

A LOT HAS HAPPENED since "Fat Man" and "Little Boy" were dropped on Hiroshima and Nagasaki in 1945. Replicas of those first two US nuclear bombs were among the attractions for a trio of top Russian weapon experts who visited Sandia/New Mexico and Sandia/California recently to discuss possible non-military cooperative research ventures between the two countries. The visit, which included tours of Labs pulsed power and microelectronics facilities, highlighted reduced tensions between the US and Russia since the end of the Cold War. Al Zelicoff (9241) is seen here taking a souvenir snapshot of the visitors in front of the replica weapons at the National Atomic Museum in Albuquerque. The Russians also visited Los Alamos and Lawrence Livermore national laboratories. More photos of the visit are on page ten.



End of the Universal 'Q'

'L' Clearances Coming Soon for Many Sandians

Up to now, essentially every Sandia employee has had a Q clearance. That practice will soon be history.

"Exactly when, we don't know," says Jim Martin, Director of Safeguards and Security 7400. "But DOE has been urging us more and more strongly to issue lower-level clearances to some employees, and that's what we're moving toward."

The new clearances will be L clearances, which allow access to Secret National Security Information and to Special Nuclear Material (SNM) categories 3 and 4, but not to Secret Restricted Data or SNM categories 1 and 2. (Roughly speaking, the higher the SNM category, the more readily the material could be converted to a nuclear explosive device. Categories 1 and 2 require special protective, such as armed guards.)

For an L clearance, the background investigation of a person is much less extensive — hence much cheaper and quicker — than for a Q. The two

"DOE has been urging us more and more strongly to issue lower-level clearances to some employees."

clearances do, however, require the same standards of personal conduct. Anything turned up by an investigation that would cause a Q to be denied would also cause denial of an L.

At Sandia/California, the first L clearances could show up in three to four months, says Don Charlesworth, Manager of Physical Security Dept. 8531. "We submitted a plan to DOE/San Francisco in February," says Don, "and we expect a response any time now. If the plan is approved, we'll have a procedure for each department manager to review the clearance level for each person in his or her organization."

Changing 40 Years of Assumptions

Don notes that one of the complications for Sandia as a whole is that in clearance matters, the California and New Mexico sites report to different DOE field offices. "That could put us out of sync with each other," he says, "and we'll have to make sure we don't introduce problems, such as having our L-cleared people require escorts to attend

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LAB NEWS

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SANDIA NATIONAL LABORATORIES

APRIL 30, 1993

Sandia Gets Top Small-Business Award — Page Five
Readers Respond Frankly to EAP Survey — Page Six

Microscopic Evidence Uncovered

Labs Materials Scientists Play Sherlock Holmes Following Intel Acid Tank Spill

Late one night last summer at the Intel semiconductor plant in Albuquerque, a 50-gal. fiberglass tank containing sulfuric acid burst open, showering the containment room with debris and spilling its hazardous contents.

At first the cause of the rupture was unknown. An Intel investigation team met with the tank's manufacturer and examined several possibilities, including overpressurization due to a chemical reaction or a mechanical equipment failure. Soon it was clear that the rupture occurred under normal operating conditions. But why?

Intel investigators scratched their heads: Why would a tank used day in and day out suddenly rupture? The answer, they thought, must lie in the materials. Somehow, the integrity of the tank's reinforced fiberglass walls had been compromised.

Labs Provides Telling Evidence

Just across the Rio Grande valley, Sandia materials scientists had the expertise and the equipment to carefully examine the tank's material at the microscopic level and determine what, if anything,

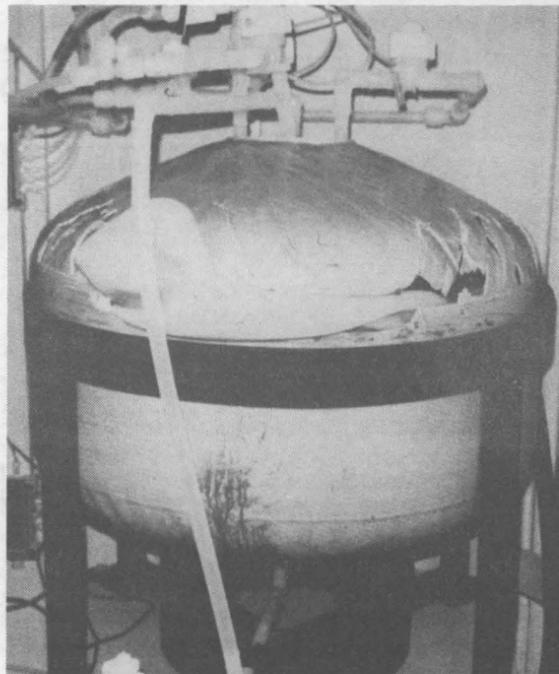
Somehow, the integrity of the tank's reinforced fiberglass walls had been compromised.

led to the material's degradation. Unfortunately, a straight line isn't always the shortest distance between two points.

Being a government laboratory, Sandia can't work directly with a private company without

DOE's approval, and time was short. Intel needed answers as soon as possible, says Marty Carr, Manager of Electron Microscopy/Metallography Dept. 1822.

Luckily, Intel and Sandia are both associated with SEMATECH, a national consortium of semiconductor manufacturers, and Intel made a case
(Continued on Page Four)



BIG BLAST — Pressurized sulfuric acid ripped through this 50-gal., 1/4-inch-thick reinforced fiberglass tank last summer at the Intel plant in Albuquerque, showering the containment room with debris.

This & That

Sandia User Friendly? - A visitor to Sandia/New Mexico recently told me about a several-hour experience he had trying to get information about technology transfer and other general info about the Labs. I won't go into the finer details, but they add up to a sad tale: In short, several Sandians and other people on Kirtland Air Force Base either misdirected him or couldn't direct him properly.

One person directed him to the Technology Transfer Center, but guess what? Sandia has TWO Technology Transfer Centers - one is an organization that's now housed off of Kirtland (outside Eubank gate) and the other is a building (825) in Tech Area 1 with (surprise!) no technology transfer people in it. Maybe it's time to change the name of that building to something more appropriate - like - uh, let's see, maybe the "Sandia Auditorium." And we should all learn where to direct "lost" visitors or folks needing general information - it's the Public Relations Dept. 7161, Bldg. 800, Room 105, telephone 844-6909. At Sandia/California, refer people to public information officer Barry Schrader (8522) in Bldg. 911, Rm. 134, telephone 294-2447. * * *

Keep the Hat, Pace - Pace VanDevender officially "changes hats" tomorrow, becoming Sandia's Corporate Communications Center 4700 Director (see page four). Lots of us have seen Pace wearing his hard hat around the pulsed power facilities that he's directed for the past few years. I have some free advice for him: Keep your hard hat, Pace. You'll really need it in the communications business. * * *

Sagging Fortune? - Some Sandians still dislike getting paid weekly. A recent Feedback writer commented, "I can't believe Sandia is saving money in making 52 computer runs over 26, or better yet, 12 (monthly) runs. If that's true, let's get paid daily and save even more." LAB NEWS Managing Editor Charles Shirley takes that idea a few steps further by suggesting that Sandia install quarter machines at our desks and workstations that shell out our pay in 25-cent increments as we earn it. That might work, and we could even tell which men are making the big money by how far their pants sag when they leave work, or in the case of women whether they can carry their purses out by themselves. * * *

"Freaky Friday" Is Next Week - Many new moons have passed since I reminded you that the first Friday of every month is "Informal Friday" at the Labs - or "Freaky Friday" as my old boss called it. It's your chance to "dress down" for a day if you're so inclined, so you might want to get your dandiest denim duds ready for next Friday. * * *

Larry's Lessons - After completing four years as LAB NEWS editor early this month, I decided to reflect on a few things I've learned about Sandians and some opinions I've formed. So I don't overwhelm you, I'll relate them in small doses over the next few issues. Here's a start:

•Sandia Managers - Most managers care more about their employees and work harder to meet their needs than they get credit for, but many need to get better at simply saying, "Nice job!"

