

Employee Assistance Program's Problem Is Sandians' Fear of Discussing Their Problems

Editor's Note: This is a follow-up to the front-page story in the last issue of the LAB NEWS that discussed the increasing number of employee Q-clearances suspended by DOE during the past few years. At least one more related story is planned — about the upcoming pilot program to issue lower-level L-clearances to some Sandians in New Mexico and California.

Sandia's chief medical officer and the manager of the Employee Assistance Program acknowledge a sharp decline in employees' use of EAP for substance abuse counseling. The reason, they say, is the rumor that seeking EAP help for treatment of substance abuse or other personal problems could lead to loss of the DOE-issued "Q" security clearance, and hence to loss of Labs employment.

Both also lament this perceived, but nearly baseless, fear because it is depriving some employees of much-needed counseling, and Sandia and DOE of the better job performances they would get

from these employees.

"Everyone wins when a problem is identified early, when the diagnosis is accurate, and when treatment is initiated before a small problem becomes a big problem," says Dr. Larry Clevenger, Director of Occupational Medicine Center 7030. "In the setting in which those interventions are done early, the employee does better and Sandia does better because it maintains a valuable employee — most often before performance issues surface.

"The real security concern is when people have horrendous problems that remain untreated," he adds.

Issue Recognized Months Ago

Harriet Morgan, Manager of Preventive Medicine/Employee Assistance Dept. 7035, says the issue has been the center of discussions within Sandia and DOE's Albuquerque Operations Office for

several months — long before the appearance of news stories detailing complaints from people claiming their clearances were suspended after they sought EAP help.

In the midst of these discussions, the newly designed and reconstituted EAP began operations in October 1992, rolling into a single program the

"The real security concern is when people have horrendous problems that remain untreated."

existing substance abuse program and the program addressing personal problems. EAP, however, expanded its scope to include more family-based problems, and added Preferred Health Care Ltd., an off-site health provider, to increase the options of EAP users.

"We're concerned that people who really do need help would not seek it out because of the concern about the clearance issue," says Harriet. "We have set up in the last several months — prior to any of these articles about clearances — meetings with the DOE personnel security people. We were aware this was a concern of Sandians long before the articles were published."

Larry says the concern became apparent through EAP's declining substance abuse contacts. In the recent past, he says, the program would average 30-40 new chemical dependency-related cases a year. That gradually dropped to about 20, and last year to less than half a dozen.

"That's a tragic consequence of this whole story, because it means that people with substance abuse problems now are either not receiving
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Labs Research Influential, Says Institute — Page Eight**



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POWER FROM THE SUN — Underneath lights representing the sun for Sandia's exhibit at the recent Regional High-School Science Fair in Albuquerque, Jack Cannon (right, 6219) shows Antoinette and Christopher Gallegos how to get power from a photovoltaic array. The Labs' exhibit showed aspects of photovoltaics ranging from sand (silicon is a major ingredient of photovoltaic devices) to utility-level power production. Jack says he worked with Christopher last year as a Sandia Science Advisor at Adobe Acres Elementary School. Christopher is now a middle school student and exhibited a project at the regional fair. Antoinette, his sister and a third-grader at Adobe Acres, won a prize at her school's fair. Gay Dybwad (2411) was organizer of all corporate exhibits at the regional fair (held at the University of New Mexico).
(Photo by Randy Montoya)

Final Decision by Late July

Battelle, Martin Marietta Are M&O Contract Finalists

Most Sandians got the news two weeks ago that Martin Marietta and Battelle Memorial Institute are the two finalists in the Department of Energy's process to select a new management and operating (M&O) contractor for the Labs. The process continues, and DOE plans to select one of the two in July and to have the new contractor on site by Aug. 1. The winning organization will assume full Sandia management responsibilities on Oct. 1, following the expiration of AT&T's management contract at the end of September.

AT&T announced last May a decision against renewing its Sandia M&O contract, which it has held since the Labs became an independent facility in 1948.

Meet the Finalists

Battelle Memorial Institute is an independent non-profit organization headquartered in Columbus, Ohio. It claims six worldwide "businesses" — national security, energy, environment, commercial and industrial technology, transportation, and health. DOE is Battelle's major customer. The institute manages Pacific Northwest Laboratory in Richland, Wash., and has other operations at Pantex and elsewhere.

Martin Marietta is a large commercial company headquartered in Bethesda, Md. It has diverse research, development, and manufacturing operations, including many that are defense related. A company spokesman says Martin Marietta will
(Continued on Page Six)

This & That

And Now There Are Two - Battelle or Martin Marietta - which one will it be? Two weeks ago, DOE announced that it had narrowed the list of prospective Sandia management and operating contractors to two finalists - Battelle Memorial Institute and Martin Marietta (see page one). The selection process continues, and DOE expects to announce its choice by the end of July - possibly sooner. We asked both groups to provide write-ups about their organizations so we could "introduce them" to Sandians in this issue (see page seven). Our thanks to Martin Marietta's Jerry Langheim and Battelle's Bill Madia for providing the write-ups. Radio Sandia (1610AM) plans to air some related interviews starting at 4 p.m. today (Friday) and continuing through Monday.

* * *

Media Mania - It's that time of the year when the media analyze the federal budget and its effects on us and our communities. Reports that speculate about our programs and people can sometimes be misleading (see story at right), so don't panic when you pick up a newspaper or listen to the news this time of year. Everything you read or hear just ain't necessarily so. We'll be doing our annual State of the Labs interview with President Al Narath and our executive VPs soon, and we're sure they'll have lots to say about Sandia people and programs.

* * *

EAP - Unfortunate PR Problems - It's a rotten shame when a program that's set up with the admirable goal of helping employees solve emotional, personal, and substance-abuse problems gets an image problem, but that's exactly what's happened to some parts of Sandia's Employee Assistance Program (EAP) in the past few years. Rumors during this time and recent news stories about Sandia/New Mexico employees who have reportedly lost security clearances after using EAP services have resulted in fewer employees using some types of its services.

Sandia Medical Director Larry Clevenger (7030) and EAP Manager Harriet Morgan (7035) offer some candid remarks and opinions about the situation in a page-one article and several sidebars. We hope you Sandia/New Mexico folks will not only read the story, but then take a few minutes to complete and return the survey on page five to help us gather some employee opinions that we can publish and perhaps make some points to the right people.

* * *

"Conehead Car" - Ellis Heustess (5823) gets lots of strange looks when driving his "guvmint" car around. Those weird things on top are part of an official project he's working on to study the tracking of vehicles using Global Positioning Satellites. Ellis, who celebrates 30 years with Sandia this month, is featured along with his car on our Milepost page in this issue. Sandia Protective Force folks working the gates dubbed his wheels the "conehead car."

* * *

Mighty Mild Crisis - Reactor Engineering Technology Center Director Jim Rice (6500) is sporting around Albuquerque in a brand-new pickup truck he says he bought to alleviate his mid-life crisis. Basically a mild fellow for years, Jim may be getting a wild and crazy streak, say his friends - his new truck has a racing stripe down the side! And I certainly don't mean to be unkind to Jim, but I must pose a basic question to him about his self-admitted "mid-life" crisis: Jim, how many 102-year-old people do you know? ●LP

Misleading News Reports Clarified

Editor's Note: The following information was issued to all Sandians in a special *Sandia Bulletin* on March 29. It is reprinted here for the sake of Sandia retirees and other interested persons who may have heard or seen the original news reports (or some even worse follow-up reports this week), but who did not receive the *Bulletin*.

"On Saturday, March 27, the Albuquerque Journal ran a front-page story with the headline "Sandia Labs To Cut 1,000 Nuclear Jobs." The Albuquerque Tribune ran a follow-up story that afternoon, and several radio and TV reports also aired. The initial headline and some of the follow-up reports were misleading, implying that Sandia is planning layoffs. Sandia management issued the following clarification this morning, Monday, March 29:

"The nuclear weapons research, development, and testing (RD&T) budget has been declining since the mid-1960s, when the program supported much of Sandia's staff of 8,000 employees. The decline has been offset by diversification of missions and sponsors since the mid-1970s as Sandia moved from a single-mission laboratory to the multi-mission institution it is today.

"During the 1980s, the pattern of decline in the RD&T budget was arrested by additional funding initiated by the Reagan Administration, and the number of Sandians supported by this program increased somewhat. By 1990, the RD&T program was again declining because of US budget concerns and reduced world tensions. Eighteen months ago, we expected this decline to proceed at 8-10 percent per year; however, the rate for FY92 and the next two years now appears to be 10-15 percent per year on average. This will mean that 300-500 more Sandians per year will need to be supported by other funding sources.

"In FY93, we have been absorbing the RD&T manpower reductions by shifting people to growing programs in energy, environment, arms control, and especially technology transfer. Our interactions with industry are growing rapidly, and Sandia technology initiatives in manufacturing, microelectronics, and other areas provide opportunities for future growth. During the next two years, we hope these shifts and new opportunities will provide funding for as many as 1,000 Sandians. Our management plan also provides for adjusting our hiring program to allow attrition to compensate for any inability to shift employees to other work. Although we are facing great uncertainties, it is our hope that these approaches will be adequate to deal with the situation.

"No layoffs are being considered at this time. Sandia management, with help from our Congressional delegation and with support from DOE, is working hard to identify appropriate new opportunities for us to contribute to a wider collection of national needs." ●

New Prescription Drug Plan Effective Yesterday

Sandia introduced the Caremark Prescription Drug Plan on April 1 to help deal with the ever-increasing costs of prescription drugs. This is an optional new plan for Sandia Medical Care Plan participants. Health Maintenance Organization participants are not affected.

Introductory packets have been sent to home addresses. If you did not receive a packet, contact the Benefits Department on 845-9706.

The Caremark plan offers a significant discount on purchases of prescription drugs through the Caremark Mail-Services pharmacy and through a select group of retail pharmacies. Detailed information is in the packets sent to homes.



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DOE Secretary O'Leary Plans April 7 Sandia Visit

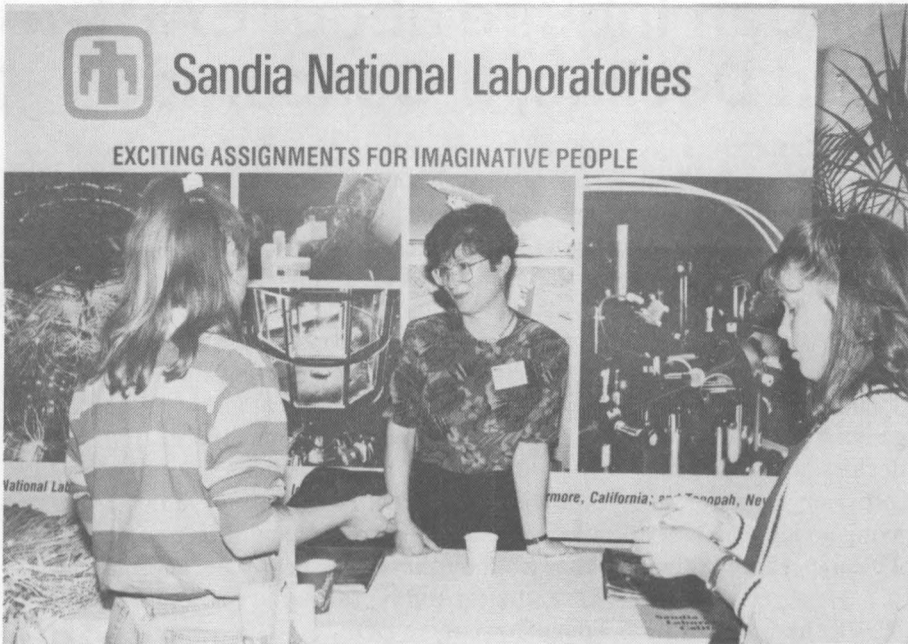
DOE Secretary Hazel O'Leary plans to visit Sandia next Wednesday, April 7, according to an announcement released early this week by Senator Jeff Bingaman.

As of Tuesday, she planned to spend the morning at Sandia and the afternoon at Los Alamos National Lab. At LAB NEWS deadline time, plans had not been completed, but Virgil Dugan, Director of Planning and Staff Support 4500, said the Secretary would likely visit several research facilities after attending a general Sandia briefing. She did not plan to make any formal presentation.

"We know that Secretary O'Leary is interested in discussing our current initiatives and future directions," says Virgil, "especially about how we will be working increasingly with US industry."

Senator Bingaman, Gov. Bruce King, and other political and DOE leaders are expected to accompany O'Leary. The LAB NEWS will cover the visit in the next issue.

'Expanding Your Horizons' Draws 700 Young Women



EXPLORING CAREERS — Mary Clare Stoddard (center, 8446) staffs Sandia's Career Fair booth, telling young women about opportunities in math, science, and engineering.



LOVE THAT SLIMY STUFF — As part of Sandia's Science Carnival event at the EYH Conference, Karen Cardwell (right, 8441) and Grace Petines (8523) make a slimy substance known as "Gluep."



Expanding Students' Horizons

"This year, we had the best turnout and most workshops ever," says Sally Raubfogel (8642), co-chair of the 14th annual Expanding Your Horizons (EYH) Conference for young women from junior and senior high schools in the East Bay. EYH was sponsored by Sandia, Lawrence Livermore National Lab, and 32 other groups and firms. The sessions were held at the Pacific Bell Center in San Ramon's Bishop Ranch Business Park on March 6. About 700 girls took part in 48 workshops during the day.



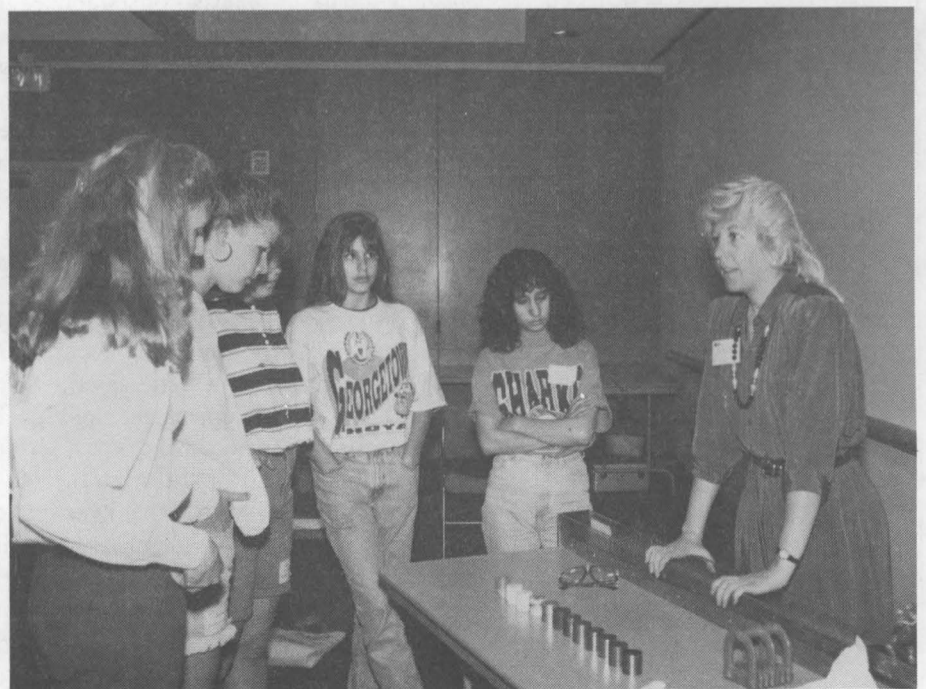
CO-CHAIRS WITH KEYNOTER — Sandia EYH Conference co-chair Sally Raubfogel (left, 8642) and LLNL co-chair Chelle Clements (right) present an appreciation award to keynote speaker Janice Huff, KRON-TV meteorologist.



