior to 1970; Happy Hollister books, by Jerry West. Torczynski, 292-7191.

HOMES, for exchange students, in Los Lunas and Belen area for the '93-'94 school year. Riley, 869-2119.

FURNISHED APARTMENT OR HOUSE, to rent for six months, Oct. '93-March '94, for retired couple. O'Meara, 299-1080.

INFORMATION concerning vandalism of '69 Mach 1 Mustang, in Bldg. 823 parking lot, April 30 between 1-4 p.m., rear spoiler taken, reward offered. Wallner, 4-3974.

BABYSITTER, responsible, fun-loving, for the summer months, Tues.-Thurs., car not necessary, but transportation to our home is. Jennings, 268-8789.

USED SWING SET, willing to fix up. Conway, 271-0770.

LOST & FOUND

FOUND: A piece of furniture fell off a truck travelling south on San Mateo on April 28 at 7:30 p.m., describe to claim. Aerts, 268-3529.

FOUND: Cat, declawed, white, gray, orange, & tan. Leshner, 884-8527.

FOUND: Autographed baseball cap, from "Toyota Grand Prix of Long Beach," in front of dome, identify to claim. Spinello, 292-5681.



Coronado Club Activities**Bag a Big Night with the 'Boys**

HERE THEY COME — The Isleta Poorboys ride into town tonight, May 14, and there's gonna be some fun at the Club. Get your dancing boots polished up extra shiny, and you'll be set for the music from 7 to 11 p.m. Bring your appetite, too, and chow down on one of the "two-fer" specials: your choice of filet mignon or fried shrimp, two-for-one priced at \$14.95. Or you can enjoy the famous-from-here-to-yonder all-you-can-eat buffet, with baked ham, baron of beef, and roast turkey breast, for just \$6.95. The chuckwagon's open from 6 to 9 p.m. Grab that phone and call 265-6791 for reservations — pronto!

HOW ABOUT BRUNCH? — May 16 is the date for the next brunch and tea dance. From 10 a.m. until 2 p.m., you'll find great food and lots of it, everything from bacon and eggs to baron of beef. Bob Weiler and Los Gatos will begin play-

ing at 1 p.m. and continue until 4. Cost is \$6.95 for adult members, \$7.95 for guests, \$2.50 for kids 4-12, and free for kids 3 and under. Reservations required (265-6791).

POOL PREVIEW — Here's a great opportunity for members and non-members alike: the Pool and Patio Open House, May 22-23. Admission is free, and you can get the lowdown about membership, pool passes, swim and tennis lessons, and all the other great activities the Club offers. Hours are 11 a.m.-5 p.m. both days. The pool will open for the season on Friday, May 28.

AVOID THE CLUB — But just for Wednesday, May 19. That's the annual Sandia retirees' picnic, and the C-Club will be closed to others. Lunch won't be served that day.

Fun & Games

Golf — The SERP Open was held March 27 at the Arroyo Del Oso Golf Course. This was a "just-for-fun" tournament for the 144 participants, with no winners or losers. The organizers thank everyone who helped with the tournament and all participants.

The Sandia Golf Association (SGA) held its first tournament, the Rail Classic, at Tierra Del Sol Country Club in Belen on April 3. Winners in the two-man best-ball tournament included: A Flight — first place, Mark Calvin (183) and Carl Leishman (2412); second place, David Salas (ret.) and Julian Lovato (35); third place, Roy Tucker (6215) and Charles Salazar (2482); fourth place, Gene Marquez (7445) and Dan Poole (7401); B Flight — first place, Don Robbins (2882) and Howard Cilke (ret.); second place, Ed Bishop (5147) and Dick Precit (2235); third place, David Norwood (2411) and Jake Gonzales (2403); and fourth place, Stephen Conrad (6331) and Earl Mattson (6622).

* * *

Games — The New Mexico Games will be held June 4-13 in Albuquerque. The events are part of a national games competition for amateur athletes. Anyone can participate. If you are interested, call one of the following numbers for information: archery, 881-6312; basketball, 846-1074; bowling, 881-4040; darts, 255-1244; gymnastics, 884-6949; horseshoes, 281-9794; judo, 242-6337; karate, 292-0255; racquetball, 266-8960; shooting, 821-7292; soccer, 262-6249; softball, 823-2343; squash, 881-9840; table tennis, 839-0179; tennis, 848-1381; track and field, 299-1361; volleyball, 344-1899; weightlifting, 1-325-7617; wallyball, 294-6280; wrestling, 1-285-6344; 5K run, 299-1361. For additional information about the games and to obtain entry blanks, contact Fred Hultberg on 764-1510 or 764-1719.