•Overachievers - Sandia has many hard-working, self-motivated "overachievers." The number of Sandians coming in the Kirtland gates before 7 a.m. might surprise some people.

•Meetings - This place must be the meeting capital of the world. Sometimes I wonder if some Sandia groups can order thumbtacks and paper clips without first calling a meeting. ●LP

Closed Today — Reopen Monday

LAB NEWS Now in Mobile Offices 172-173

It now takes some extra effort to get to the LAB NEWS and *Weekly Bulletin* offices and photo facilities. Employee Communications Dept. 7162 is resettling today (April 30) in Mobile Offices 172 and 173 (MO172-173). Although we are very near the southeast corner of our old Bldg. 814 location, our new offices and photo studio are now inside Technical Area 1, meaning that uncleared folks can't normally visit us, and getting here is somewhat challenging even for cleared employees.

Here's probably the quickest way to find us: Head north from Bldg. 801, walk past Bldgs. T14-16, and then bear left (west). Our regular entrance is on the west side of MO172. We are closed today but will reopen Monday, May 3.

If current plans materialize, within about six months or so the fence will be moved inward, putting our new facilities outside the tech area.

Uncleared employees, retirees, and others who want to place "unclassified" advertisements in the LAB NEWS can mail them to us at Department 7162 or fax them to us at 844-0645. Also, Josephine Sandoval (21), the receptionist in the lobby of Bldg. 800, will accept ads there for us on workdays 8 a.m.-noon and 1-4:30 p.m. (desk is closed noon-1 p.m.). Ad rules and deadlines are published at the top of the ad page in each issue.

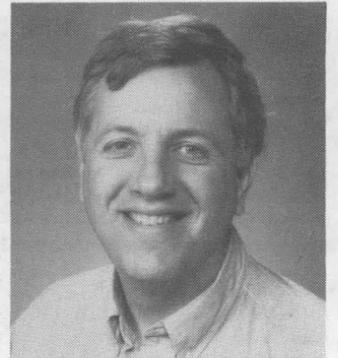
All Employee Communications Department staffers kept their current telephone numbers listed in the box in the lower left corner of this page.

Supervisory Appointments

ART PONTAU to Manager of Advanced Materials Research Dept. 8347.

Art came to Sandia in 1978 to study plasma materials interactions for the Physical Science Department. In 1983-84 he went to Germany on assignment for Sandia and worked on a joint international project at the K.F.A. lab in Julich involving the TEXTOR tokamak.

Art has a BA in mathematics and physics from UC San Diego and an MS and PhD in physics from the University of Illinois.



ART PONTAU

He is active in the American Vacuum Society and was elected chairman of the Plasma Science and Technology Division in 1991.

* * *

FRANK TULLY to Manager of Combustion Chemistry Dept. 8353.

Frank joined Sandia at Livermore in 1980 as a physical chemist. He began in the Applied Physics Department and later moved to the Combustion Chemistry Department. Before coming to Sandia, he held a faculty research scientist position at Georgia Tech from 1976 to 1980.



FRANK TULLY

He has an AB in chemistry and mathematics from Clark University in Worcester, Mass., and an MS and PhD in chemistry from the University of Chicago.

Frank received the O. W. Adams Award in combustion research in 1989, was designated a Distinguished Member of Technical Staff in 1990, and was named an Associated Western Universities/DOE distinguished lecturer for 1991-92.

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this month in the past...

Sandia LAB NEWS

40 years ago... Bid openings were coming up for construction of a new "maintenance and general stores building" to be designated Bldg. 887. Now, lots of Sandians have their offices in that structure.

The military police sergeant responsible for the 44-man MP section on what was then Sandia Base asked drivers to use hand and arm signals. They were easier for the MPs directing traffic to see than "automatic signaling devices."

30 years ago... A Sandia-designed sampler was all set to collect radioactive and inert particles in the atmosphere from 100,000 to 230,000 feet up. The sampler was to be boosted by a two-stage rocket, which had undergone tests at Tonopah Test Range.

10 years ago... Construction was starting on the Technology Transfer Center (Bldg. 825) at Sandia/New Mexico.

Facility to Go Non-nuclear**Final Radiological Experiments Done at Tritium Research Lab**

The last experiments involving tritium at Sandia/California's Tritium Research Laboratory (TRL) were completed in December. The facility will now enter a new phase, pending final DOE approval, of clean-up and transition to other uses.

The final experiments were the Tritium Plasma Experiment (TPX) and the Sandia Thermal Outgassing Experiment (STOX). TPX and STOX were used extensively during the last several years to quantify materials for use in tokamak fusion reactors.

Some examples of this work are determining the tritium retention of graphite and carbon-carbon composites, the properties controlling the uptake and release of tritium from beryllium, and the tritium permeation characteristics of metals such as copper, nickel, and stainless steel. Facilities benefiting from this work include the Tokamak Fusion Test Reactor (TFTR) in Princeton and the Joint European Torus (JET) in Abingdon, England.

TPX is being moved to the Tritium System Test Assembly at Los Alamos National Laboratory. According to Rion Causey, a member of Fusion Research Dept. 8347 and head of TPX, the move was scheduled to take place the last week of April.

TPX Going Again by June

The experiment should be up and running again by June. It was recently upgraded to increase the plasma density and particle flux to conditions more closely resembling those for the planned International Thermonuclear Experimental Reactor (ITER). Data from TPX will be used by designers working on ITER. Shortly after the upgrade, TPX was shut down to be prepared for transfer to Los Alamos.

TPX will remain under Sandia's control. Rion and Wayne Chrisman (8347) will be coordinating TPX activities. "I expect to be spending one week a month at Los Alamos," says Rion. As for the rest of the month, "We'll be working here at the

TRL on non-radiological experiments involving deuterium," he says. (Non-radiological experiments do not involve tritium.)