ROCKETS AWAY! — Debbie Post (left, 8114) conducts a workshop on designing and launching model rockets.



WHAT YOU DON'T SEE . . . Lawrence Livermore industrial hygienist Jennifer Leon (right) shows how to detect unseen dangers posed by everyday items such as household cleaners.



EXPLORING PROPERTIES OF METALS — Jane Ann Lamph (right, 8283) conducts the "Metal Mania" session at EYH, testing various materials for space-shuttle construction.

(Continued from Page One)

Employee Fears

therapy or they're having to go elsewhere to try and get the help they desperately need," he says.

In spite of declining substance abuse referrals, however, he says, the program as a whole is growing, with increased self-referrals by those experiencing marital difficulties, problems with children, and other family-based issues.

Larry and Harriet emphasize that personal problems revealed through EAP counseling can be released to investigators, or to anyone else, only

"DOE has specifically said it supports people who need help seeking it, but there is a bit of a Catch 22."

with the written consent of the client (see "Clearances, Counseling Help Individually; Sometimes Squeeze People Between Them" below). Misunderstanding of this, however, has driven the numbers of those requesting help systematically downward during the last couple of years.

Nature of Work a 'Departure Point'

"DOE has specifically said it supports people who need help seeking it," says Harriet, "but there is a bit of a Catch 22 for all of us."

That Catch 22, says Larry, is the nature of the work done at Sandia, and something of a departure

No Record of First Visit

Sandians Can Inquire about EAP Help — and Decline, If Concerned

During an employee's first visit, says Harriet Morgan (7035), counselors talk about what the Employee Assistance Program offers, including detailed information on the specific limits of confidentiality. She says anyone entering the program should understand that although EAP's only interest is in helping to alleviate problems, the nature of problems addressed in counseling could be reviewed during a clearance reinvestigation.

If a potential client decides after that initial contact not to enter the program, no record of the visit is made, thus leaving no indication of a problem for a subsequent clearance reinvestigation to discover.

Larry Clevenger (7030), the Labs' chief medical officer, points out that during the past

20-odd years, counselors in EAP and its predecessor programs have seen more than 3,000 people for relationship, chemical dependency, or other kinds of mental-stress problems "and the vast majority of them have done wonderfully with intervention and counseling, and have had no security clearance concerns."

He believes that is important, and that DOE should consider such results in reevaluating its reinvestigation procedures and criteria.

"If it's true," he says, "that a place like Sandia believes in this notion of continuous improvement, and what we did five years ago that we thought was just right perhaps can be done better today, the same principle really ought to apply to DOE."

point Sandians must reconcile themselves to.

"The bind employees find themselves in is that a job at Sandia, under current policy, requires them to have and maintain a Q-clearance," he says. "They're signing up for a special role in our society."

"That special role says DOE is going to grant

us access to a variety of locations, materials, and information that are considered national security-related concerns. All of us who sign on the dotted line are subject to a host of regulations that other people don't have to answer to."

He says DOE, in its role of dealing with Sandians
(Continued on Next Page)

Best-Intentioned Plans Have Pitfalls

Clearances, Counseling Help Individually; Sometimes Squeeze People Between Them

Sandia's Employee Assistance Program is designed to help Sandians with emotional or behavioral problems. Q-clearance reinvestigations are designed to protect national security matters. Sometimes real people get caught between the two.

The "real people" are Sandians who must maintain their active Q-clearances to keep their jobs, but also sometimes need help in overcoming personal, emotional, or addictive problems.

To remain productive and valuable to the Labs, they may need counseling to overcome such problems, but DOE personnel security guidelines see the very existence of some of those problems as threats to the integrity of national security work assigned to the Labs.

Dr. Larry Clevenger (7030) and Harriet Morgan (7035) say it can be a delicate balancing job to provide the counseling that's needed while maintaining the quality of work required of Sandia.

"If we want to maintain our security clearances, we need to recognize that we have to be personally responsible for our current and future behavior, and accept the consequences of our past behavior," says Larry. "That's reality."

Believes DOE Should Adjust

He also says he believes DOE could make some adjustments that would improve its security clearance requirements. Past illegal drug use is an example.

"An employee will talk to DOE security and admit to past illegal drug use," he says, "and DOE will say, 'OK, we believe it was recreational use, so sign this form saying you'll never use again and you can have your clearance.'"

"The dilemma is that a certain percentage of those folks who are past recreational drug users have an addictive disorder, and signing the form is simply band-aid therapy," Larry continues. "Finally an employee will develop a significant

problem, seek therapy and rehabilitation, and reach a true recovery phase in which life turns around in a dramatic way."

But when that employee fills out the questionnaire for a clearance reinvestigation and indicates having entered therapy for drug use, the sky falls in.

"DOE is absolutely unforgiving at that point and will remove the clearance," Larry says. "I think that's unfair, and I know some of our employees have been caught in that kind of situation."

And, he says, the alternative is no better. "An employee can say, 'I'm not going to sign that form [consent form allowing investigators to talk with counselors about an employee's treatment], because that's my private personal business.' That's the employee's prerogative, but there are clearly consequences. I don't know of a case in which an employee has refused to sign the form, but my guess is that it would result in a removal of a clearance."

EAP has been the target of suspicion in recent news accounts of suspended clearances, but Harriet, who manages the program, says that isn't necessarily fair.

"Often an individual who comes to the EAP for assistance may already have a very troubled history, and may already have been suggested for treatment by security or by the medical department," she says. "Then, during the course of treatment, the individual is questioned by investigators and the past history surfaces."

"Although there's no connection between EAP and the investigation," she adds, "there may be a connection between the investigation and a security report, or a report from some other quarter. But if the investigation leads to a clearance suspension, EAP is often blamed."

But the bottom line, she says, is that these problems affect "a very, very small percentage of people, in terms of clearances being suspended."

Dave Fredrickson, Director of Personnel Security Division at DOE's Albuquerque Operations Office, said the same thing in a letter to the *Albuquerque Journal* on the subject of clearance suspensions in the entire DOE/AL complex.

He says only 162 individuals out of the 37,000 employees in the complex have clearances currently in the "administrative review process," a number equal to less than one-half of one percent. Of those, 139 are people whose existing clearances have been suspended while they are being reinvestigated, and 23 are people for whom new first-time clearances are being sought.

Eligibility Question Triggers Review

Fredrickson says the administrative review process is triggered when a "serious question of eligibility" arises in the evaluation of an employee or potential employee seeking reissuance or issuance of a security clearance. He says that while the status of the clearance is being reviewed, the employee cannot be allowed access to classified information, special nuclear material, or other work-related material ordinarily available to someone with a valid clearance.

Harriet says representatives from Sandia and DOE/AL began discussions months ago on the problem of employee perceptions that seeking help from EAP will lead to clearance suspension.

Fredrickson confirms that, but says resolving situations like the hypothetical one Larry outlined — a former drug user who gets therapy — is not as simple as it would appear.

That particular situation, he says, would not be considered as only a drug case, but would turn on the issue of honesty: the breaking of a written promise not to use drugs again. And the individual would then have recourse to the administrative appeal process, to present any circumstances felt to be mitigating ones.

(Continued from Preceding Page)

as individuals, is like everyone else in realizing that people face issues in the ordinary course of adult living. Personal relationships sometimes generate problems — marital, family, and adolescent problems among them — and some 30 percent of the overall population experience depression to one degree or another.

Another major concern to DOE is the prevalence of substance abuse in our society, including those who work in its installations. DOE wants to be sure that if a person has a chemical dependency problem, the problem is being treated and the person is recovering.

“However,” says Larry, “if they identify someone who is currently using illegal substances, their view is that that’s incompatible with maintaining an active Q-clearance and people who are active substance abusers ought not to be the people assigned to work on nuclear weapons, or carry machine guns, or deal with special nuclear materials.”

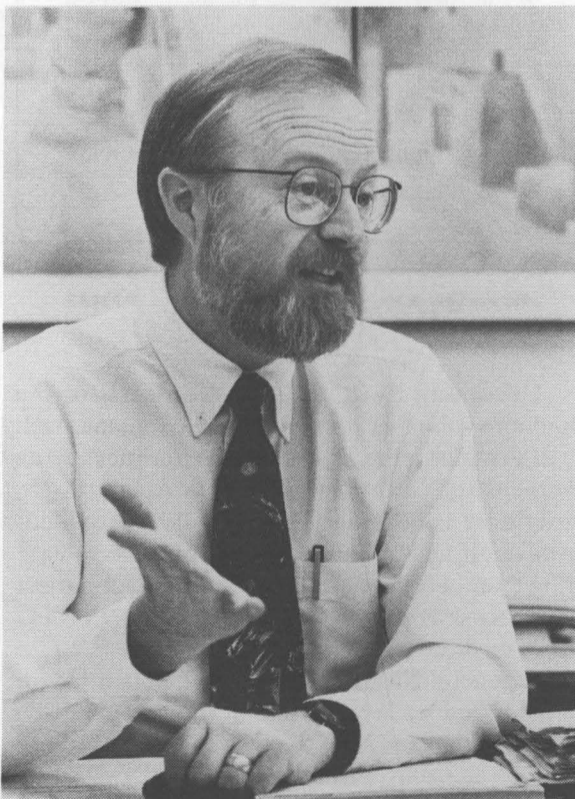
Information Guidelines Specific

Even so, say both Larry and Harriet, there are very specific guidelines on what information is available to those investigating employees’ backgrounds and how it is made available.

“It is explicit,” Harriet explains. “The employee being investigated signs a specific release of information for each care provider or program that will be discussed and actually indicates the type of information being approved for release — for example, progress notes made by the counselor, summary forms, treatment records. The release forms are designed to be very specific.”

Recent news stories, she says, seem to have caused people to jump to conclusions about how information is shared with investigators, mistakenly assuming the files are simply opened to them.

“Actually, 99 percent of the time we sit and summarize information from the file in response to specific questions,” Harriet says. “We give pretty general information and we are very careful about even that. We definitely do not just lay out records



LARRY CLEVENGER

Take Note

Choices for Families Child Care Resource and Referral Service is sponsoring a 1993 Summer Activities Info Fair on April 13 and 14 at the Coronado Club from 11 a.m. to 1 p.m. Representatives from summer camps and recreational programs will be on hand to share information about their programs. Everyone is welcome. For more information, call Carolyn Nee on 844-1492.

for people.

“We would not approach DOE at all,” she says. “If someone comes — and it’s typically an OPM (Office of Personnel Management) investigator — we would never discuss the case unless the investigator has a release-of-information document signed by the individual.”

There are occasions, she says, when investigators may ask to examine documents, but stresses that those occasions are rare. She also says counselors try to make time spent with investigators

“A good bit of time” in the very first session is spent explaining the limitations of confidentiality.

productive by emphasizing the value of the treatment and how well the client is responding to it. Taking that a step further, Larry says clients who have problems with clearance investigations may ask EAP representatives to testify on their behalf during DOE reviews.

Harriet says “a good bit of time” in the very first session with someone seeking EAP counseling is spent explaining the limitations of confidentiality “because we think it’s really important that people understand that in any confidential service, there are always limitations.”

Specific limitations, she says, are suspected child abuse, medical emergency, a subpoena from a court of law, or a client being an imminent danger to himself/herself or others. A counselor having substantial evidence a client is involved in any of those four cases is legally required to report that information to appropriate authorities.

Despite such assurances, suspicions linger.

Clearance Suspensions Not Linked

“There’s a perception that all Sandians who have lost a security clearance have been through counseling or an Employee Assistance Program event,” says Larry. “That’s not true. There’s a reasonable percentage of folks at Sandia who have never had counseling, but who have had significant personal issues that have triggered DOE actions on clearances.”

On the other hand, he says, there have been instances of a clearance investigation being a “triggering event, causing the person being investigated to come to EAP for counseling.”

DOE’s handling of security clearance investigations is a Sandia concern, even though it is not a Sandia responsibility, he says.

“We say and believe — and behave in accordance with the principle that — confidentiality is crucial,” Larry says, “and we collectively work



HARRIET MORGAN

hard to assure that it’s our operational norm. There is no requirement for EAP counselors to provide independent reports without an informed consent from the individuals being counseled, and, in fact, it’s illegal for them to do so.”

He says that from time to time investigators come to the Labs seeking information about employees, “but without that release, we send them away. We give no information; we don’t even tell them whether a person has been seen by one of us. EAP handles the transfer of information with the same level of protection that private counselors provide.”

Even though they understand the reasons for the fears that have driven the numbers of their clients in some parts of EAP down in the past couple of years, both Larry and Harriet are trying to dispel the misperceptions and attract those who need counseling back into the EAP fold.

“I would like to think that somewhere in the not-too-distant future we will be able to turn that trend around,” says Larry, “but that’s going to be dependent upon the success of the Employee Assistance Program, supportive policies from Sandia, and a climate of caring and interest in helping from DOE.”

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After reading these articles, please fill out and send to Employee Communications Dept. 7162 the survey form printed below.

Employee Assistance Program: Tell Us What You Think

The LAB NEWS wants to know what you think.

After you have read the Employee Assistance Program (EAP) articles in this issue, please take the time to respond to this questionnaire. Base your responses on what you know today about the program, DOE’s security clearance regulations, and recent news accounts about the two.

If you were experiencing one of the problems listed below, and wanted to correct the problem, please indicate what you would be most likely to do:

	Seek help through EAP	Seek private counseling	Try to solve by myself
Alcohol-related	_____	_____	_____
Illegal drug-related	_____	_____	_____
Prescription drug-related	_____	_____	_____
Serious emotional problem	_____	_____	_____
Personal problem*	_____	_____	_____

(*Family, marriage, work, etc.)

If you would like to attach a note explaining your reasons, please do so. The LAB NEWS will compile results and publish them in the next issue. Results of this unscientific survey may also be provided to DOE/AL and/or other organizations.

Please return your questionnaire to Employee Communications Dept. 7162 by interoffice mail, or fax it to 844-0645. **Questionnaires must be in the Dept. 7162 office by the end of the business day Wednesday, April 7, to be included in the tabulation for publication.**

Drive Starts April 5**US Savings Bonds — For Education, Retirement, or a Rainy Day**

How much lower do you suppose interest rates can go? If you're getting ready to buy a house or car, you cheer every time the rates head down. But if you've got money in a savings account or certificate of deposit, every half-point lower brings an "ouch!"

Really, of course, most of us are both buyers and investors. And for most of us, the important thing is to invest in a regular, dependable, safe way, no matter what's happening in the financial markets.

That's where US savings bonds shine — particularly when you're buying them through a regular payroll deduction program.

"When you sign up to buy bonds through payroll deduction," says Doug Robertson (20A), chairman of the 1993 Savings Bond Committee, "you know where the money is going. You don't have to remember to make a deposit, and you know your investment is safe — the bonds will be replaced if they're lost, stolen, or destroyed."