* * *

Windsurfing — The New Mexico Windsurfing Association Swapmeet will be held May 14-15 in the south parking lot of the San Mateo Gardenswartz. Buyers and sellers are welcome. Equipment check-in on May 14 is 6-9 p.m.; equipment will be sold May 14, 7-9 p.m. and May 15, 9 a.m.-1 p.m. Unsold items must be picked up immediately following the close of the meet. Call Barry Ritchey (2472) on 298-4311 for more information.

Sandia in the News

This is a periodic column listing a selection of print and broadcast news reports about Sandia. It is provided by Public Relations Dept. 7161 and is published to give Sandians a sense of what is being said about Labs work in national and international media.

Major pieces about Sandia's technology transfer efforts are in recent issues of two key trade magazines — *Design News* and *Photonics Spectra*.

Design News mentions lots of Sandians. One photo features Cliff Loucks (1611). *Photonics Spectra* opens its coverage with a quote from Del Owyong (1304). He's quoted later as saying, "We must help generate a mass production photonics industry base. It's very important for the national interest or we'll lose as we lost the flat-panel-display industry to Japan."

The *London Telegraph* ran a piece about Sandia's use of ion microtomography, developed to detect flaws in weapons materials, now being used to study defects in artificial heart valves.

The *Wall Street Journal* reported on the new Sandia/SEMATECH five-year \$103 million agreement, saying that Sandia "will contribute the materials database and the expertise in advanced [microelectronics] systems design needed to improve performance and reliability."

The *Washington Post's* coverage of this cooperative R&D arrangement quotes Chuck Gwyn (1302). He says, "The agreement focuses on a very critical industry that ultimately supports more jobs than the auto, steel, or other industries."

Mary Green (9511) is quoted in a nationally syndicated *New York Times* story about Sandia working on a system that would allow people to vote by telephone. The story says, "Applying the technology that they have used to secure high-risk data at nuclear weapons facilities, the White House, FBI and CIA headquarters and American embassies, Sandia scientists designed a system for telephone voting."

The challenge, Mary says in the story, is ensuring that votes are kept confidential and that no tampering is possible.

If all goes well, the *Times* reports, the Sandia voting system will get a test run in three New Mexico counties during the 1994 primaries and general election.

In a story The Associated Press (AP) sent out nationally, Henry Dodd (6214) is quoted as saying that wind power could provide as much as 20 percent of the country's energy needs within a few decades. Henry points out, in the article, that costs of wind power are approaching a nickel per kilowatt hour in some areas of the Pacific Northwest.

AP also reported nationally on Sandia solar energy experts recently visiting a Tampa Electric Co. test site equipped with pole lights that burn at night on power collected earlier in the day by the sun.

Mechanical Engineering magazine reports on

our work with Roswell, N.M., bus manufacturer Transportation Manufacturing Corp., to develop advanced sensor technology for possible wheelchair lift applications.

"Sandia-developed strain gage technology . . . allows the platform to function like a bathroom scale," the magazine reports. It also explains that our strain gage technology will improve the lift's ability to determine when a passenger is present and to function properly when rocks and other obstacles are encountered as the lift descends.

New Technology Week headlined a recent story, "Narath Calls Focus Key to Labs' Shift." It quotes Sandia President Al Narath as saying, "We need to develop major themes around which to organize our technology transfer work." He cites our interests in textile, auto, semiconductor, and high-performance computing research as examples of solid themes that will yield lasting benefit for industry and American society.

Interavia/Aerospace World, out of Geneva, offers extensive coverage of Sandia's work to improve the safety of aging commercial aircraft.

Ken Bergeron (6907) and T. Y. Chu (6422) are quoted, and there's a photo of Keri Sobolik (6411), in *Electric Light & Power's* detailed coverage of our work to enhance nuclear power plant safety. ●

Favorite Old Photo

THESE FISH came from just one hole on the Nueces River. That river, in east central Texas near Weimar, had some of my family's favorite fishing spots. In this photo, taken about 1925, are my grandfather Herman Koehn (in the middle back, wearing a hat), three of his sons, and several cousins. One of my aunts was especially good at cooking catfish, so I always enjoyed visiting her. Some of the fish in this catch certainly gave her plenty to work with!
Dorothy Meister, 1128