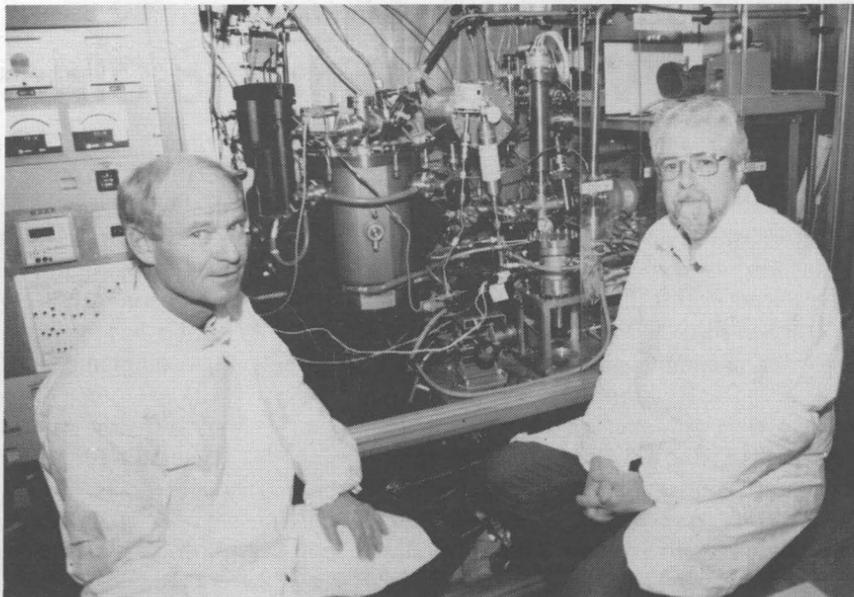
STOX Equipment Recycled

STOX has been completely shut down. Its equipment will be used in other experiments, including TPX. The final experiment was funded by Idaho National Engineering Laboratory in support of the New Production Modular High Temperature Gas-cooled Reactor. The experiment involved determining tritium migration parameters of silicon carbide. Last year, DOE delayed this program for several years.

The final STOX experiments, completed in early February, were non-radiological. One examined the amount of release and release rate of deuterium from the copper beam dumps used in the TFTR neutral beams. The other measured the amount of deuterium retained in the carbon debris produced when tokamaks have disruptions. This is of concern to researchers trying to predict the tritium inventory of TFTR and the ITER fusion reactors.

The TRL is preparing for transition to non-nuclear status, according to Jim Bartel, Manager of Tritium Management Dept. 8281.

Part of the cleanup and transition involves reducing the tritium inventory. As it is reduced, potential hazards to the environment and to people decrease. "The lower levels allowed us to seek classification as a Category III low-hazard facility," says Jim. "We were previously classified as a



FINAL EXPERIMENT — Rion Causey (left) and Wayne Chrisman (both 8347) sit in front of the Sandia Thermal Outgassing Experiment (STOX), the last experiment involving tritium performed in the Tritium Research Lab. Among the equipment seen in the background are a high temperature resistance furnace, tritium ionization changer, mass spectrometer, and turbomolecular pumps.

Category II moderate hazard nuclear facility."

One consequence of the reclassification will be one less layer of oversight. In Category II status, DOE/HQ oversight is delegated to DOE/AL. However, Jim says that functionally there will be no changes in operations while TRL is undergoing clean-up and transition. ●KGordon(8535)

Andrews Named On-Site Manager

Sandia/California has its first Department of Energy on-site manager: John Andrews, who arrived earlier this year.

Andrews represents the Kirtland Area Office (KAO), which oversees Sandia's New Mexico and California sites. His office is temporarily located in MO920. His responsibilities include day-to-day operations at the California site, emphasizing ES&H and contact with external regulatory agencies such as the California Environmental Protection Agency.



JOHN ANDREWS

Andrews' background includes managing the environmental restoration program for KAO from 1990 to 1992, serving as chief of the Lands and Minerals Staff for the Bureau of Land Management in Albuquerque from 1986 to 1990, and working with the US Geological Survey.

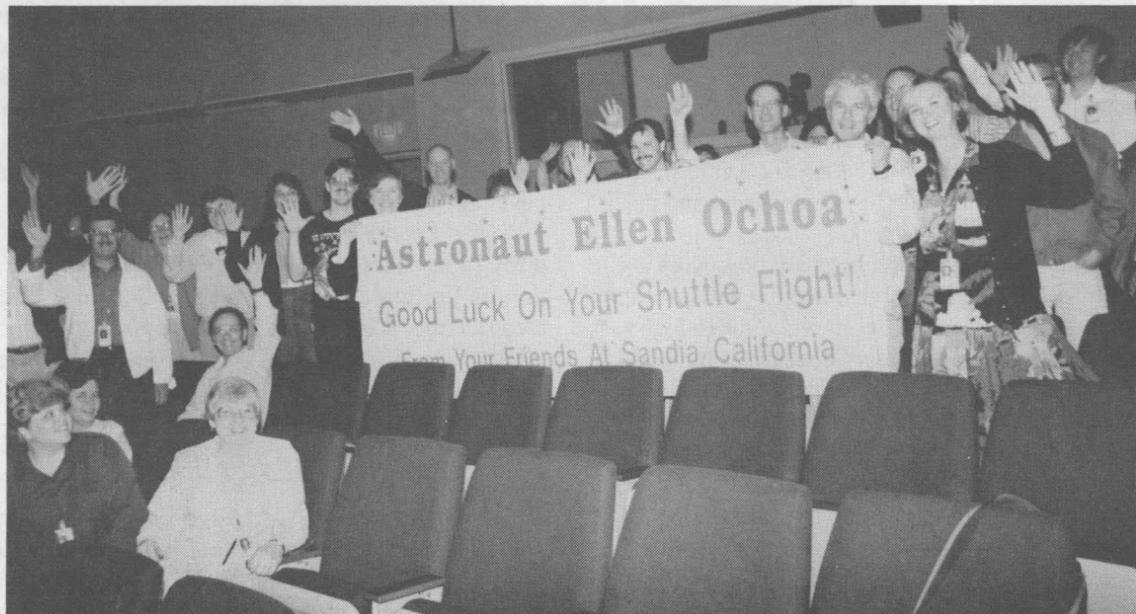
He has a broad range of technical and managerial experience spanning 20 years, with special emphasis in energy and environmental issues. His technical expertise is in water quality and radiation in the environment. He has also done extensive community outreach work with both the Department of the Interior and DOE, including public meetings, hearings, radio, and television. In 1987 he received Interior's superior service award, one of only 20 given nationwide. ●

Congratulations

To Kathy Bernard and John Wheeler (8281), married Feb. 6 in Pleasanton.



SANDIA CALIFORNIA NEWS



SENDING BEST WISHES — Sandia/Californians gathered in the Bldg. 904 auditorium to watch a replay of the takeoff of the space shuttle *Discovery*, eager to catch a glimpse of their former co-worker Ellen Ochoa, one of five NASA astronauts aboard the flight. The banner, held by Pat Falcone (8111) and Rich Palmer (1901), was posted at the Labs entrance during the flight. Ellen deployed and retrieved a small satellite that was part of an instrument studying the sun. She also managed to play her flute on-board for the other crew members and talked with high school students from orbit. *Discovery* made 148 orbits during nine days and landed at Cape Canaveral on April 17.