Sandians have long recognized the value of bonds. During the 1992 campaign, they signed up for a record-setting allotment of more than \$3.7 million. "Our goal this year," says Doug, "is to achieve an 11-percent increase in allotments."

The bond drive begins April 5 and continues through April 16.

Guaranteed Minimum Interest

One attraction of Series EE savings bonds is that they're guaranteed to earn a minimum interest rate when redeemed, but there's no limit on how

A Nod to the People Who Help Us Invest in Bonds

One key to a smooth-running bond campaign, says 1993 Bond Drive chairman Doug Robertson (20A), is the help of division representatives. They make sure that each center in their division has a representative, and they help take care of any questions or snags that arise.

The 1993 division representatives are Frank Ortiz (101), Rosemary Springer (200), Robert Balthaser (363), Craig Jones (1903), Kurt Wessendorf (2234), Dick Pettit (4342), Carolyn Pura (5363, Sandia/California coordinator), Paul Page (5500), Art Verardo (6612), Michael Allen (6422), Carolyn Lucero (7617), Boris Starr, Jr. (7324), and Judy Davenport (9202).

Other 1992 Bond Drive Committee members are Rita Shortman (152), Charles Shirley (7162), Sheila Carr (7325), and Jennie Negin (7701). Jennie will lead the 1994 bond drive.

Allotments and Denominations

If you purchase bonds by payroll deduction, you may elect to receive them in face amounts from \$100 to \$10,000 (bonds are bought at half their face value).

Deductions can be as little as \$1 a week. The deductions accumulate until there's enough to buy a bond at the denomination you signed up for.

Folks who participate in the Bond-a-Year plan (one annual payment) may purchase any denomination, with the minimum deduction being \$50.

high the interest can go. The bonds pay a floating, market-based interest rate (compounded semiannually), which makes them compare well with many other investments.

And though the rate can float, it can't sink below a guaranteed minimum — currently 4 percent. (See "How Much Do You Get for Your Bond?")

"Another good feature of bonds," says Doug, "is their tax advantages. Prospective retirees — near-term or long-term — can defer taxes on the bond interest until after retirement, when they'll probably be paying taxes at a lower rate.

"And since 1990," he adds, "taxpayers who are at least 24 years old have been able to buy bonds in their own names and owe no tax on the interest used to pay for educational expenses." The obvious users of this feature, Doug points out, are parents saving for children's college expenses, but the provision can also be used by others, such as grandparents. (There are some income limitations on this

"Not only are bonds a solid part of anyone's investment portfolio, buying them helps the country."

use of bonds — anybody planning to use it should check the information being distributed to all Sandians during the bond drive.)

Parents can also gain tax advantages by buying bonds in a child's name, so that the interest is taxed at the child's rate. Again, anyone planning to do this needs to make sure he or she understands the details.

One tax advantage applies to everybody: interest on Series EE bonds is exempt from state and local taxes.

Good for the Country

"Not only are bonds a solid part of anyone's investment portfolio," says Doug, "buying them helps the country. Every billion dollars in bond

sales saves the US Treasury — and us taxpayers — more than \$70 million in borrowing costs."

As in previous years, the 1993 Savings Bond Drive will be conducted by division representatives, with the help of coordinators and canvassers in each center. Every employee will receive a payroll deduction card to enroll in the bond program or to change basic allotments, beneficiaries, or denomination amounts. The cards should be returned to the canvassers, even if no changes are requested.

"The Bond Drive Committee, the division representatives, and a number of other Sandians are working to make this year's drive a success," says Doug. "But ultimately it's up to every individual Sandian. If you're already participating, consider increasing your basic allotment. If you're not participating, think about the benefits of making at least a small allotment — you'll feel a sense of accomplishment when that first bond shows up in the mailbox." ●CS

How Much Do You Get for Your Bond?

The combination of a floating market-based interest rate and a guaranteed minimum rate for US Series EE bonds can be confusing. Here's a bit more about how it works:

Market-based rates are set each May and November according to financial market averages during the preceding six months. The current rate (through April 30) is 5.04 percent.

If a bond is held for at least five years, it earns the greater of the two possible rates: either the average of semiannual market-based rates during the holding period, or the minimum rate. At redemption, either the average or the minimum rate is applied and compounded semiannually to determine the value of the bond.

Bonds bought after March 1, 1993, and held for less than five years earn interest at a 4-percent annual rate, compounded semiannually.

Take Note

Upcoming New Mexico Volunteers for the Outdoors volunteer opportunity: La Ventana Arch Trail Project in the El Malpais Wilderness Area southeast of Grants on Saturday, April 10. No experience is necessary. Tools will be provided; however, if you have rock bars or pulaskis, please bring them. For more information, contact project leader Rose Doub on 293-3653 or the NMVFO Office on 881-1991.

A general NMVFO membership meeting will be held Wednesday, April 7, at the Home Office Plaza Clubhouse (2403 San Mateo NE, just north of I-40) at 7 p.m. Information about NMVFO's 11th project season will be announced. Janice Hartley of the New Mexico State Land Office will be the guest speaker. Anyone interested in the outdoors is invited to attend.

The New Mexico Volunteers for the Outdoors is a non-profit, all-volunteer organization dedicated to increasing citizen participation in the care of public lands. NMVFO seeks, through education and work projects, to promote partnerships between citizens and land management agencies.



(Continued from Page One)

M&O Contractor

become the world's largest aerospace electronics company when it completes a merger today with General Electric Aerospace. It currently manages Oak Ridge National Lab, the Pinellas (Fla.) Plant, and other DOE facilities.

The LAB NEWS asked Battelle and Martin Marietta to prepare 500-600 word descriptions of their organizations and operations for this issue. Both agreed, and their write-ups can be found on page seven.

On the day DOE announced the two finalists, Sandia Transition Executive Lee Bray (30) complimented DOE's Source Evaluation Board (SEB) in an announcement issued to employees. "We are confident that the board has done a thorough job in analyzing the proposals it received," he said.

"Obviously, we are familiar with the organizations that DOE has identified, and of their work. They are both fine institutions."

Martin Marietta and Battelle were selected as finalists from a group of prospective bidders that submitted M&O proposals in early January. Although the DOE never officially named them, the five others were widely reported to be EG&G, Loral Corp., Raytheon, Science Applications International (SAIC), and TRW.

The finalists were selected after the SEB, composed of DOE officials from the Albuquerque Operations Office, briefed DOE's Source Selection Officer on March 17 at DOE Headquarters in Washington.

Source Evaluation Board Chairman Denny Krenz says DOE will hold detailed discussions over the next few months with both Battelle and Martin Marietta before making its decision. ●LP

At LAB NEWS Request . . .

Prospective Sandia M&O Contractors Introduce Themselves

Battelle Memorial Institute

Battelle was established in 1929 in Columbus, Ohio, with a founding purpose of "Science in the Service of Humanity." Gordon Battelle — a leading Ohio industrialist — originated the concept of contract research and development to help industry compete through the use of advanced technology.

With an initial staff of 30 in 1929, Battelle has since grown to be the world's largest non-profit, independent research, development and applications (RD&A) organization with 8,400 engineers, scientists, and support staff in 50 locations worldwide.

Since its beginnings, Battelle has been guided by eight corporate values — benefit to humanity, innovation, integrity, quality, teamwork, corporate citizenship, growth, and financial health. These values are the foundation for all Battelle policies and actions.

Other Key Battelle Facts

- Non-profit and fully tax-paying
- Major technology centers: Columbus, Ohio; Richland, Wash.; Geneva, Switzerland; Frankfurt, Germany
- Business volume: \$940 million

Strategic Mission Focus

Battelle concentrates on issues and problems of major national and international importance. We are committed to preserving the national security through a broad range of science and technology programs.

We operate in three modes: technology development, technology commercialization and transfer, and technology management.

Our accomplishments range from pioneering research and development to major commercial product breakthroughs. Examples of our major contributions include: (1) development of the uranium processing technology and fuel plate fabrication techniques for the Manhattan Project, (2) development of the xerography process upon which today's Xerox Corp. and office copier industry is based, (3) establishment of the world's first privately owned and funded Nuclear Research Center, and (4) creation of a Battelle Energy Program that has developed numerous breakthrough technologies for renewable and carbon-based energy sources, including the commercial deployment of our patented multi-solid, fluidized bed coal combustion technology around the world.

Battelle staff have been granted more than 4,000 patents and have received 36 R&D 100 Awards and four E.O. Lawrence awards.

Our Vision for the Future

As we approach the 21st Century, we will be guided by the following vision —

Battelle will be a recognized world leader in providing value to our customers by solving significant problems through: (1) innovative participation in the full RD&A technology cycle, from conceptualization to commercialization, (2) technological breadth and multipurpose national laboratory operations, (3) highest quality, diverse staff, (4) collaborative relationships with our clients, and (5) an open, information-sharing environment.

Our vision is implemented through each of our six worldwide businesses — national security, energy, environment, commercial and industrial technology, transportation, and health.

Throughout the 1990s, we will continue to serve a broad customer base. DOE is our major customer, whom we serve at the Pacific Northwest Laboratory, Pantex, and other locations. Other federal clients include DoD, EPA, NRC, and DOT.

We will also continue to maintain long-standing relationships with industry. Examples of companies with which we maintain such relationships are: Emerson Electric, Procter and Gamble, Johnson & Johnson, Kodak, General Motors, Owens-Corning, and U.S. Health Corp.

And with the growing importance of regional technology initiatives aimed at competitiveness and infrastructure improvements, Battelle is assisting state governments with their technology applications needs. For example, we are currently working with the states of California, Iowa, Minnesota, South Carolina, and Ohio on major technology-economic development initiatives.

A final element in Gordon Battelle's vision was the continued education of men and women. In adhering to this vision, we have established hundreds of education partnerships and outreach programs to strengthen linkages among science, engineering, research, and educational institutions.

William Madia
Senior Vice President
Columbus, Ohio

Martin Marietta Corporation

Martin Marietta is a leader in research, development, and engineering across a broad spectrum of advanced technologies. It designs, manufactures, integrates, and operates leading-edge products and systems in such diverse fields as aerospace, electronics, information management, electro-optics, robotics, laser communication, neural networks, uranium enrichment, superconductivity, genetics, and artificial intelligence.

Has 90,000 Employees

On April 2, when it completes its merger with General Electric Aerospace, Martin Marietta will be the world's largest aerospace electronics company, with annual revenues of more than \$10 billion. It will employ more than 90,000 persons, of whom more than 27,000 will be scientists and engineers.

This merger is the latest evolution of the corporation which began in 1909 as the Glen L. Martin Company. Under the leadership of that aviation pioneer, it built some of America's most famous aircraft, including the *China Clipper* and the B-29 known as the *Enola Gay*. In 1961, the company merged with America Marietta to form the present Martin Marietta Corporation, headquartered in Bethesda, Maryland, a corporation whose principal objective is service to the nation, with a customer base that includes most agencies of the federal government.

Among Earliest Missile Producers

The true evolution of Martin Marietta has been more than just corporate realignments and name changes. In the early 1950s, the corporation recognized that the future would include missiles as well as airplanes, and it became one of the earliest US producers of such systems. Martin Marietta played an essential stewardship and surety role from system concept through eventual elimination of weapons under the INF Treaty. In the 1960s, Martin Marietta designed and built the first of what is now a family of Titan missiles and launch vehicles that propelled the Gemini series of early manned space missions. Today's Titan IV system is the nation's largest expendable launch vehicle.

Martin Marietta also recognized that the future of missile systems was dependent on the development of precision guidance and sensor systems. Martin Marietta is now one of the nation's leading suppliers of night vision systems and precision-guided munitions, 11 of its products having been used successfully in Desert Storm.

DOE Partnership Began in 1984

In 1984, Martin Marietta began its partnership with the Department of Energy, with an award to manage the DOE facilities in Oak Ridge, Tenn. Today, Martin Marietta continues to manage the Oak Ridge National Laboratory (ORNL), Y-12, and K-25, as well as the Pinellas Plant and the gaseous diffusion plants in Paducah, Ky., and Portsmouth, Ohio. With the GE merger, Martin Marietta will also take responsibility for the Knolls Atomic Power Plant in New York.

Company Commitments and Philosophy

Martin Marietta is committed to transfer technology from federally funded research activities to leverage the federal research investment and to enhance the nation's overall economic security. At Oak Ridge, Martin Marietta has implemented a highly successful technology transfer program, which in 1991 alone resulted in 15 licenses of ORNL inventions and 50 cooperative research and development agreements (CRADAs).

Our commitment to apply Martin Marietta's experience and high standards to the issues that challenge DOE is part of a long-range corporate strategic objective. We are committed to serving DOE, to helping fulfill its present and future national security responsibilities, and helping to define the roles and responsibilities of its laboratories for the future.

Martin Marietta's corporate philosophy provides employees with the freedom to determine their own approach to achieving established goals, and the respect to do their jobs with the full support of management. It is a total quality philosophy of employee empowerment based on a common objective: to do the job right the first time. At Martin Marietta, everyone plays a critical role in the company's continued success.

Gerald R. Langheim
Director, Public Relations
Electronics, Information
and Missiles Group
Orlando, Florida

Judged by Number of Citations**Research by Sandia Ranks High among Major DOE Labs**

More and more researchers are footnoting Sandians' publications these days.

That's what the Institute for Scientific Information (ISI), a publisher and analyst of scientific research worldwide, says it found in a recent study. Judging by how often Sandia papers published in technical journals are cited by other researchers, the Labs' influence in several scientific and engineering disciplines is top-rated among DOE labs.

"Our study shows that most of the DOE labs rank on a par with the best universities in the country," says David Pendlebury, editor of ISI's *Science Watch* magazine. "Sandia's standing is impressive. Papers by Sandia researchers have shown increasing influence throughout the last decade."

Eight Labs, Nine Research Fields

The study, published this month in *Science Watch*, is based on journal publication and citation analyses. Rankings reflect how often an article is cited by other articles — and thus how important other researchers consider it. The ISI study compares the citation record of eight major DOE labs in nine scientific and technical disciplines. The eight labs are Sandia, Ames, Argonne, Brookhaven, Lawrence Berkeley, Lawrence Livermore,

Los Alamos, and Oak Ridge.

In papers published from 1988 to 1992, Sandia's research was the most-cited in nuclear engineering, earth sciences, and physical chemistry and chemical physics. (No other lab led in more than two disciplines.) The Labs also earned high marks in materials science and applied and condensed-matter physics. In general physics, however, Sandia's ranking was lowest of the eight labs.

Sandia wasn't rated in the three categories of experimental biology and medicine, biochemistry and biophysics, or analytical, inorganic, and nuclear chemistry. Any lab with fewer than 100 papers in a category was not ranked.

"As a national laboratory, it's essential that Sandia both be scientifically productive and communicate its findings to the technical community," says Executive VP Orval Jones (20). "The *Science Watch* study shows that we're satisfying those responsibilities. My thanks to all who are keeping us at the forefront of science and technology."

The *Science Watch* report will go to top research executives in academic institutions, research and development managers in industry, and a variety of planners and policy makers at government science agencies and laboratories.

Conducted to look at the largest DOE laborato-

ries in light of new interest in post-Cold War activities for these institutions, the ISI study assesses the collective merit of their research contributions. "The research impact of these large DOE labs, as measured by citations per paper, generally exceeds the US average," concludes the *Science Watch* article. "In fact, there are signs of improvement. More of the labs surpassed the US average in 1988-92 than did in 1981-92."