Coordinating Corporate Communications

Pace VanDevender to Direct New Communications Center

"Before you can communicate well, you need to be a good listener, and that's what I intend to do first as Sandia's Corporate Communications Center Director," says Pace VanDevender, who officially begins his new duties tomorrow, May 1. Pace has been Director of Pulsed Power Sciences Center 1200 at Sandia/New Mexico since 1984.

After he completes a short-term Sandia assignment at DOE Headquarters soon, Pace says he plans to visit with managers and employees to get their ideas about how both external and internal communications can be improved. But he especially wants to visit with the Labs' professional communicators to get a solid understanding about their programs and how he can help.

Enhancing Our Reputation

"I want to team with our communicators to help provide a more coherent message to our customers and help spread the 'Sandia message' to people who can influence our future," he says. "Working closely together, one of our main jobs will be to help 'market' Sandia's services and capabilities — to help enhance our already good reputation with existing customers and to establish it with potential customers."

As announced in the Jan. 22 LAB NEWS, the new center will help plan and improve communications with various external customers, including the media, all levels of government, community

organizations, and others. It is also designed to serve as a resource to all Sandia organizations that deal with external groups.

Corporate Communications Center 4700 is part of Laboratory Development Div. 4000. Paul Robinson (VP-4000) explains that the center was established to emphasize the increasing importance that communications will play in Sandia's future. It will also give corporate communications a higher visibility, he says, and provide some centralized leadership for communications programs throughout the Labs.

"For the immediate future, the Corporate Communications Center will operate primarily in a cooperative mode to advance the work of Sandia's communications and other external interface organizations," says Paul. He adds that some of these organizations could later reside in the Corporate Communications Center after Pace has time to study the existing situation and develop plans for Sandia's changing needs.

Coherent Messages Needed

Although the January announcement about the establishment of the center did not emphasize this fact, the center will be just as concerned with internal Sandia communications as external. "Although we must communicate well with our customers and other folks outside the Labs, it is vital that we communicate well among ourselves,"

says Pace. "Our external and internal communications are interdependent. To get a coherent message to customers, we must first get a coherent message to Sandia employees."

Pace continues, "It is particularly important that we continue to communicate well with our fellow employees during the transition to our new management contractor. That will be one of our primary concerns."

Pace has some communications leadership experience. He managed the Sandia/New Mexico Environment, Safety, and Health communication program in 1991 before and during the DOE Tiger Team visit. The Tiger Team commended that effort.

His office will be located in Bldg. 802, Room 3116G. Shanna Lindeman, formerly of Staff Support Office 4501, will now work with Pace in the 4700 Center.

Taking over as Acting Director of Pulsed Power Sciences Center 1200 is Don Cook, Manager of ICF [Internal Confinement Fusion] Program Dept. 1202.

Pace began his Sandia career in 1974 as a technical staff member after receiving his PhD in physics from the Imperial College of Science and



Pace VanDevender

(Continued from Page One)

Intel Tank Rupture

that determining the cause of the rupture could in fact prevent similar accidents throughout the industry.

Sandia agreed to take the case under SEMATECH's auspices. Six Labs organizations and about 20 researchers were involved in the project. (See box below, "Intel Tank Investigation Required Mix of Expertise.")

'Hackles' Are Clues

The Sandians performed a complete failure analysis of the tank, including forensic reconstruction of the event, analysis of the fracture, computer modeling of stresses in the tank, and mechanical testing of sections of the tank.

Some of the most telling evidence was uncovered when team members put pieces of the fractured tank under both optical and scanning electron microscopes. "A series of 'hackle' marks were present on the fractured glass fibers," says Jill Glass of Glass and Electronic Ceramics Dept. 1845. The orientation of those 'hackles' clued team members that the tank failed from the outside in rather than the inside out.

The combined evidence led the Sandia team to

a much clearer picture of what happened. Over time, several microscopic cracks formed on the outside of the tank as a result of normal pressurization and depressurization. During the normal maintenance process, small amounts of sulfuric acid washed into the cracks, which leached calcium and aluminum from the fiberglass fibers and gradually weakened them. Several isolated cracks grew slowly as the leached fibers weakened and broke, exposing new fibers to the acid leaching process. Finally, three slow-growing cracks grew together, and the tank ruptured.

The Sandians also discovered that when a fiber-optic light is placed against the surface of a fiberglass tank, microscopic cracks show up as shadows in the glowing halo around the light. The *Rio Grande Circuit*, Intel's employee newsletter, called the detection technique "an important discovery to prevent similar incidents in the future."

First of Many Investigations?

As a result of the Sandia team's findings, according to the *Circuit*, "Intel is currently examining all of the acid tanks across the company . . . Furthermore, Intel will redesign the entire bulk chemical distribution system to reflect what has been learned . . . Meanwhile, the tank manufacturer is using the results of the Sandia analysis to explore ways of improving the manufacturing and testing procedures for the tanks."

In addition, Sandia and Intel are now working through SEMATECH to transfer the results of the research to the rest of the semiconductor industry. "Safety on the job is a primary concern at Intel and across the microelectronics industry," says Marty. "The Sandia investigation pointed out some limitations to a design that's been evolving in the industry for many years. As a result, Intel — and maybe the whole semiconductor industry — is changing the way it does business."

"Sandia has the unique capability to pull together a diverse team of experts to solve complex problems on short notice," says Chuck Gwyn, Manager of External Silicon Programs Dept. 1302. "In the future we will be working with SEMATECH to address similar problems." ●JG

Editor's note: Thanks to Terry Stuart, editor of Intel's Rio Grande Circuit, for permission to reprint some of her words.

"I want to . . . help spread the 'Sandia message' to people who can influence our future."

Technology at the University of London. Since becoming a supervisor in 1978, he has managed various aspects of the Labs' fusion research and pulsed power programs. Pace is a Fellow of the American Physical Society, and he received DOE's prestigious E. O. Lawrence Award for Physics last year.

Asked why he, a technical director, decided to take the job of Corporate Communications Director, Pace answered, "I've been the Director of Pulsed Power Sciences for a long time. We just had a very successful review of the major portion of our pulsed power work. So that organization has never been in better shape — the spirit of teamwork, the closeness to our customers, and the competence of our technical staff and managers has never been better."

"So I asked our executive management, through my boss Paul Fleury [VP-1000], where at Sandia I might add more value, and a week later, they told me. It looks like a great opportunity!" ●LP

Intel Tank Investigation Required Mix of Expertise

At least 20 Sandians contributed during the eight-week investigation of the ruptured Intel tank. "Different skills were needed at different times," says Marty Carr (1822).

Sandians involved in the project were: Gordon Pike (1802), Jill Glass, Sandy Monroe, Ed Beauchamp (all 1845), Mark Stavig, Tommy Guess (both 2472), John Gieske (2752), Mark Davis (1706), Roger Moore (2476), Will Hareland (1824), Karl Schuler, Adam Slavin (both 1562), Alice Kilgo, Dick Grant, Rob Sorenson, Fred Greulich, Joe Michael, Bonnie McKenzie, Paul Hlava, and Marty (all 1822).

Welcome

Albuquerque — Carol Garcia (21), Sarah Hammond (185), Barbara Jaramillo (21), Judith Mori (21), Leslie Rettinger (21), Scott Schrader (7001), Tammy Strickland (7325). *Other New Mexico* — Annabelle Tafoya (7615).

Elsewhere: *Arizona* — Phillip Van Buren (6613); *California* — Debra Clouten (7202), John Porter (1273); *Delaware* — Kathleen Schulz (6605); *Kansas* — Matthew Burger (6521); *Missouri* — Michele Leshner (7322); *Texas* — David Heckart (7204).

For Work with Small Businesses**SBA Lauds Sandia as Top R&D Prime Contractor**

The US Small Business Administration has named Sandia the federal government's top R&D prime contractor in offering opportunities to small-business suppliers and subcontractors and has awarded the Labs the Dwight D. Eisenhower Award for Excellence.

The Eisenhower Award, the highest SBA award to federal prime contractors, honors companies in four categories — manufacturing, service, research and development, and construction.

Robert Moffitt, Associate SBA Administrator for Procurement Assistance, announced the award in a notification letter to President Al Narath. He

“The Eisenhower Award recognizes the effectiveness of Sandia's total small business program.”

wrote that Sandia “has been judged to be the most outstanding of all research and development companies in the Small Business Administration's portfolio.”

Sandia has a long-standing program of supporting small and disadvantaged businesses in New Mexico and California through competitive subcontracting opportunities and has been recognized by the SBA previously with other awards.

“SBA and America's small businesses are most appreciative of your efforts to provide subcontracting opportunities to small and small disadvantaged businesses,” Moffitt wrote. “Your outreach efforts, technical assistance, and participation at trade shows and procurement conferences are all evidence of your commitment to providing maximum utilization of the nation's small businesses.”

Award Presented May 13

Al says, “The Eisenhower Award recognizes the effectiveness of Sandia's total small business program, which consists of a procurement program, a technology transfer program, and a supplier quality program. I will be pleased to accept the award on behalf of all the Sandia employees whose dedication and efforts have made these programs successful.”

The 1993 Eisenhower Award will be presented to Sandia in Washington at the May 13 Small Business Procurement Conference breakfast.

Jon Bedingfield, Manager of Supplier Relations Dept. 7203, says the award is particularly satisfying because it recognizes the result of many years of work nurturing small businesses in New Mexico and California.

“Sandia has, over the years, played a vital role in developing the New Mexico economy,” he says.

(Continued from Page One)

‘L’ Clearances

meetings at other Sandia and DOE sites.”

Jim makes much the same point, emphasizing that the complexity of the changeover has prevented setting a firm timetable and ensuring that the California and New Mexico sites will stay together and coordinate actions. “Our facility has grown up for more than 40 years with the assumption that everyone who has access to it has a Q clearance,” he says. “We're working with DOE and with the other Sandia sites, but we're going to make sure that we do this right when we do it. We don't plan to rush in and then discover that we've created some big, unforeseen problem.” He estimates, though, that some New Mexico Sandians will have L clearances in a matter of months, not years.

For both California and New Mexico, one of the sticky points of the change is L-cleared per-



LARRY DRESSER, left, of Supplier Relations Dept. 7203 and Matt Riley of Just In Time Purchasing Dept. 7221 visit with Tony Trujillo, right, of A.T. Trujillo Inc., Sandia's JIT Hewlett Packard systems contractor. Work with small businesses such as Trujillo's contributed to Sandia's being honored by the Small Business Administration as an Eisenhower Award winner for 1993.

“Last year, for example, we spent \$291 million, basically in Bernalillo County. That's almost 45 percent of our commercial procurement expenditures. When I first became a buyer at Sandia, you couldn't spend that percentage of our commercial procurement dollar in New Mexico because we couldn't find the quantity and variety of the products we needed in the state.”

Helped Develop Businesses

“But we've helped develop a lot of smaller businesses to support us, Los Alamos, and Phillips Laboratory,” Jon adds. “This award is recognition of that.”

Larry Dresser (7203) spins off more numbers to support Jon's contention.

Last year, he says, Sandia funneled \$321 million to small businesses in purchases of materials and services, including \$60.7 million to disadvantaged businesses and \$49.9 million to women-owned businesses. And, he adds, the Labs' expenditures with small businesses for the first five months of the current fiscal year are running ahead of last year's percentages.

“Over the past several years,” Larry says, “we've spent 45-49 percent of our commercial procurement budget in New Mexico. As Jon said, in

“We've helped develop a lot of smaller businesses to support us, Los Alamos, and Phillips Laboratory.”

the early 1960s and even into the mid-1970s, you couldn't spend that percentage because the diversity and volume of products we needed was not available. I think Sandia, Los Alamos, and Phillips

sons' access to technical areas. Two major areas of concern are protecting secure computer networks and Secret Restricted Data matter — documents and material. Changes will be required both in facilities and procedures before DOE will approve L-cleared persons being in tech areas without escorts.

Another issue being worked on by planners — who include people from security, human resources, labor relations, and similar organizations — is to make sure that L-cleared employees aren't at a disadvantage when they bid on posted jobs that require Q's.

The downgrading of clearance levels at Sandia is part of a much broader movement in the DOE complex, says Jim. “The same thing is happening for DOE employees and for contractors at other DOE facilities,” he says. “I think the time will come when a significant percentage of our staff — maybe 30 percent — will have L instead of Q clearances.”

•CS

Lab have all helped the business base to grow because of the size of our purchasing power.”

And although California and New Mexico function as a single unit in purchasing, Larry says, “the purchasing folks at Livermore contributed to our winning the Eisenhower Award by nominating two small businesses they deal with as Small Business of the Year. It's that combination of effort that put Sandia in position to win the overall award.”

He says projections for FY93 show 55 percent of Sandia's total commercial budget will go to small businesses. And based on estimated expenditures of \$550 million, that amounts to more than \$302 million.

Extensions of Sandia's Arms

Jon says the use of small businesses by Sandia is based partly on the fact that they have been so responsive to the Labs' needs. “They really become a part of the total Sandia team: They are an extension of Sandia's arms,” he adds.

A good example of the symbiotic relationships that have developed among Sandia, DOE, and New Mexico small businesses is the growth of Gregory Manufacturing, a company in Carlsbad.

When Sandia was charged with developing secure canisters for the Army, Gregory was contacted and developed the prototype. The production contract eventually went to Bechtel Corp., but Bechtel then subcontracted the job to Gregory, which made the canisters in significant numbers, Jon says.

In a subsequent move, DOE decided to sell the facility it had built for manufacturing TRUPACT nuclear material containers in Carlsbad, and Gregory bought it.

Stainless Steel Welders

“When the TRUPACT was being created, DOE, Nuclear Packaging Inc. (a DOE contractor), and the city of Carlsbad partnered with New Mexico State University in teaching people how to weld stainless steel to nuclear quality regulations,” says Jon. “Now there are probably more people who can do that in Carlsbad than in any other place in the country.”