Citations Help Track Influence

To carry out its citation analysis study, ISI counted journal publications and the number of times a scientific paper is cited by other articles in scientific journals. The latter measure is considered to be a gauge of the importance and impact of the paper. In nuclear engineering, for example, Sandia papers published from 1988 to 1992 were cited in other works an average of 3.64 times by the end of 1992. The US average for citations of a paper in that field over the same time period was 1.85, according to ISI. This shows that the Sandia papers have a strong impact on the advancement of nuclear engineering.

Calculating the citations-per-paper score of an individual's or institution's research papers is considered a more significant measure of influence than a mere summation of the total number of papers published, many of which may never be referenced by other researchers.

ISI tallied citations on a 12-year and 5-year basis (1981-1992 and 1988-1992). Comparison of the two time frames gives a picture of how an institution's relative influence in a discipline may be shifting.

A look at the 12-year figures shows that Sandia has maintained its position as a leader in both nuclear engineering research (first among the DOE labs) and materials science (third among the DOE labs). In the earth sciences, the Labs has improved its standing, moving from a fourth-place ranking to the top spot. In physical chemistry, the Labs climbed from a third-place ranking to the top.

Copies of the *Science Watch* article are available through Public Relations Dept. 7161 (telephone 844-8066). ●WKeener(7161)

Sandia Joins Forces with National Institute of Standards and Technology

The needs of US industry will determine the eventual direction of an agreement between the Labs and the National Institute of Standards and Technology (NIST), but the essential point is to build on the success of existing programs to bolster the competitiveness of US companies in world markets.

NIST, formerly the National Bureau of Standards, is operated by the US Department of Commerce.

The agreement signed last month covers microelectronics, advanced manufacturing, materials, and standards. It will bring together federal and industrial researchers.

"This agreement with NIST is a very important way to leverage our two institutions' substantial strengths toward further helping American industry," says President Al Narath.

At first, Sandia and NIST will concentrate on microelectronics research, through efforts aimed at improving the quality of US semiconductor products. Industrial needs in semiconductor research have been identified through a "road map" created recently by the Semiconductor Industry Association. The "map," which plots the course of semiconductor technology over the next 15 years, identifies key components of semiconductor manufacturing that could be helped by federal agencies.

In the other three target areas, both Sandia and NIST have major programs. In advanced manufacturing, for example, Sandia encourages cooperative manufacturing initiatives in areas such as intelligent machines, sensors, materials, and manufacturing processes through the Center for Advanced Manufacturing Technology. NIST has a factory-like testbed to develop technology for computer-integrated manufacturing.

In materials, Sandia has strong programs in synthesis and processing and is giving special emphasis to process diagnostics and modeling.

Both Sandia and NIST are active in measurement standards. As industry strives to improve product quality, accurate measurements on the factory floor become increasingly important. NIST provides calibration and accreditation services that help industry attain needed accuracy, while Sandia has been providing this support to manufacturing activities in the DOE complex. Together, the Labs and NIST will work to develop better, faster, less costly ways to get the needed measurement support to manufacturers.

Cooperative R&D agreements (CRADAs) and other industrial links will ensure that research in the four areas of agreement is aimed at meeting the needs of US industry. ●KFrazier(7161)

Sandia Varies from Top to Bottom, but Mostly Top

Sandia conducts research in six of the nine fields surveyed for a study of the influence of DOE labs' research. Here are Sandia's rankings, based on papers published from 1988 through 1992 and cited during the same period. Figures listed are the average number of times each paper was cited by other researchers. The rankings are from a comparison of eight DOE labs. Also included are the average number of citations of papers published by all US researchers.

Physical chemistry and chemical physics: 6.63 citations per Sandia paper, first among DOE labs. Average for all US papers: 4.60.

Nuclear engineering: 3.64 citations per Sandia paper, first among DOE labs. US average: 1.85.

Earth sciences: 4.79 citations per Sandia paper, first among DOE labs. US average: 3.62.

General physics: 5.28 citations per Sandia paper, least-often cited among DOE labs. US average: 5.80.

Applied physics and condensed-matter physics: 4.99 citations per Sandia paper, fourth among DOE labs. US average: 4.31.

Materials science: 3.16 citations per Sandia paper, third among DOE labs. US average: 2.20.

BY COMPUTER LINK rather than pen, President Al Narath (seated) in Albuquerque and Raymond Kammer, acting director of the National Institute of Standards and Technology (NIST) in Gaithersburg, Md., seal a Sandia-NIST agreement. When the signers entered authentication codes, the computer added previously digitized signatures to the text, making signed copies available immediately at both of the widely separated locations. Also present (from left): VPs Paul Fleury (1000) and Heinz Schmitt (2000) and Executive VP Orval Jones (20).



For Strained-Layer Superlattice Work**Physicist Gordon Osbourn Wins Prestigious International Prize**

Sandia physicist Gordon Osbourn is the 1993 winner of the American Physical Society's prestigious International Prize for New Materials. The award was presented March 22 at the APS meeting in Seattle.

The award honors his theory and Sandia innovations that have already led to a variety of new commercial semiconductor lasers and transistors, and open up an almost infinite number of chemical combinations for designing new materials having special electrical and optical properties.

The prize committee cited Gordon, Manager of Vision Science Dept. 1155, for "originating the field of strained-layer superlattice electronics and optoelectronics" as well as for "inventing important new electronic and optical devices."

"This is exciting," says Fred Vook, Director of Physical and Chemical Sciences Center 1100. "We feel quite proud of him and the recognition this provides Sandia. This is a major, major award from one of the world's leading professional societies."

Calculations Led to Unique Materials

Gordon made the first theoretical calculations that predicted the unique electrical and optical properties of strained-layer superlattice (SLS) materials. This theory and the subsequent development of the technology by him and numerous Sandia colleagues have led to the ability to tailor-make a variety of entirely new materials with unique optical and electronic properties.

Strained-layer superlattices are new materials

composed of many alternating layers of different types of carefully grown, ultrathin crystalline compounds (such as aluminum gallium arsenide). The spacing between atoms in the different layers is initially mismatched, but the layers are so thin — it would take 5,000 to equal the thickness of a sheet

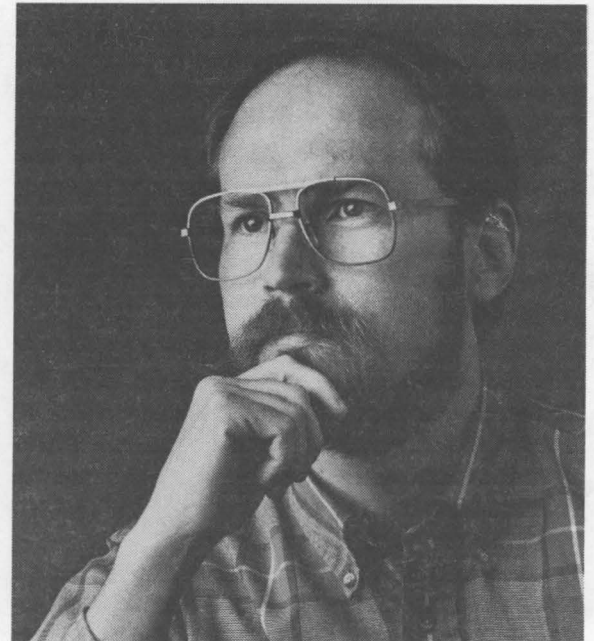
"This is a major, major award from one of the world's leading professional societies."

of paper — that they can easily align by elastic strain. This allows a much greater variety of semiconductor compounds with new, tailorable properties.

SLS principles are now used in the best semiconductor lasers for light-wave communications through optical fibers, rapidly replacing copper wires for communications.

SLS technology is also used in making transistors for high-frequency, low-noise electronic amplifiers. One example of their current use is in sensitive amplifiers at the Very Large Array (VLA) radiotelescope facility west of Socorro, N.M. A number of specialized military applications also make use of the SLS transistors.

"There was a fairly large team effort at Sandia that evolved out of this," says Gordon. "The best semiconductor lasers and field-effect transistors now use strained layer technology. It has been quite a success from a technology standpoint. It's making money for a number of companies. You might say it's an unsung technology transfer success."



GORDON OSBOURN

Gordon previously received the Ernest O. Lawrence Award from DOE for the same work.

"We are really happy about this honor," says Fred. "Gordon provided the spark and initial calculations that predicted the properties that would result from various combinations of strained layers made of different elements. Many Sandians then contributed to demonstrating their applications."

Gordon's initial theory and calculations were presented in 1981. They were soon confirmed by Sandia researchers Bob Biefeld (1126), Paul Gourley (1112), and Ian Fritz (1312), and Sandia announced the first devices made with strained-layer superlattices in April 1983.

The research program has grown continually in the 10 years since then, Fred notes, until it now employs about 40 Sandia professional researchers and makes use of millions of dollars worth of equipment and facilities Sandia has invested in the program. These include a Compound Semiconductor Research Laboratory, clean rooms, and at least nine sophisticated machines that make SLS materials by laying down elements one atomic layer at a time via either molecular beam epitaxy or metal-organic chemical vapor deposition.

"Strained layer technology has really become one of the foundations on which our capabilities in optoelectronics and photonics at Sandia rest," says Fred. "This was a real example of teamwork and investment with a long-term vision and goal."

Materials Variety Nearly Limitless

There is almost no limit to the variety of potential new materials that might arise out of SLS principles, he says, adding: "The importance is that it wasn't a single material, like silicon. With SLS you open up an infinite number of materials. There are all sorts of possibilities."

The biggest impact so far, says Fred, has been in lightweight communication. The best semiconductor lasers used in fiber optic communication use SLS materials because they have been found to have lower thresholds and be more stable. Other important applications are very high quality field-effect transistors and infrared detectors.

•KFrazier(7161)

Fun & Games

Corporate Cup — Corporate Cup events are coming up, and the Sandia Labs Track and Field Club is looking for people of all abilities to participate. The key to doing well is participation; you really do not have to be a superstar. Road races (run and walk) will be held Sunday, May 2, and the track and field events will be held May 21-23. If you are interested in participating or looking for people to run with, contact Peter Green (1845) on 823-4486 or Tamara Ulibarri (1811) on 271-1429.

DOE and Textile Manufacturers Sign Multimillion-Dollar Research Agreement

Americans may soon be walking all over Labs research, not to mention wearing it, thanks to a recent agreement between DOE and America's textile manufacturers.

Representatives of DOE laboratories and the American Textile Partnership (AMTEX) — a partnership of five fiber, textile, and fabricated product manufacturing consortia — recently signed a multimillion-dollar collaborative research agreement expected to increase the textile industry's competitiveness in the international economic arena. The research will help US manufacturers make better carpets, clothes, fabrics, and home furnishings.

The agreement links AMTEX with eight DOE laboratories: Sandia, Los Alamos, Lawrence Livermore, Lawrence Berkeley, Argonne, Brookhaven, Oak Ridge, and Pacific Northwest. DOE and AMTEX will share the cost of the work, which is scheduled to begin this spring.

Bill Alzheimer, Director of Advanced Manufacturing Technology Center 2900, signed the agreement March 15 along with Energy Secretary Hazel O'Leary, representatives of the textile industry, and representatives from the seven other DOE laboratories.

The US textile industry includes cotton growers and companies that manufacture fibers as well as textile and apparel firms that spin yarn, weave and knit fabrics, and make fabrics into carpets, clothing, home furnishings, and other products.

Textiles Account for Two Million Jobs

Altogether, the industry contributes nearly \$53 billion to the gross national product — more than automobiles, paper, primary metals, or petroleum — according to the *Survey of Current Business*. Some two million people in the US work in the textile industry, which provides about 12 percent of all US manufacturing jobs.

As part of the agreement, the laboratories will

target five research areas judged to be the most beneficial to US textile manufacturers: improved materials and processes, demand-activated manufacturing, environmental quality and waste minimization, energy efficiency, and automation. Individual projects will be evaluated and funded competitively.

Energy Secretary Hazel O'Leary says the agreement supports President Clinton's technology policy for US competitiveness, refocusing federal R&D dollars on critical technologies that benefit US industry. •JG

New Sandia-GM CRADA Targets US Cars of Future

Sandia and three General Motors divisions have signed six cooperative research and development agreements (CRADAs) totaling \$30 million to design lighter, more environmentally sound automobiles of the future.

The CRADAs were announced jointly by Sandia President Al Narath and GM's North American Operations Engineering Center Vice President Donald Runkle. The three GM divisions involved in the projects are AC Rochester, Saginaw Division, and Cadillac/Luxury Car Division.

The joint research will explore ways of strengthening materials, developing more sensitive systems for monitoring engine fluids, designing materials and methods for producing them with less adverse environmental impact, and development of software to enhance automated manufacturing efforts.

Watch for details of the CRADAs in a future LAB NEWS article.

What's Happening in the Research and Exploratory Technology Division

By Paul Fleury (VP-1000)

Editor's Note: This is the sixth in a series of LAB NEWS articles by Sandia's vice presidents, discussing what's happening in their areas. The next scheduled article is by Paul Stanford (100).

The Cold War ends and the nation's defense priorities change dramatically. The challenges of energy security and environmental integrity expand explosively. The new administration places unprecedented emphasis on health care, information infrastructure, and industrial competitiveness. Demands on the nation's economic and intellectual resources are greater than ever, and powerful voices are calling for major realignments in the missions and makeup of the DOE weapons labs, including Sandia.

In the face of this turmoil, what is the future of Sandia National Laboratories, and how in particular does the Research and Exploratory Technology Division 1000 fit in? I'd like to address these questions in terms of Division 1000's roles, responsibilities, resources, and relationships. The bottom line is that — more than ever in its past — the division shares with the entire Laboratories the dual aspects of "change" and "challenge" — two words so closely related that they differ by only three letters.

On the one hand, Division 1000, as the principal bearer of the research responsibility for Sandia, maintains a constancy of mission: to ensure that Sandia has the knowledge base and technology it needs to fulfill its present and future missions. On the other hand, Sandia's responses (sector formation, tech transfer focus, Labs-wide initiatives, etc.) to the forces mentioned above mean that executing the division's mission requires rapid and creative changes in our relationships, roles, and programs if we are to meet both our long-term corporate responsibility and the more immediate needs of today's customers.

New Centers Help Execute Mission

To do so, we have expanded and reorganized substantially. The past 18 months have seen the formation of five new centers within Division 1000. Dona Crawford's Center for Scientific Computing 1900 is rapidly assuming national leadership in high-speed networking and distributed computing while providing improved computational services internally and driving the intersite high performance computer consolidation project toward completion. The

Sandia is the recognized leader in robotics R&D for the United States.

Center for Microelectronics and Photonics 1300 was formed from elements of Organizations 1110 and 2100. Paul Percy (1300) is leading a transformation of the Microelectronics Development Lab into the nation's premier silicon technology development enterprise. Just last April we formed the Intelligent Systems and Robotics Center (ISRC) 1600 under the spirited leadership of Pat Eicker. A definite "growth" area building on a small nucleus of strength, the ISRC has already established Sandia as the recognized leader in robotics R&D for the United States.