That and many other similar relationships Sandia has forged with small businesses have transcended simple buying-selling pacts, he says, turning them, instead, into technology transfer relationships.

“We need to look at this not as an award won by Purchasing, although it played a big role,” says Jon. “This is one that everybody should share in, because it takes in our entire purchasing process, the Labs' technical people, requesting organizations — essentially everyone at Sandia.”

•HK/AEtheridge(7161)



Some Feel Helpless to Deal with Problems

Sandians Frustrated, Angered by Clearance Process Intrusion into Employee Assistance Program

Individual feelings range from anguish to anger, frustration to fear, but the collective chorus from Sandians answering a LAB NEWS survey about the Employee Assistance Program (EAP) is that they are overwhelmingly leery of seeking its help in dealing with personal problems.

The survey was part of a package of stories in the April 2 LAB NEWS exploring the fact that fear of subsequent loss of security clearance is keeping people from turning to EAP for help.

Of the 676 responses registered by 128 (mostly anonymous) people who returned survey forms, only 6.4 percent favored seeking EAP help in addressing problems. Respondents indicated the rest would be addressed either by private help or by trying to work out the problem themselves.

The questionnaire ("Employee Assistance Program: Tell Us What You Think," LAB NEWS, April 2) asked, "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."

Three Options Offered

The problems were: alcohol-related, illegal drug-related, prescription drug-related, serious emotional, and personal (family, marriage, work, etc.). The options for each were: seek help through EAP, seek private counseling, or try to solve by myself.

A few respondents marked multiple options for some problems, producing a slightly higher number of total responses than the number of people responding would otherwise account for.

Respondents indicated they would seek personal solutions to problems in 50.4 percent of the cases and private counseling in 43.2 percent of cases.

Of employees indicating a willingness to seek EAP help, the largest number (16) would go to the in-house service for personal problems, the smallest number (3) for help in dealing with an illegal drug problem.

Slightly more than half of those responding (65) also offered comments, which varied from a few expressions of support for EAP to condemnation of DOE's methods of reinvestigating employees for renewal of security clearances.

Some examples: "You (EAP) must think we're idiots if we would come to you after this publicity" and "I think this and the previous article ('Employee Security Clearance Suspensions Increased As Reinvestigations Increased, Baca Says,' LAB NEWS, March 19) is a series of lies."

But then there was: "Your article addressed concerns I was dealing with. Thanks."

'No Thanks' for Help

Few, however, were so mild or so complimentary.

Expressing at least some balance, one person wrote, "Even though EAP is well meaning, formal acknowledgment of a problem exposes the recipient to the bureaucracy and all the 'help' that entails. No thanks."

Another, addressing alcohol-related problems specifically, announced: "AA — it works — no fees!"

Fairly representative were these remarks: "I do not trust EAP to keep my business confidential" and "I don't know what I would do if I had one of the problems listed (but) I do know I wouldn't seek help through EAP."

Somewhat atypical was a survey form indicating a willingness to go to EAP for a prescription drug-related problem, seek private counseling for a serious emotional problem, and try to solve any personal problems personally. The respondent wrote of alcohol-related problems: "I don't drink alcohol"; and of illegal drug-related problems: "I

feel these people shouldn't have clearances."

Most responses were fairly brief and succinct, but some were longer and more reflective, such as: "Thanks for doing a great job of covering this most distressing problem. I have seen DOE take administrative action against Sandians and find their procedures to be callous and reprehensible. I don't question the rules as much as I do the process."

The writer then decried the suspension of clearances without explanation to the employee and the emotional and financial stress involved in contesting such actions, and concluded: "Should my world be swept away tomorrow, I will attempt to rely on myself first, seek private help as a last resort, and never expose my problem to DOE's punitive scrutiny by approaching EAP."

Another wrote of knowing five people who have had their clearances suspended during the reinvestigations required every five years, and two others who fear their clearances are in jeopardy. The respondent claimed two of those are people who sought counseling for depression associated with loss of a spouse through death or divorce.

"I believe that depression is a normal human response that all of us experience at some points in our lives, and is not indicative of tendencies to reveal national security secrets to foreign governments," he/she wrote. "While there are obviously serious national security concerns about employees who are engaged in criminal activity, there are also serious concerns about the effect of unreasonable investigative decisions on the lives and careers of solid citizens who have provided many years of honorable service to Sandia and the nation."

Non-involvement the Only Way?

One writer sees non-involvement as the sole option: "Hopefully I would have better sense than to get into such problems, but I firmly believe avoidance of problems and counselors is the only way I could keep my clearance on reinvestigation."

Several people related situations they experi-

enced personally, or knew of someone else experiencing, that left them open-mouthed in frustration. One wrote that he/she would "Never" (repeated in all five problem response blanks) seek EAP help and would only seek private counseling "under false identity" and "pay cash."

That same writer claimed to be "aware of at least two persons who, after no less than five years of successful rehabilitation for alcoholism, without relapse or reuse, have had their clearances suspended by the DOE. Why would anybody who values their job take this chance?"

Another person was complimentary, saying "My participation in the EAP has changed my life completely. . . . (However) none of the information that I thought would be confidential was protected from DOE. In fact, one of my counselors was subpoenaed by DOE to testify against me in my clearance hearing."

Anger also was evident in the response from a writer who "had an investigator insist that they talk to my doctor about (my) taking Inderal for one week for nervous tension. This is Draconian."

No Solutions Requiring Counseling

One writer said he has an understanding with his wife that "if we ever have problems, there can be no solutions that require counseling, or any other course of action that might be reportable to DOE."

Another said he/she has stopped seeing a psychologist for help in dealing with depression because during a clearance reinvestigation "I was asked all kinds of personal questions, some of which I felt were unrelated to my depression. I felt that I was treated like a criminal, just because I had been treated for depression!"

Reflecting the general suspicion of DOE investigative processes, the writer added, "The problem is not with how Sandia handles employees with problems, it is with how DOE handles their reinvestigations."

(Continued on Next Page)

About the EAP and Security Clearance Series

Controversy Calls for Cooperation

By Larry Perrine, Editor

This story, "Sandians Frustrated, Angered by Clearance Process Intrusion. . . ." concludes the LAB NEWS series that we began on March 19 to discuss employee concerns about two related issues: (1) the fairness of the Department of Energy's security clearance investigation system and (2) how Sandia's Employee Assistance Program (EAP) relates to the system.

We began our series after the *Albuquerque Journal* began reporting security clearance concerns expressed by some DOE, Los Alamos National Lab, and Sandia employees. The general message and tone was that security clearance suspensions have increased and that DOE's security clearance investigators are being overzealous and in some cases heavy-handed in their investigations of employees. Other local and area media soon began similar reports.

This entire subject is one of the most controversial that the LAB NEWS has covered. From the anonymous employee comments in this article, it is evident that some employees have *very strong* feelings about the issue. The LAB NEWS neither endorses nor discounts any of these employee views, but we believe it is important that the views be expressed so DOE and Sandia officials can better understand the concerns and then work to get problems fixed

and any misperceptions cleared up.