Division 1000's commitment to increased customer focus and to Sandia's future as a "new style" corporation, built around core competencies, led to the formation last spring of two additional centers with programmatic focus. Peter Mattern — formerly Director of Organization 8300 at Sandia/California — joined us as Director of the Core Competency Support Center 1010. Among his many related responsibilities are management of the energy research programs for the Energy and

FAST FIGURING — Paul Fleury (left, VP-1000) and David Womble of Applied and Numerical Mathematics Dept. 1422 discuss output from Sandia's new Intel massively parallel supercomputer (to their right). Called the Paragon, the machine figures considerably faster than you can scratch your head. After upgrades this summer, it's expected to be the fastest supercomputer in the world, operating at 140 gigaflops (billion floating-point operations per second). Sandia scientists hope to use the Paragon to find solutions to currently unsolvable scientific and economic problems.



Environment (E/E) Sector and management of the Laboratory Directed Research and Development (LDRD) program. Bob Eagan, after several years as Director of Materials and Process Sciences Center 1800, became Director of our new Engineered Materials and Processes Center 1700 with principal responsibility to coordinate Sandia's diverse set of materials-related activities across the entire research, development, and applications (R-D-A) spectrum.

Expanded Roles for 'Old' Centers

Our five previously established centers have expanded responsibilities. Fundamental research in those sciences underlying our material, device, and processing technologies remains the responsibility of Fred Vook's Physical and Chemical Sciences Research Center 1100. The combination of forward-looking research and connectivity to emerging technologies over the past several years enabled 1100 to provide the research nucleus for our efforts in Microelectronics and Photonics 1300. We look for similar impact in the future. The Physical and Chemical Sciences Center pursues a balanced program of concurrent research (addressed toward recognized applications) and leading research (addressed toward fundamental questions in advance of recognized applications). This requires maintaining scientific leadership in arenas such as electronic materials and related fundamental processes, the science of surfaces and interfaces, ion-solid interactions, and lasers and



A WHITE-FROCKED lab worker extracts a 6-inch-diameter silicon disk from a metal deposition system in the Microelectronics Development Lab's Class 1 clean room.

optics. Sandia has repeatedly been recognized with leadership awards by the Department of Energy for basic materials research [LAB NEWS, Feb. 19].

Organization 1100 strives to enhance its effectiveness with customers through more joint projects. Its work in the fundamental science of chemical vapor deposition feeds into programs in Organizations 1800, 8300, 1300, and others. The research into nanoclusters (single crystal aggregates of few to thousands of atoms) underlies future technologies ranging from super catalysts to quantum dot optical devices. Various novel techniques for materials and process analysis are being pursued, such as the heavy ion back-scattering and nuclear microprobe techniques for detecting and imaging impurities and defects; novel remote detection of airborne species using tunable ultraviolet-excited fluorescence; and atomic force microscopy to image nanometer-scale structures without physical contact.

We look to 1100 to help Sandia build the national "brain capital" required for 21st Century success through continued anticipation of national

Sandia is repeatedly recognized with leadership awards by the DOE for basic materials research.

needs in physical and chemical science and through increased emphasis on coupling its research effectively to customers.

Pulsed Power Sciences Center 1200 under Pace VanDevender is the home of Sandia's Inertial Confinement Fusion Program, and a continuing source of the vision that a national laboratory's unique strength is the ability to conceive and conduct complex R&D projects on a scale that is not possible elsewhere. Organization 1200 tackles the big and the bold when it comes to projects and national impact. Starting from the premise that a national laboratory can best address the most complex, globally important problems, the people in 1200 seek long-range, large-scale solutions to such problems in ways that also produce valuable intermediate returns. Perhaps best known is 1200's leadership in inertial confinement fusion and the science of nuclear weapons effects simulation, conducted increasingly in collaboration with Sandia's two sister Defense Programs (DP) labs — Los Alamos and Lawrence Livermore national labs — and a host of international players. Other intermediate-term promises lie in non-nuclear weapons systems based on coil-gun and directed-beam technologies.

For the early to mid 21st Century payoff, research is aimed at the Laboratory Microfusion

Facility (which will reduce the need for underground nuclear testing), a viable industrial base for commercial production of modified materials and destruction of chemical waste; and the LIBRA (light ion beam reactor assessment) fusion energy power plant for environmentally safe and secure energy production. Looking into the 22nd Century, 1200 folks dream of ultra-high specific impulse systems for interstellar travel.

Our Materials and Process Sciences Center 1800 has been under the direction of Al Romig since last spring. As a research organization, it serves an unparalleled set of customers — internal and external — both in numbers and diversity. Sandia's material programs are spread throughout the Laboratories. Bob Eagan and Al Romig strive to integrate the 1000 research base with efforts in 2400, 6200, 6300, 8300, and 8700. In addition, they have spearheaded the new Advanced Material Laboratory. Ron Loehman (1708) directs Sandia's collaborations with the University of New Mexico and Los Alamos National Lab in this pioneering effort. Strong programs in ceramics, metallurgy, polymers, and novel materials with "controlled porosity" not only give 1800 significant participation in Sandia initiatives and sector programs, but serve a healthy customer demand from industry. The close collaboration between our materials and

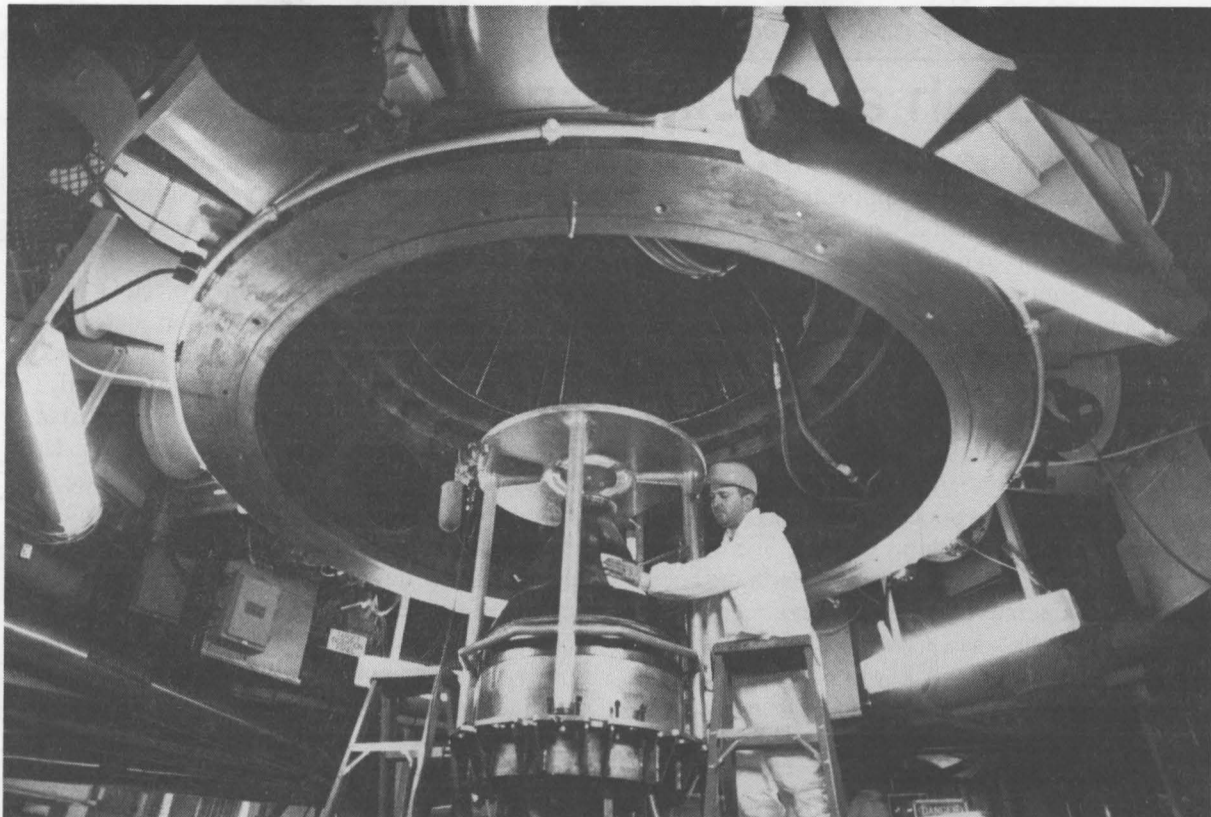
Sandia's materials program has a research base that is unsurpassed anywhere in the world.

synthesis people in 1800 and the physical and computer simulation and first-principles prediction of material properties provided by 1100, 1300, 1400, and 1500 give Sandia's materials program a research base that is unsurpassed anywhere in the world.

Engineering Sciences Center 1500 is led by Dave McCloskey. With its world-class computer modeling and unique aerodynamic test capabilities, 1500 represents the "Sandia Way" of taking "science to solutions" as well as any organization. Organization 1500 is Sandia's focal point for expertise in fluid and thermal sciences, solid and structural mechanics, and aerospace technology. The Center's principal customers are the Sandia sectors through a variety of programs involving applications of physical and computational simulation tools to manufacturing technology, transportation systems, space, and aerodynamics. Materials processing activities in 1500 range from modeling of sol-gel thin film coating and fiber formation to the FASTCAST project, which integrates computational methods, solid-model design practices, automated mesh generation, and empirical casting rules into a complete design and analysis environment. Both involve close collaboration with materials scientists in 1800 and illustrate the value 1500 can bring to a variety of core research fields. FASTCAST also exemplifies the impact Sandia's capabilities can have on US competitiveness. It certainly engaged the interest of President Clinton when he visited Sandia last September during the presidential campaign.

Computer and Computing Sciences Center 1400, led by Ed Barsis, is the focus of Sandia's strategic computing effort. Division 1000 aims to: (1) advance the state of the art in high-performance computing (massively parallel, distributed, and networked computing), (2) immediately apply high-performance computing (HPC) to real problems of scope, complexity, and national importance, (3) combine advanced physical simulation with computational modeling of processes, components, and systems, and (4) enhance the availability of all three to our staff, customers, and partners through advanced information systems. While Centers 1400, 1900, and 1500 lead in these dimensions, many other centers within and outside of Division 1000 also play key roles.

Sandia's Massively Parallel Computational Research Laboratory (MPCRL) is another of



UNDERNEATH PBFA II, Jimmy Ryan of Fusion Accelerator Dept. 1236 cleans a cathode as part of routine maintenance between accelerator shots. PBFA II (Particle Beam Fusion Accelerator II) uses short pulses of energy aimed at a central fuel target to study nuclear fusion. The technology, which grew out of weapon effects studies, is now helping researchers investigate controlled fusion as a long-term energy source.

1400's major initiatives. Involvements range from educational projects like "Superquest" with high school students to winning national Grand Challenges (Computer Design of Materials and Molecules) to interagency collaborations such as the National Consortium for High Performance Computing. With ARPA (Advanced Research Projects Agency) support, Sandia will soon have the highest performance super computer in the world. Software development projects range widely also. Our automated mesh generation software will greatly accelerate computer-aided product design and is the nucleus of an industry-laboratory consortium. Bringing together the analytical and experimental aspects of structural dynamics in the form of "Structural System Identification" provides predictive models for design of automotive structures, space-based interferometers, and missile structures, to name a few. Small but exciting programs in information surety and the information theoretic aspects of computational biology further illustrate the creativity that the center's staff brings to Sandia's partnerships.

Emerging Missions

In all, Division 1000 consists of more than 1,000 Sandians and 200 contractors. Our programs are executed on behalf of all three sectors [Defense Programs, Energy and Environment, and Work for Others] with important additional support coming from LDRD and technology transfer projects. A little more than half of our work is either basic or applied research performed as part of the core competency research programs and LDRD. And a bit less than half is exploratory technology performed on joint projects with the sectors or US industry through CRADAs [cooperative research and development agreements] or other mechanisms.

Our major customers (those who influence our funding) are DOE, all three sectors, and US industry. Through a combination of their substantial support of core competency research and our (1000's) substantial role in carrying out the research, the DP Sector is our largest customer. Roger Hagengruber (VP-5000) and I, as Sandia core competency leader, work especially closely. This relationship is enhanced by Dennis Hayes (5600) who coordinates research for the DP Sector.

In his message last August on the implications of our strategic intent, "Exceptional Service in the National Interest," Sandia President Al Narath detailed Sandia's enduring and emerging mission responsibilities. He identified such emerging

themes as technology transfer, manufacturing, transportation, biomedical technology, and more.

It is important for us in Division 1000 to provide fundamental support, and where appropriate, visionary leadership to such laboratory initiatives. The very nature of "emerging" responsibilities suggests the need for substantial participation on the research and exploratory technology levels.

In the 22 months or so since DOE began to provide matching funds for cooperative research and development agreements between the DP laboratories and US industry, Sandia has exploded onto the CRADA scene. We lead all other labs with a \$251 million cumulative CRADA portfolio. Perhaps surprisingly, Division 1000 is responsible for more than 60 percent (nearly \$160 million) of all Sandia CRADAs. This intensity of activity has enabled us to build strong relations with Paul Robinson's Laboratory Development Division 4000 and especially with Dan Arvizu's Technology Transfer Center 4200 [Dan transferred to 6200 today and Mike Dyer becomes acting director of 4200]. We strongly share the belief that US industry is vital to Sandia's future and the perception that the industrial customer wants more of the

Division 1000 is responsible for more than 60 percent (nearly \$160 million) of all Sandia CRADAs.

"front end" R&D capability. Because Divisions 1000 and 4000 bear a prime "de facto" responsibility for satisfying industry customers, our people are leading a process management team to devise and recommend strategies for a more coherent Sandia interface with industrial partners.

Heinz Schmitt (VP-2000) and Bill Alzheimer (2900) have brought us into Sandia's Advanced Manufacturing Technology initiative. Peter Mattern works on the steering committee, and key roles have been identified for several centers in Division 1000. Other 1000 centers are anxious to contribute. As mentioned by Roger Hagengruber in his LAB NEWS article (Dec. 18, 1992), this initiative is key to DOE's Complex 21 [smaller, more-efficient weapons complex]. Likewise, Dan Hartley (VP-6000) has consistently emphasized the importance of environmentally conscious manufacturing.

Several important dimensions of microelectronics technology are involved in the manufacturing
(Continued on Page Twelve)

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Research and Exploratory Technology

initiative through NCAICM (National Center for Advanced Information Components Manufacturing) and the environmentally conscious aspects of manufacturing through SEMATECH and Sandia's Center for Contamination Free Manufacturing. Paul Robinson is appropriately fond of pointing out that more than 80 percent of Sandia's CRADAs with industry relate directly to manufacturing technology. More than 60 percent of this 80 percent is associated with microelectronics technology. Such agreements have brought much of Sandia (especially 8000, 2000, and 1000) into partnership with key elements of US industry. Dennis Hayes and Roger Hagengruber have been especially cooperative in helping Paul Percy and me support Sandia's new Center for Microelectronics Technology (CMT). A key to Sandia's success in working with US industry, the CMT promises to put collaborations between national labs and US industry on a new plane.

While manufacturing technology and tech transfer stand at the head of our "emerging responsibilities" list, others are likely to grow. Two aspects of biomedical technology find their roots in

Making our capabilities available to external users will provide large returns on a small additional investment.

research in 1000 — diagnostics such as the non-invasive glucose monitor are based on research in 1800, and medical imaging of X-ray and NMR (nuclear magnetic resonance) tomographs is based on research in 1400 and 1500.

Beyond these, Gerry Yonas (VP-9000) has emphasized the potential economic impact of a computerized patient records system. As with RSTAKA (Reconnaissance, Surveillance, Target Acquisition, Kill, and Assessment) — the envisioned distributed simulation of battle strategies, tactics, and scenarios — this requires a new approach to information technology. A key element is Ed Barsis' vision called TIE-IN (Technology Information Environment for Industry). TIE-IN is a vehicle for increasing access to Sandia (and eventually other DOE) capabilities to allow users to obtain, and participate in the development of, solutions to their problems.

Users will be able to "impedance match" into Sandia's unclassified physical and/or computing capabilities at whatever level of sophistication their in-house expertise permits. Thus, users would not be required to maintain their own computers, analysts, software libraries, data bases, or experimental facilities. TIE-IN will construct intelligent front ends for a system to guide users electronically through the process for obtaining solutions while allowing for automatic sign on, verification, information security, cost reporting, and reimbursement.

A driving force for making it a reality is that implementing TIE-IN internally will enhance Sandia's efficiency markedly. So close involvement with Larry Bertholf's activities in 4400 for improving our information infrastructure is essential. Making our capabilities available to external users will provide large returns on a small additional investment. Further, it may be the most practical way to do tech transfer with the many thousands of small and medium-sized US businesses. The same approach offers exciting prospects for "education at a distance" as well.

Prototyping Information Infrastructure

To address another key element in the new information technology, Sandia has taken a leadership role in establishing an integration prototype for National Information Infrastructure. Dona Crawford and Ed Barsis are leading Sandia's

collaboration with other national labs, major industry partners, and NASA to test the technical, architecture, economic, regulatory, and market aspects of this national challenge. Through Sandia's computer consolidation project, Organization 1900 has developed "production" capabilities for reliable high-speed remotely networked computing. They recently demonstrated (at Supercomputing '92) the world's longest distance implementation of Switched Multimegabit Data Service. In partnership with industry, they also demonstrated a distributed computing capability called "metacomputing" that enables transparent access to all data holdings and computational assets of the network participants — such as the NASA Astrophysics Data Systems. Research on other key elements of future information technology addresses fully interoperable, multimedia, vendor neutral networks like HEAT (Heterogeneous Environment and Testbed) and DAVE (Distributed Audio and Video Environment).

Today it is a truism that information technology underlies just about everything from patient care to manufacturing to RSTAKA. Translating this observation into practice is largely responsible for our success in Intelligent Systems and Robotics Center 1600. Its mission is to address problems of national importance, such as hazardous waste cleanup and automated dismantlement of nuclear weapons. Combined with the drive to reduce the time and cost for developing advanced technology and for inserting it into practical systems, this focus is emphasizing teamwork with industry, government, and universities. The ISRC emphasizes (1) systems architectures that facilitate integration into intelligent systems, (2) sensors to monitor, adjust, and help to self-program robotic operation, and (3) automated planning based on computer knowledge and real-time sensing. These have put Sandia in the national leadership position in robotics R&D.

In addition to these Laboratories initiatives, division members are participating in efforts to define long-term a strategy for developing, protecting, and managing Sandia's intellectual property. Our folks take part in Sandia's human resource strategic planning, the *Sandians Perspective* planning group, diversity planning and implementation, capital equipment strategy, and LDRD. Several Division 1000 directors are program managers for the sectors. For example, Peter Mattern — Energy and Environment; Ed Barsis, Bob Eagan, and Paul Percy — Work for Others; and Bob Eagan — Defense Programs. Many more of our managers have sector responsibilities at the project level. This matrix approach fosters communication, customer focus, and teamwork. Correspondingly, we seek to involve Labs-wide representation in our planning and execution of 1000 activities.

Research Supports Core Competencies

This discussion clearly indicates that both our government and our industrial customers are placing increased demands upon us for more research. Indeed research at Sandia — as with few other places in the world — is becoming more rather than less essential to our primary sponsor's success. Because of the bewildering array of possible futures facing DOE, the management and evolution of our research programs presents an unprecedented challenge. Indeed, we must divine what "Exceptional Service in the National Interest" will mean not only next year but into the next century.

We are guided broadly by Sandia's *Strategic Plan* and by our commitment to manage by our core competencies (CCs). As Sandia's core competency leader, I am responsible for nurturing, communicating, and managing the research aspects of today's CCs and for evolving the future CC

base. Our current research portfolio is divided into six program areas: the five current CC's plus the Emerging Technologies (ET) area. The program managers are: Fred Vook (ET), Pace VanDevender (Pulsed Power), Paul Percy (Microelectronics and Photonics), Jim Powell (9300, Physical Simulation/Engineering Sciences), Bob Eagan (Engineered Materials and Processes), and Ed Barsis (Computational Simulation and Computing). The large representation of Division 1000 directors among the program managers for CC research has been misunderstood by some people, and we are working hard to help Sandians understand the reasons for this representation.

Sandia's core competencies reach across the entire R-D-A spectrum, and part of each CC manager's responsibility is to coordinate efforts across that spectrum. So, for example, involvement in materials science and technology goes well beyond 1000, and Bob Eagan has put a Labs-wide council together to provide coordination — as have the other CC managers.

Board Works Strategic Issues

On the larger scale, core competency strategic issues are being worked by the CC Board, which includes Peter Mattern and myself; the six CC program area managers; Sector Directors Dennis Hayes (DP), Tom Hunter (6900, E/E) and Sam Varnado (9900, WFO); as well as Bill Alzheimer (2900), Rick Wayne (8700), Steve Binkley (8301), and Virgil Dugan (4500). Together we are engaged in three broad efforts to nurture and evolve CCs: Inreach, Strategic Planning, and Outreach.

The Inreach Project — led by Marie Garcia (4514) and a Labs-wide team of technical people and process facilitators — aims to refine our identification and understanding of Sandia's core

We must divine what "Exceptional Service in the National Interest" will mean into the next century.

competencies through interactive workshops with virtually all of Sandia's technical centers and major programs. This "bottoms-up" input on future needs, current technical capabilities, and gaps between them will be integrated later this spring into our development of the core competency dimension to Sandia's Strategic Plan. A central theme from these discussions is that Sandia must enhance its differentiating strengths through the integration and nonlinear interaction of the technical skill represented by our present core competencies and resident in line organizations across Sandia.

By later this spring, when our current strategic planning styles for both Division 1000 and the core competencies are concluded, I believe Sandia will have fashioned a new model for matrix management of research in a complex technology-based corporation — a model that optimizes our ability to meet the long-term corporate needs and the shorter term customer needs.

Lengthy as it is, this view of Research and Exploratory Technology Division 1000 only scratches the surface of what's going on and doesn't even attempt to discuss details of the many exciting projects that are being done by our folks in the "research trenches." I invite you to contact me or any of our managers or staff to get the finer details and to discuss how we can work even better together in teaming arrangements.

●PFleury(1000)

Employee Death

Bernard Sujka of Diagnostics and Target Experiments Dept. 1277 died March 19 after a long illness.

He was 50 years old.

Bernard was a senior technical associate and had been at Sandia since 1984.

He is survived by his wife and daughter.

Sandia News Briefs

Correction: Two Authors, Not One, Wrote Award-Winning Paper

Based on information provided to the LAB NEWS, a Sandia News Briefs item published March 19 credited Norm Warpinski (6111) as the sole author of a research paper that recently earned a 1992 best paper award from the Society of Petroleum Engineers.

Another Sandian, Larry Teufel of Geomechanics Dept. 6117, should also be credited. He and Norm were co-authors of the paper, titled "Determination of the Effective Stress Law for Permeability and Deformation in Low-Permeability Rocks."

Project Management Course Surpasses 1,000-Student Mark

Members of Continuing Technical Education and Training Dept. 7522 will hold a ceremony in the Coronado Club Fiesta Room on April 14 to mark the surpassing of 1,000 student enrollments in INTEC course PE 700, "Project Management Overview." PE 700 has been taught at Sandia since May 1984.

The course addresses basic skills needed to define, plan, implement, and administer projects and provides knowledge sufficient for working with planning specialists on major projects. The 37th offering of the course, in which the 1,000th student will be enrolled, takes place April 13 and 14. The April 14 ceremony begins at 2 p.m. Sandians are invited to attend.

Sandia/AEC Reunion Planned for Texas April 24

Former Sandia/AEC employees at Sites Baker (Killeen, Texas) and King/Medina Base (San Antonio, Texas) will get together for a reunion on Saturday, April 24, at PoPo's Country Restaurant, seven miles northwest of Boerne, Texas, just off Interstate 10 (37 miles northwest of San Antonio). A catered lunch will be served. Cost is \$11.50 per person. If you plan to attend, please take old photos or other mementos of the "good old days." For reservations, contact Fred Bartel (ret.) on 210-537-4452. For information, call Bob Austin (ret.) on 505-296-5195 or Leonard Parsons (ret.) on 806-352-0835.

New Mexico, Tonopah Receive Top Rating in Annual DOE Security Audit

Sandia's compliance with DOE safeguards and security requirements got a rating of "satisfactory" recently following an annual audit at Sandia/New Mexico and Tonopah Test Range. "Satisfactory" is the highest rating possible; other possible ratings are "marginally satisfactory" and "unsatisfactory."

DOE's Albuquerque Field Office conducted the audit Feb. 8-26. DOE Orders mandate an audit of all Class A facilities every 12 months. According to Jim Martin, Director of Safeguards and Security Center 7400, the DOE survey team was impressed by Sandians' knowledge and practice of requirements and how quickly and appropriately they provided information.

Following the audit, Kathleen Carlson, Manager of DOE's Kirtland Area Office, sent Labs President Al Narath a congratulatory letter. "J.D. Martin and his staff should be congratulated on their noteworthy achievements," the letter said. "I realize they have worked hard and dedicated long hours to building a viable safeguards and security program. Their tenacity and personal dedication have produced positive results and merit accolades."

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

Welcome

Albuquerque — Christopher Schell (2525).
Other New Mexico — Margie Baldonado (7615),
Bruce Dahly (7611), Cynthia Sandoval (7612).

Elsewhere: California — David Ota (7734);
Maryland — Caleb Crump (183); Michigan —
Michael Kelley (7714); Texas — Stephanie
Draeos (158).

Sympathy

To Clorinda Berryman (7615) on the death of
her husband Lawrence in Albuquerque, Feb. 16.

To Richard Sparks (9531) on the death of his
mother in Albuquerque, March 13.

To Mel Salazar (2414) on the death of his wife
Lydia in Albuquerque, March 16.



MONTANA CONSORTIUM representatives visited Sandia last month after the Consortium became the first Native American institution to join DOE's Science and Technology Alliance of DOE labs and predominantly minority colleges and universities. Seen at the Photovoltaic Test Facility are (from left) John Pretty on Top, Crow Cultural Director; Joseph McDonald, President of Salish Kootenai College; Arthur DeRosier, President of Rocky Mountain College; Nancy Jackson (6212); Janine Pease-Windy Boy, President of Little Big Horn College; and Mike Thomas (6218), displaying a photovoltaic array. A fourth member of the Montana Consortium is Fort Peck Community College. The colleges in the consortium serve about 2,000 students, more than half of whom are American Indians. Several Montana Consortium students will be working at the Labs this summer.

Retirements Trigger Management Shifts

Several management changes have been announced as the result of the retirements of Glen Cheney as VP-7000 and Bill Marshall as Director of Advanced Energy Technology Center 6200.

Arlyn Blackwell is now Acting Vice President of Internal Programs Div. 7000. He serves as chair of the ES&H and Quality councils for all Div. 7000 organizations and reports to Executive VP Lee Bray (30).

Some organizations in Div. 7000 now report to Arlyn, and others directly to Lee.

Reporting to Arlyn: ES&H Assessment Dept. 7001, ES&H Coordination Dept. 7002, Facilities Program Management Center 7010, ES&H Program Management Center 7020, Environmental Operations Center 7040, Safety and Health Center 7700, Facilities Operations and Maintenance Center 7800, and Facilities Development Center 7900.

Reporting to Lee: Occupational Medicine Center 7030, Information and Communication Services Center 7100, Purchasing and Materials Management Center 7200, Laboratory Information Systems Center 7300, Safeguards and Security Center 7400, Human Resources Center 7500, and Logistics Management Center 7600.

Moving to become Director of Advanced Energy Technology Center 6200 is Dan Arvizu, who leaves Technology Transfer Center 4200. Mike Dyer, formerly Manager of Technology Transfer Office 8101, becomes Acting Director of 4200.

More about these appointments will appear in a future LAB NEWS issue.

More Engineers Needed? Article Stirs Controversy

A short article in the March 19 LAB NEWS under the headline "Wanted: 600,000 Qualified Engineers" raised the eyebrows of at least one Sandia engineer. The item, part of a larger article on a new DOE-sponsored engineering school in Puerto Rico, referenced a recent Department of Labor (DOL) report titled *Workforce 2000*, which predicted that the US may face a shortage of as many as 600,000 qualified engineers by the year 2000.

DOL's predictions about an engineer shortage were similar to predictions made by the National Science Foundation (NSF) in 1989. Congress eventually criticized the NSF findings, ruling the data were inconclusive and may have been misinterpreted.

The LAB NEWS does not want to further misconceptions about the future availability of engineering jobs. The existence of an engineer shortage, especially in times of possible defense cutbacks, is a subject of great debate. However, the LAB NEWS article in question was meant to shed light specifically on job prospects for minorities and women in science and engineering, especially jobs for women and minorities fresh out of college.

"As fewer and fewer white males enter the work force, more minorities and women will be needed to fill those spots," says Ken Holley of Education and New Initiatives Dept. 35. "To fill this void, we need to do something about the pipeline. Educational programs for women and minorities will increase their representation in the work force."

Thanks to Gene Kallenbach (5921) for bringing the debate to our attention.

Congratulations

To Linda Rees (4301) and Rusty Gillen (7435), married in Albuquerque, Dec. 23.

To Sheila and Rick (7908) Ramirez, a son, Phillip Paul, Feb. 21.