We do not represent the employee views in this article to be typical of all Sandians' views; only 128 responses were received from a Sandia/New Mexico population of somewhere around 7,000 folks. We realize that people who are unhappy with "the system" are more likely to respond to any survey, and that's probably the case here. But the point is that some Sandians would obviously be reluctant to seek needed help from the Employee Assistance Program OR from private counselors. And that, folks, is a SHAME! Sandia and DOE simply must work together to develop ways to remedy this situation.

Finally, I know that Sandia Medical Director Dr. Larry Clevenger (7030) and EAP Manager Harriet Morgan (7035) are enlightened folks who care about Sandia employees and who will do what they can to fix the problem and to clear up misperceptions.

As explained in the April 2 LAB NEWS, Sandians can visit an EAP counselor, find out what types of services are available, and find out the limits of confidentiality with absolutely no record made of the initial visit. The telephone number is 845-8085.

Security clearance questions can be directed to Personnel Security Dept. 7437 or to Physical Security Dept. 8531.

Take Note

Kirtland Air Force Base (KAFB) is hosting the 9th annual Guard and Reserve Appreciation Day Luncheon at the Officers Club on May 12 at 11:30 a.m. The luncheon is held to recognize civilian employees working on KAFB who have a Guard or Reserve affiliation with any of the Armed Services, and is the Air Force's way of officially thanking Guard and Reserve counterparts for their contributions to the Armed Forces mission, as well as the Kirtland community. Sponsors include KAFB, the New Mexico Committee for Employer Support for the Guard and Reserve, and the Greater Albuquerque Chamber of Commerce. Labs employees who are Guard or Reserve members can nominate their supervisors to receive a certificate of appreciation at the luncheon for their support of Guard and Reserve activities. Forms are available from Sandia's Public Relations Department. Call Nancy Campanozzi (7161) on 4-6909 for forms and information. Deadline for submissions is May 9.

Retiring and not shown in LAB NEWS photos: James McIlmoyle (9323) and Edward Gallegos (822).

Employee Death

Lucien Van Blaricum of Seismic Verification Technology Dept. 9236 died April 18.

He was 57 years old.

Lucien was a senior member of technical staff and had been at Sandia since 1962.

He is survived by his wife.

Sympathy

To Paul Eckles (6352) on the death of his brother in Nashville, Tenn., April 6.

To Ed Cassidy (7550) on the death of his mother, Catherine Cassidy, in Gurnee, Ill., April 11.

To Vern Romesberg (9561) on the death of his father in Pennsylvania, April 12.



(Continued from Preceding Page)

Some respondents, while deploring the reality of suspended clearances and the anguish such actions produce, tried to be sanguine in their reasoning. Said one: "The bottom line is that the minute you choose a job that requires a Q clearance, you give up some of your protections. Your privacy is no longer protected (and) you are not protected against subjective judgments regarding your 'fitness' to hold a clearance."

In a similar vein, another wrote: "DOE is the customer and should call the shots. Medical is an agent of DOE, ultimately. Maybe there are some things we shouldn't expect an in-house program to do."

'Relentless' Questioning Deplored

For some, the process seems to be a "damned if you do; damned if you don't" experience.

A respondent who sought counseling for help in coping with a "wayward child" thought the program was "very good" and dutifully listed the counseling on a reinvestigation form, only to be "questioned quite relentlessly."

"The bottom line," the writer continued, "was that they wanted to find out if the reason I indicated for seeking the counseling was really true and that I did not lie to them. There should be an easier way. I felt that the whole thing was a 'witch hunt.'"

TSA Tips — Do's and a Don't

As the DOE-conducted Technical Safety Appraisal (TSA) nears (May 17-26 at California and June 14-25 at New Mexico), ES&H Program External Interface Office 7026 is presenting tips to help Sandians get ready.

Do —

Actively listen. Try to identify the appraiser's tone, attitude, or any underlying meaning that might be present while an appraiser discusses an issue or concern.

Refer questions to the best qualified person. That may not be a supervisor. The best person could be a lead technician, an experimenter in another organization, or someone in a support organization such as Safety Engineering.

Stick to the subject. Stay on the specific subject — don't stray into unrelated areas.

Tolerate appraiser silence. Don't allow

silence on the part of an appraiser to cause you to start new discussions or to provide information that wasn't requested.

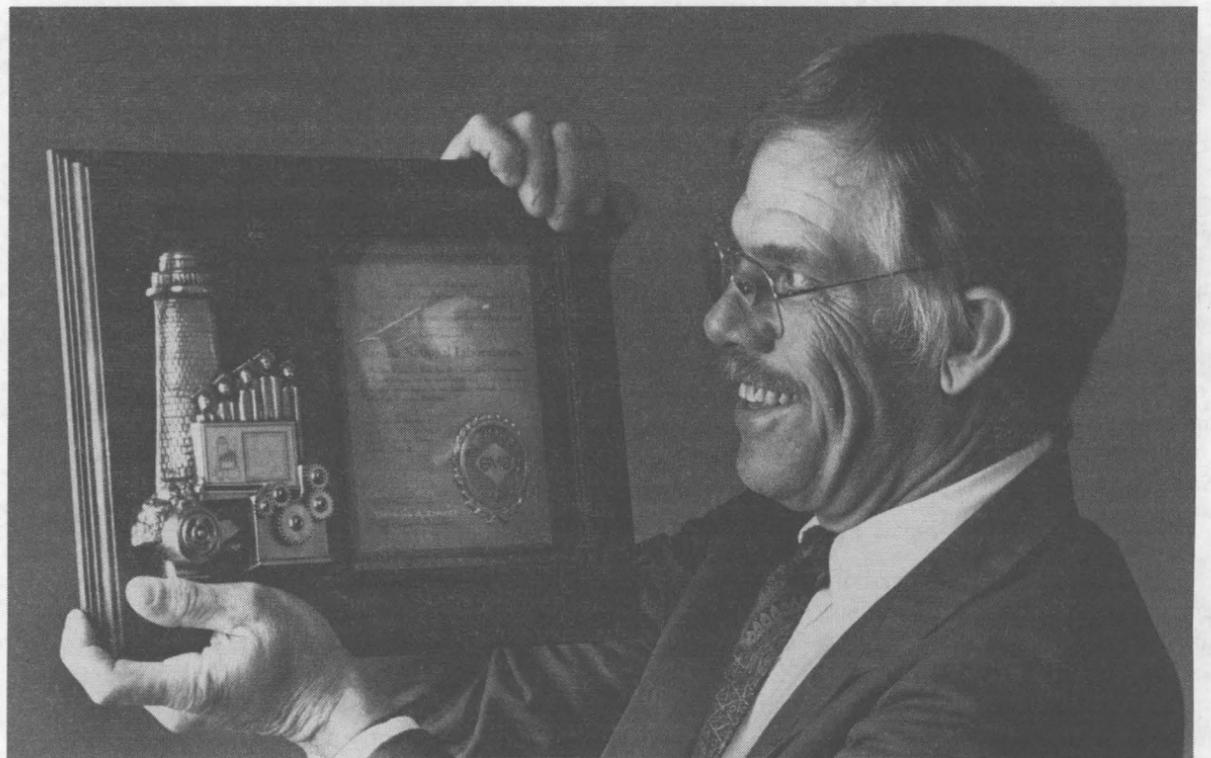
Stay cool. An appraisal isn't the end of the world. You're a member of the Sandia team, and as a team we'll overcome any problems.