MILEPOSTS

LAB NEWS

April 1993



Bill Roche
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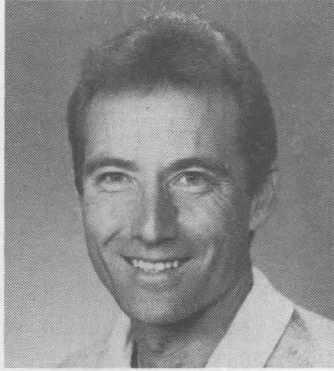
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Chuck Looney
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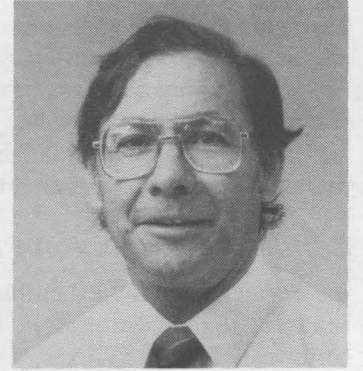
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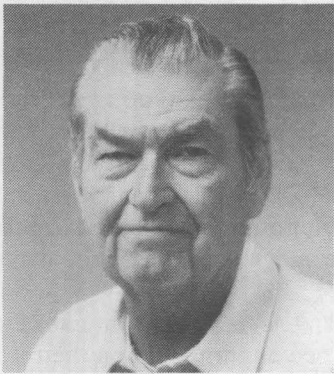
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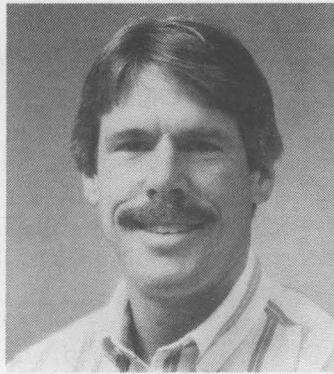
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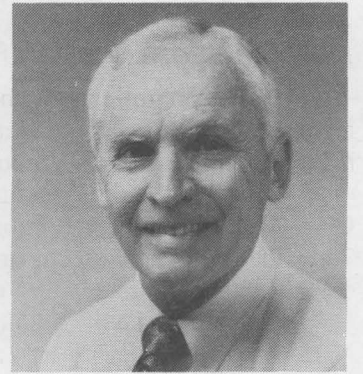
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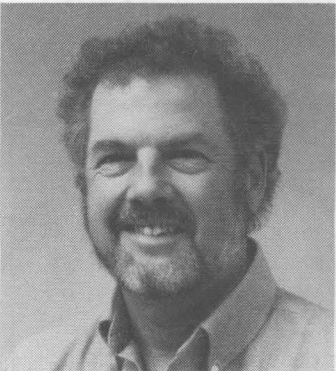
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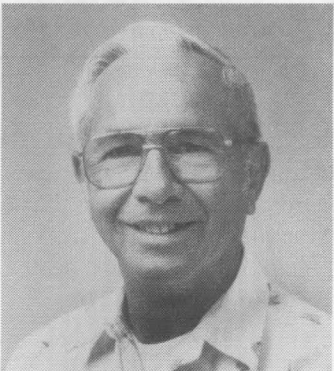
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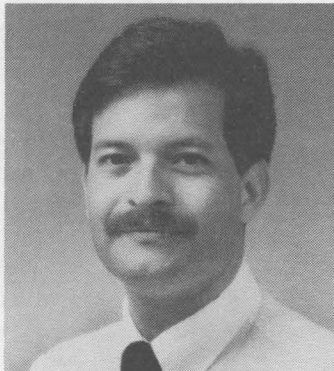
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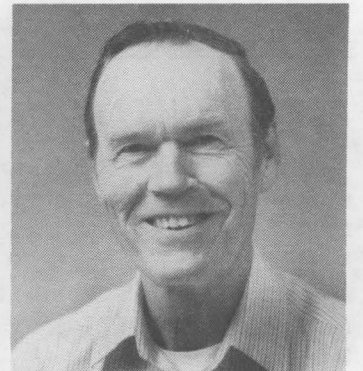
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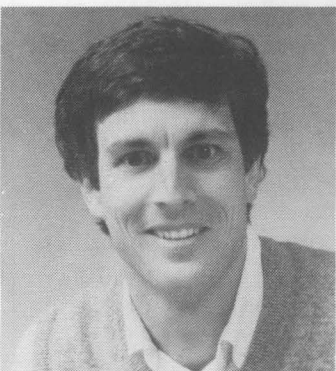
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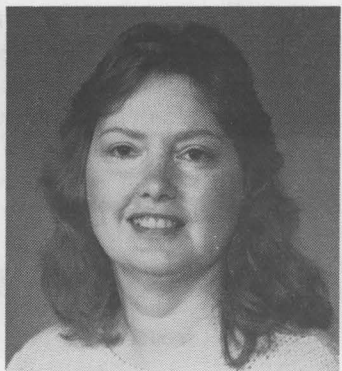
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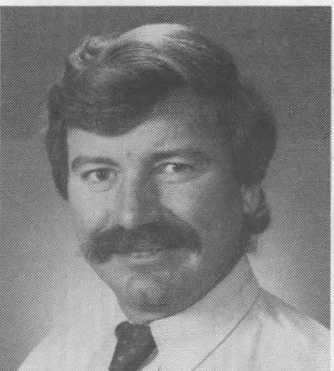
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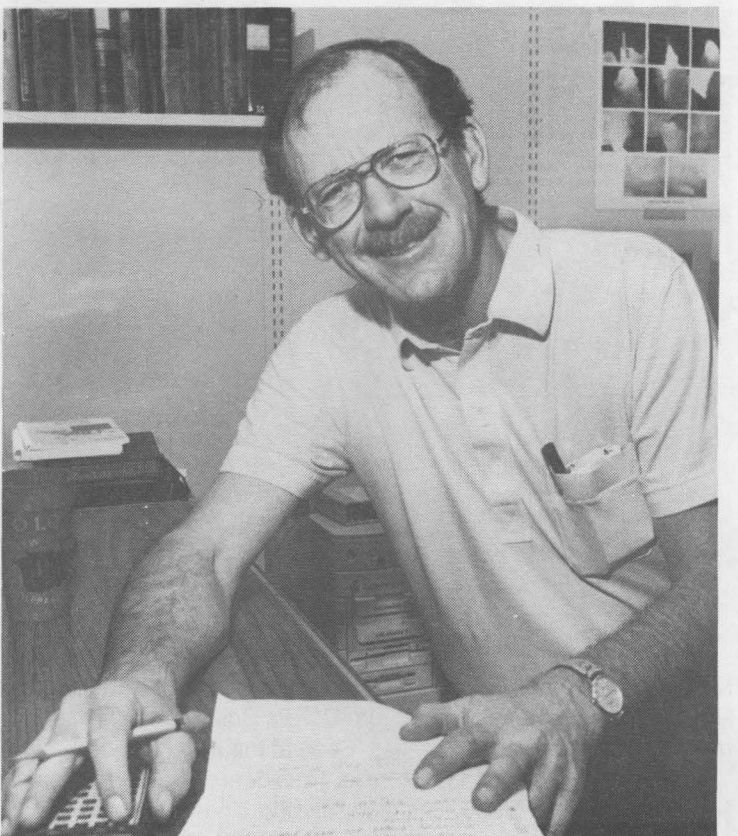
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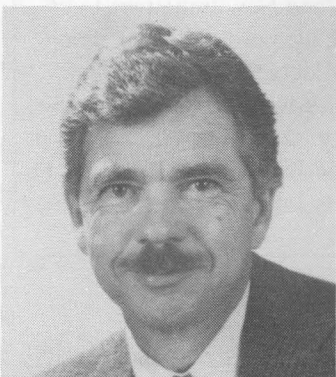
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Bill Winters
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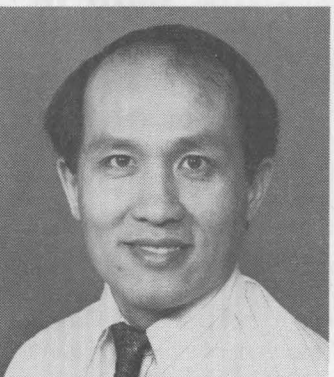
John Cawfield
5151 25



Don Putz
8609 25



Michele Wells
5361 15



Yung-Shung Yu
1951 15

Fun & Games

Sailing — Bill Horton (DOE ret.) is making plans for his 11th sailing tour, and he invites Sandians to sign aboard for a nine-day cruise in the Caribbean. Bill will lead three or four nine-day voyages in November and December sailing back and forth from Grenada to St. Lucia or from St. Lucia to Grenada, and will take along four persons per trip. Bill invites novices and experienced hands to sail with him on these non-money-making adventures (Bill loves to sail and charges just enough to meet expenses). Many of his fellow sailors over the years have been Sandians and their mates. For information, call Bill on 883-7504.

Biking — The 21st Annual Bicycle Tour of

the Rio Grande Valley will roll Sunday, April 18, with a sequenced mass start at 7 a.m. at the corner of University and Stadium Boulevards. There are five route lengths to choose from: 27, 43, 65, 80, or 100 miles. The event is a fully supported, route-patrolled tour open to all levels of riders and all types of bicycles. Proceeds from the tour are donated by the Albuquerque Rotary Charitable Foundation to New Mexico Special Olympics and other charities in Albuquerque. Registration fee is \$25 for adults and \$15 for children age 12 and under when accompanied by an adult. After April 16, the fee is \$30. Call the Rotary Office on 242-2651 for registration forms and more information.

Savings Plan Information Coming

Comprehensive brochures detailing the changeover from the AT&T Savings Plans to Fidelity Investments and the establishment of new and separate Sandia Corporation Savings Plans will be on the way to all Sandians and retirees next Thursday, April 8.

Informational meetings about the changeover will be held at the New Mexico, California, and remote Labs sites, beginning April 14 and continuing through April 28. Meeting schedules will be published in the *Weekly Bulletin* and will be mailed to Sandians and retirees.

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

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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

- SKI BOOTS, CS 80 Tecnica, women's size 7-8, \$150. Lachenmeyer, 268-7818.
- CLOTH BENCH SEAT, for '85 Ford full-size pickup, charcoal color, like new, \$85; rear step bumper, chrome, \$90. Richardson, 299-3673.
- SLEEPER COUCH, 2 cushions, yellow, plaid, \$65; occasional chair, wrought iron, \$12. Chavez, 294-7933.
- COLLECTOR'S GUN, 1940 Winchester, pump action, .22 repeater, Model 62, good condition. Eaton, 869-2847.
- SALOMON SKI BOOTS, men's size 10 to 10-1/2, \$30 OBO. Bland, 265-6286.
- ELECTRIC DRYER, Maytag, excellent condition, \$165; Craftsman gasoline-powered push mower, \$75; utility trailer, 4' x 8', folds for storage, \$100. Horschel, 271-9407.
- WATER HEATER, Constellation, glass-lined, heavy duty, 40-gal. capacity, \$150; car cover, for '92 Honda Accord, 4-dr., never used, \$150. Mitchell, 291-8663.
- FIREWOOD, some other scrap lumber/wood, free, you haul it. Stinchcomb, 266-4212.
- ELECTRIC TYPEWRITER, Smith Coronamatic 2200, uses ribbon cartridges, excellent condition, \$40. Wallace, 256-1643.
- VACUUM CLEANER, Hoover Celebrity, tank type, excellent condition, \$50. Gorney, 821-9623.
- DOUBLE BED, w/mattress, box spring, frame, headboard, footboard, \$60. Beer, 828-2755.
- PORCELAIN HORNED OWL, Kaiser, 10" high, #378 of 1500, limited edition, valued at \$950. Kelton, 281-8224.
- WARDS CONSOLE COLOR TV, 25-in., good condition, \$100; bath sinks (2), \$15/ea. Hammond, 881-3715.
- KENNEL for a medium sized dog; round table w/4 chairs. Strascina, 299-2285.

- OUTBOARD MOTOR, 10 HP, Evinrude, old (1949) but runs OK, \$150. Snowdon, 344-4637.
- '89 TRAVEL TRAILER, Palomino TXL-SC, hard-side pop-up, shower, refrigerator, ice box, water heater, furnace, more, like new, \$5,900 OBO. Campbell, 296-8304.
- RV AIR CONDITIONER, roof-top, Domestic Model SL110R, 11,000 BTU/hour, \$400. Bush, 281-3773.
- EXERCYCLE, Schwinn DX900, \$175. Smith, 292-7540.
- EXTENSION LADDER, 40-ft., aluminum, heavy duty, \$100. Magnani, 299-8693.
- SOFA, dark brown, 8-ft., \$85; matching chair, \$45; 2-drawer student desk, \$20. Maloney, 828-9610.
- CRIB, honey oak, double drop sides, Simmons mattress, \$150; changing table, \$40; Fisher-Price high chair; bedding; baby toys. Olsen, 294-2333.
- MAN'S HANDKNIT SWEATER, large, eagle design on back, \$50. Chemistruck, 281-8789.
- WATERBED, queen-size, w/under-dresser, \$150 OBO. Mozley, 884-3453.
- ZENITH CONSOLE COLOR TV, 25-in., \$150; waterbed mattress, king-size, extra firm, \$25; parrot cages (2), large, \$25/ea. Sargent, 865-3227.
- SEMI-AUTOMATIC PISTOL, 9mm, Glock Model 17, extra clip, new in box, \$475; Raven .25-cal. pistol, new, \$40. West, 292-2271.
- VAN SEATS: mid position, bench type, tan, \$50; front position (2), mid-back height, tan, \$25/ea. Patrick, 265-4569.
- DINING ROOM SET, mahogany veneer table, w/6 matching chairs & custom pad, \$400. West, 296-1483.
- WEDDING DRESS, white, long train, drop waist, bead work, size 8, hand made, head piece included, \$550 OBO. Chavez, 884-7909.
- SHELTIE PUPPIES, AKC-registered, champion sired: black/white female, \$250; sable male, \$300; sable female, \$350. Pullen, 291-0666.
- WATER HEATER, electric, 30-gal., 5 yrs. old, single element, works fine, \$50; tire, Firestone, P195/75R14, white wall, used 5K miles, \$25. Jackson, 281-8927.
- BEDROOM FURNITURE, off-white, double bed w/bookshelf headboard, box spring & mattress, triple dresser w/mirror, 4-drawer bureau, \$500. Foust, 296-1483.
- COLOR TV, 19-in., good picture, \$75 cash. Horton, 883-7504.
- WATERBED, large California queen, 12 drawers, w/long center storage, \$90. Marchi, 291-9681.
- CHILD'S BIKE SEAT, w/helmet, \$25; car booster seat, \$15; HP41CX calculator, w/Math Pac; AKG C525EB studio microphone; stereo receiver, Sony STR-AV290. Hueller, 296-0976.
- DAY BED, white w/gold trim, comforter, bed ruffle, & 3 pillow cases, without mattress, \$80 OBO. Lesperance, 298-5203.
- JUNIOR FORMALS: violet taffeta, never worn; metallic pink/black velvet; dark green velvet taffeta, size 11/12, worn once. Thompson, 292-2877.
- TOOLBOX for small truck, 5-drawer metal desk, screen door, hamster cage, green overstuffed chair, coffee table. Parr, 892-5618.

- PIANO, dark brown, Currier Spinnet, excellent condition, \$750; lawn mower, Black & Decker, electric, w/bag, \$40 OBO. Bouchard, 265-8148.
- STORAGE SHED, large, metal, excellent condition, \$300 OBO; exercycle, new, \$40; large wood playhouse, \$50; scooter, new, \$40. Patterson, 822-1196.
- DOG, black Lab, neutered, all shots, 1 yr. old, kennel included, accustomed to small children, \$100. Morse, 298-0490.
- POOL TABLE, includes balls, cue sticks, & Tiffany-style lamp, excellent condition, \$650. Gomez, 291-0691.
- FIREWOOD, cedar, elm, some spruce, black walnut & scrap lumber, bring your big pickup truck, free. Stamm, 255-2640.
- SHREDDER, 3-1/2 HP, \$110; Wards exercise bike, \$75; roll-top desk w/chair, \$150; infant swing, \$25. Smith, 892-8633.
- SPRINKLER SYSTEM TUBING, black plastic, 3/4-in. diameter, 100 psi, 60-ft. roll, \$6. VanDeusen, 291-8196.
- COMPUTER EQUIPMENT: PC keyboard, Link MC3 amber, 84-key, \$100; 2400 Baud ZOOM modems, 2 for \$50. Perkins, 296-4467.
- CAMERA, Minolta Freedom Tele, everything automatic, zoom, originally \$180, sell for \$150 OBO. Hwang, 857-0628.
- MICROWAVE OVEN, small, 500 watts, Goldstar, good for school or work, \$30 OBO. Guss, 298-3992.
- UTILITY TRAILER, heavy duty, w/full-size spare tire, \$250. Duke, 344-6549, call any evening after dark.
- TV/STEREO STAND, oak, approx. 6.5' x 3' x 2', 5 shelves, \$80 OBO. Chow, 281-9235.
- STEREO TURNTABLE, Pioneer, wired remote control, dust cover, anti-skating device, extra stylus, \$65. Barnard, 292-5648.
- SWIMMING POOL HEATER, gas, Anthony model, 325K BTU per hour, good condition, best offer. Durkee, 255-4211.
- PISTOL, Llama .32-cal., semi-automatic, \$175, consider trade. Roeschke, 266-8988.
- LASER LEVEL, Spectra Physics Model 944-2 SL, good condition. Potter, 869-4716.
- '71 TRAVEL TRAILER, Aristocrat, 21-ft., nice awning, dual-axle, new plumbing, toilet, shower, clean, \$3,300. Smith, 892-8633.
- WATER HEATER; ceiling fan, w/light; toddler car seats (2); exercise bike; fireplace tools; more. Barbera, 275-2562.
- BABY GRAND PIANO, 4.5-ft., Lindeman & Sons, \$1,900. Lockner, 292-6374.
- MASTER BIKE LOCK, \$12; Albinar Thyristor 90MDT-2 flash, \$25; Vivitar 2x teleconverter, Pentax mount, \$15; miscellaneous Vivitar filters, \$5. Key, 298-7988.
- GOLF CART, Kangaroo Caddy, w/battery & charger, \$100, youth bed frame, w/bookcase headboard, \$15. Peterson, 256-7514.
- POOL TABLE LIGHT, Bud Lite; RCA video camera, not camcorder; children's clothes & toys; miscellaneous equipment. Jackson, 299-8883.
- RECLINER, Strato-Lounger, yellow/beige, good condition, \$75. Goetsch, 892-8366.

TRANSPORTATION

- SAILBOAT, Super Sunfish, ready to sail, \$350. Spring, 298-7978.
- BOAT, '77 Seajay Tunnelhull, 17-ft., 140 HP, Chrysler O/B, excellent condition, \$4,500. Erdman, 275-7755.
- '87 LANCER, sedan, AC, AM/FM Topline stereo/cassette, leather interior, 5-spd., 4-cyl., below book, \$3,800 OBO. Sunny, 294-8216.
- '82 HONDA GL-500 MOTORCYCLE, shaft drive, 5-spd., fairing & new rear tire, \$525. Peterson, 883-8463.
- FISHING BOAT, 12-ft., fiberglass, Moulded Fiberglass Boat Co., weighs approximately 150 lbs., very stable, \$150. Snowdon, 344-4637.
- '77 MERCEDES BENZ 300D, diesel, AT, stereo, auto door lock, 176K miles, service records, good condition, \$4,500 OBO. Chavez, 294-7933.
- OFF-ROAD MOTORCYCLES: '86 Kawasaki KDX-200, very good condition, \$775; '86 Honda Z50, excellent condition, \$445. Horschel, 271-9407.
- '75 CLASSIC YAMAHA RD-350, all original, adult-owned, two-stroke, \$600. Lachenmeyer, 268-7818.
- JETSKI, '85 Kawasaki 550, many extras, custom paint, must sell, \$1,900 OBO. Striker, 296-8206, please leave message.
- '86 CHEV. S-10 BLAZER, 4WD, 86K miles, excellent condition, \$4,995. Beck, 299-4786.
- '90 YZ250 MOTORCYCLE, new piston (first over), plastic, S-11 equalizer, o-ring chain, & sprockets, race mods & extras, \$1,950. Pryor, 294-6980.
- SKI/FISH BOAT & TRAILER, Duracraft, 16-ft., aluminum, 35 HP, two 6-gal. tanks, accessories, excellent condition, \$1,000. Wilcoxon, 296-8295.
- '81 NISSAN KING CAB PICKUP, diesel, 100K miles, 3 minor defects, \$1,200. Dykhuizen, 281-9463.
- BOY'S BIKE, 20-in., GT Dyno VFR '93 Model, \$100. Girard, 292-3708.
- '82 PLYMOUTH RELIANT STATION WAGON, 90K miles, 4-spd., rebuilt std. transmission, 4-dr., \$1,150. Gomez, 291-0691.
- '84 FORD LTD, 4-dr. sedan, 6-cyl., 51K miles, tires replaced at 35K miles, \$1,800. Watson, 260-8322.
- BICYCLES, man's 10-spd., woman's 15-spd., approx. 19-in. frame, \$20/ea. Chow, 281-9235.
- '81 KAWASAKI GPZ1100, original owner, adult ridden, fuel-injected, superbike header, service manual, numerous spares, excellent condition, \$2,300. Barnard, 292-5648.
- '86 FORD BRONCO II, 4WD, 5-spd., rebuilt heads & clutch, 1 owner, \$6,000. Chavez, 877-7518, leave message.
- '80 INVADER BOAT & TRAILER, 17-ft. deep V, open bow, 150 HP, \$6,500; '75 Titan Motorhome, class A, 20-ft., refurbished, 55K miles, \$6,000 OBO. Furaus, 293-9799.
- BOY'S MOUNTAIN BIKE, red, Diamondback, 5-spd., \$90. Schluter, 298-0940.
- SEA EAGLE 8, inflatable, great fisher, butte dinghy, floorboard, motor mount, oars, foot pump, carrying bag, \$350. Woolsey, 271-7940.

'66 FORD TRUCK, custom cab 100, twin I beam. Candelaria, 897-1451.

REAL ESTATE

- 5-BDR. HOME, Four Hills, 3-bath, approx. 3,800 sq. ft., on 1.2 acre, fabulous panoramic view, 2-car garage, 2-car carport, detached shop/studio. Paek, 298-9630.
- 3-BDR. HOME, 1-3/4-bath, 2-car garage, north of Comanche, quiet family neighborhood, excellent condition, \$104,900. Whitehurst, 299-9526.
- 2-BDR. HOME, garage, covered patio, forced air, convenient, quiet, close-in location, southwest of Zuni & San Mateo SE. Kollman, 265-2626.
- 4-BDR. HOME, 2-1/2-bath, 2,630 sq. ft., Presley in quiet Cielo Grande neighborhood, 3-car garage, fully landscaped, sprinklers, excellent condition, \$159,100. Evans, 831-4736.
- 5-BDR. HOME, 2-bath, 2-story, large family room, 2-car garage, large corner lot, 1420 Luthy Cr. NE, by owner, \$125,000. Corbin, 296-4121.
- 1-3/4 WOODED ACRES, east of N217, in Thunder Mountain Estates, electricity, phone, water, Edgewood school district, spectacular views. Schreiber, 281-3196.
- 2-BDR. TOWNHOUSE, 2-bath, living room/dining room, 1,250 sq. ft., 2 patios, double carport, home owners association, near Lomas/Tramway, refinance required, \$75,800. Keeling, 296-9729.
- 10 ACRES, unimproved, southwest of Belen, growing area, excellent investment opportunity, sacrifice \$5,000 cash, details weekends only. Myers, 299-4244.

WANTED

- CHAIN LINK FENCING, w/posts & hardware for dog run. Tyree, 281-5738.
- ADULT BACKPACK, in good condition. Baldo-Pulaski, 345-1288.
- BUNK BEDS, w/mattresses. Underhill, 294-5774, after 6 p.m.
- HOUSE TO RENT, or housesitting position, in 3-4 bdr. home, from mid-June to beginning or mid-August, for SNL executive living in Alb. for the summer. Stocks, 845-8267.
- HELMETS, suitable for horseback riding, on loan or for donation to Girl Scouts. Keener, 255-8482.
- METAL WEIGHTLIFTING SET, reasonably priced, call Ryan. Perrine, 293-1429.
- RV TV ANTENNA, for travel trailer. Kercheval, 1-864-6549.
- HOUSE/MOBILE HOME TO RENT, for couple, 2 little girls, & outside pets, available before June 1, any area. Parr, 892-5618.
- STEREO REALIST VIEWER, for 3-dimensional slides. Pfeiffer, 299-3951.
- LAWN TRACTOR, with or without mower attachment; small compact generator for camping. Baker, 294-3334.
- OLD DATSUN, TOYOTA, SUBARU, must be cheap. Roeschke, 266-8988.
- TIFFANY LAMP, for above pool table, in good condition. Schwartz, 856-0836.

Coronado Club Activities**Trio Grande Kicks Off April**

COUNTRY AND WESTERN sounds will fill the Club tonight, April 2, as Trio Grande plays for your dancing pleasure. They'll be on stage from 7 to 11 p.m. For your dining pleasure, the kitchen crew has big plans: a 14-oz. T-bone steak for \$11.95 or 8 ounces of grilled halibut for \$10.95. Or try what has become many folks' favorite — the all-you-can-eat buffet for just \$6.95. Reserve your place now (265-6791).

HUNT THE EGGS — Saturday, April 10, is a special day for members' kids (12 and under): It's the annual Easter egg hunt and party, from 10 a.m. until noon. The Easter Bunny will be there, and the egg hunt starts at 11:30 a.m. (bring a basket). Until the hunt, enjoy games, prizes, and cartoons. Please, members only — no guests for this popular event. Admission is free.

SUNDAY BRUNCHES — The first Sunday Brunch and Tea Dance this month is the 4th. It's a

family special — kids 4-12 eat for only \$1 (tots 3 and under free, as always). Adults pay \$6.95 for members or \$7.95 for guests. Brunch is served from 10 a.m. to 2 p.m. At 1 p.m., the Starlighters take the stage and play until 4 p.m.

On April 11, it's the traditional Easter brunch. The Club is offering a fine, fancy, and plentiful menu, served from 10 a.m. until 3 p.m. Cost is \$7.95 for adult members, \$8.95 for guests, \$4.95 for children 4-12, and free for kids 3 and under. Reservations are required for either brunch — call 265-6791.

MEMBERSHIP DRIVE continues for another week — through April 9. New members (folks who've never been a member) can sign up and get a month free. Both new and old members, take note: Pool and patio passes are on sale, as are swimming and tennis lessons. For membership info, call 265-6791; for pool/swimming/tennis info, call 844-8486.

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.

CNN's "Science and Technology Week" news review program led off a recent edition with a sound bite from Ted Wheelis (6623) and some shots of the Weapon Waste Management Technology Department's weapon-pulverizing program known as WeDID, or Weapon Component Waste Disposal Integrated Demonstration. CNN combined this with information about a General Atomics (San Diego) weapon dismantlement effort.

Technology Transfer Business, the quarterly magazine that *Washington Technology* puts out, had a six-page feature on a day in the life of Sandia's tech transfer outfit. There were color photos galore — Jim Pacheco (6216) and Mike Hosking (1831) were in them — and quotes from Dan Arvizu (formerly 4200; now moved to 6200), Jim Carson (contractor), President Al Narath, Vic Chavez (4212), Dave Larson (4200), Ed Barsis (1400), Frank Zanner (1833), and Vic Berniklau, director of DOE/AL's Office of Management Planning and Analysis.

Washington Technology, in an article about cooperative R&D agreements (CRADAs) with multinational companies, mentions new Sandia/GM agreements in lightweight metals and advanced welding.

Security Management magazine published a lengthy feature about biometrics, a security tech-

nology that uses human characteristics or behavioral traits to distinguish one person from another. It includes discussion of Sandia work concerning product performance of five commercially available biometric techniques — retinal scan, fingerprint, hand geometry, voice, and signature. James Holmes (9548) gets a mention.

Gerry Yonas' (9000) recent address to the graduating class of the Texas State Technical College received coverage by the *Amarillo Globe Times*.

A *Seattle Times* column — about education in the 21st century and the premise that "too many enterprises are currently based on outdated interpretation of the world, its inhabitants, its social structures, and the way markets behave" — quotes William Miller (2276) about "virtual corporations," small and highly specialized companies that are formed to meet a short-term need and disbanded as market conditions change. The column says William suggests that megacorporations will increasingly be a thing of the past.

Assembly magazine ran a three-page article with color photos that was coauthored by Mike Hosking and Fred Yost (both 1831). The subject: Sandia's environmentally conscious fluxless soldering. ●

Volunteers Needed

Local not-for-profit agencies have requested volunteer assistance from Sandians for upcoming events and on-going projects.

Tree New Mexico, an organization dedicated to planting and replanting thousands of trees throughout the state, is serving as coordinator for the annual *March for the Parks* Saturday, April 17, to help raise funds for a local park that needs financial assistance.

The march is sponsored by the National Parks and Conservation Association (NPCA). Sandia's Volunteers in Action (VIA) program has been asked to recruit 10 Sandia marchers to participate with an expected 500 other marchers from throughout the community. The first 10 persons to volunteer for this march will receive a free Sandia Labs T-shirt to wear during the march.

Volunteer marchers ask friends and family members to donate money that will be used to support the parks project chosen locally. NPCA suggests a goal of \$10 per pledge and 10 pledges per marcher. Money should be collected in advance so it can be turned in on the day of the march.

Working Classroom Inc., an award-winning Albuquerque non-profit program that provides intellectual and creative opportunities for at-risk students, needs help to send a group of students to an international theater festival in Rio de Janeiro.

Executive Director Nan Elsasser needs donations of frequent-flyer air miles to help cover travel expenses for a student theatre group invited to the festival in July.

Working Classroom provides artistic mentoring, after-school tutoring, and English as a Second Language classes at no charge to low-income students and adults. All programs are bilingual, intergenerational, and community-based.

The *Albuquerque Children's Museum*, which has just relocated from Coronado Shopping Center to the Mercado at the Sheraton Old Town, needs volunteers to serve as visiting scientists for one hour a month.

The visiting scientists program will be scheduled every Thursday from 10:30 to 11:30 a.m. The museum would like to have a Sandia volunteer every second Thursday of the month to do science demonstrations for approximately 30 to 70 children.

For more information about these volunteer opportunities, call Al Stotts (7161) on 844-2282. ●

Favorite Old Photo

This was the crew of the last passenger train on the Leigh and Hudson Railroad. The date was July 8, 1939, and I rode on the train for the trip from Warwick, N.Y., to Maybrook, N.Y., and back. My father, William Henry Niper (second from left), was the engineer. Ernest Niper, 9533

Take Note

Don't be too surprised when you see people running around today with big red noses. They don't have colds, and they're not professional clowns. It's Red Nose Day USA. People wearing red noses have contributed to the Sudden Infant Death Syndrome (SIDS) Alliance to fund high-priority medical research projects, improve local support services to SIDS families, and expand public education programs. SIDS is the sudden death of an infant under one year of age that remains unexplained after all known and possible causes of death have been ruled out by autopsy. Local K-Mart stores and other businesses will be selling red noses and chicken badges (for those too chicken to wear a red nose). You can also get a red nose or chicken badge from Betty Pierce (9213) on 294-0871. For more information about SIDS, call the Alliance on 800-221-SIDS.