Discuss problems or suggestions with your manager afterwards. It's to Sandia's advantage to correct identified problems before the TSA appraisers leave.

Document appraisers' comments or suggestions, and send them to the TSA Logistics Team on fax 848-0499.

Don't —

Take the assessment or criticisms personally. The appraisers are trained to be as thorough and accurate as possible. Keep your professionalism, and continue to assist where needed.



HAPPY TO ACCEPT — Bill Alzheimer, Director of Advanced Manufacturing Technology Center 2900, happily accepted an award on behalf of all Sandians recently from the Society of Manufacturing Engineers (SME). The award, called the Citation for Economic Development, recognizes the Labs' success in sharing manufacturing technologies with US industry. Through March 1993, Sandia has entered into 93 cooperative research and development agreements (CRADAs) with US companies involving \$277 million worth of research. The largest number of CRADAs are related to manufacturing. Bill delivered the keynote address during the awards banquet April 17 in Denver.

One respondent said he/she would try to solve a problem personally, even though believing professional help would be more effective. "All people at one time or another find themselves in difficulty and a healthy way to deal with this is to seek professional advice," the writer continued. "I think a greater national security danger comes from those who do not seek professional advice and eventually crack under the strain."

Said another: "If you admit something is wrong and take care of it, you'll be harassed. If you deny a problem and do nothing about it, you'll be left alone."

And yet another, obviously imagining the hot breath of official pursuers: "I sought private counseling one and a half years ago. After reading the (recent Albuquerque) *Journal* and (Albuquerque) *Tribune* articles, I regret it, and I'm dreading my next security reinvestigation."

Anger, bordering on outrage, emerged from some responses.

"DOE's policy on extracting information on individuals through the Sandia EAP program is absolutely reprehensible!" said one. "This immoral, unethical, and despicable act violates the sacred, fundamental client-patient relationship guaranteed by law."

Compared to McCarthy Era

Another felt such "malicious strategies will propel the American justice system back 40 years

to the earlier troubled times of the McCarthy era, where people were blatantly accused and found guilty based on rumor and accusation."

Somewhat less strident, one writer was troubled by wording in the federal Office of Personnel Management authority for release of information he/she felt is "way too broad." The reference was to the phrasing, "I authorize any duly accredited representative of the federal government . . . to obtain any information" from practically any source on the activities of the person being investigated.

And finally, in wording more like a plea than a complaint, a respondent wrote, "People who have problems must feel that their problems will be treated with understanding and not feel threatened by the prospect of loss of job. . . ."

"It is said by DOE authorities that (the suspension of clearances) only affects less than one percent of the employees," the writer adds. "This is a misreading of the situation. It affects 100 percent of the employees through the effect on morale."

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Editor's Note: The LAB NEWS did not have space to print all comments, and some were unprintable. All comments, however, have been provided to Sandia's EAP administrators. Although this is the final LAB NEWS story in this series, we will continue to follow and report any related news and developments.

What's Happening in the Chief Financial Officer Division

By Paul Stanford (VP-100)

Editor's Note: This is the seventh 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 Robinson (4000).

Late 1989 was an important time for us in Chief Financial Officer (CFO) Div. 100. We were in the process of redefining our mission and role in

“‘Pay for what you use, use what you pay for’ is the basis for many of the business changes we are incorporating into . . . the financial system.”

the Labs. In addition, we were in the midst of facilitating the Sandia Management Council (SMC) through the process of creating the Labs *Strategic Plan*, and we hosted a financial system planning session called FIN PLAN to obtain input on requirements for our new financial system.

The *Strategic Plan* defined the Labs' values, mission, and objectives, which we use today as our basis for making day-to-day decisions. The FIN PLAN session set into action many of the business changes that have occurred over the past year and will continue over the next few years.

The *Strategic Plan* indicates that we need to focus on satisfying our customers' needs, wants, and expectations. FIN PLAN helped us focus on the financial practices needed to support the *Strategic Plan*.

System Changes — Financial

FIN PLAN was composed of system designers, Div. 100 staff and management, and 27 department managers (their former titles; many of them are now directors) from across the Labs. They spent 3-1/2 days together, working to understand future requirements and capabilities.

They identified the essential requirements for a new customer-oriented financial system. The requirements of the group included the need for support of project management, the ability to have flexible reporting, the desire to eliminate “entitlements” associated with a single corporate indirect rate, the need to understand the true cost of particular operations, and other improvements.

Division 100 played a key role in the major change in the way Sandia conducts its business by expanding service centers and creating center support cost pools, and expanding the base for allocating overhead costs. These changes were a direct result of FIN PLAN input.

As a result, the systems support Sandia's philosophy of paying for what you use and using the services you pay for. Service centers allow project and line managers much more flexibility in how they spend their resources, while center support cost pools allow directors to size their

support staff and pay the price for high levels of support, or realize the savings by reducing support staff.

The cost of both service centers and center support was removed from indirect, and the base for spreading corporate indirect costs was expanded to all labor costs not in corporate indirect and full-time on-site contractors.

Sandia currently has 39 service centers, and we expect to add another half-dozen or so next year. To support service center managers and customers, we have been teaming with the system developers in Laboratories Information Systems Center 7300 and service center employees, to improve the reporting capabilities and management tools available in the Service Center Information System (SCIS), which was implemented at the beginning of this fiscal year.

Our goal for the financial system is to provide a flexible, feature-rich information systems environment focused on satisfying customer requirements. Enhancements to the system will continue to be made for several years, until we are able to satisfy customer requirements. A number of new features will be available in FY94.

The concept of “pay for what you use, use what you pay for” is the basis for many of the business changes we are incorporating into all aspects of the financial system. We are working to fully synchronize spending plan development, cost processing, and reporting capabilities. We aim to provide useful, easily accessible, and timely financial management information, which may be a challenge since management information is “in the eye of the beholder.”

We have put forth a great deal of effort to provide project managers with improved cost-control tools so they can ensure that project costs can be controlled within available resources. We will fully implement an expanded case number capability (currently available in SCIS) to allow project managers to accumulate costs in lower-level work-breakdown structures (WBS).

Finally for FY94, the new system will have the flexibility to better support new business directions and future organizational and programmatic restructuring. This type of flexibility is essential, given the changes taking place in DOE, our new business arrangements (such as cooperative research and development agreements), and the fact that we will have a new contractor with its own financial requirements.

CFO Division will also be involved as we bring up new systems for employee accounts, assets management, and the new savings plan.

System Changes — Project Management

To provide some project management tools to Sandia's project managers until the new financial system comes on line, we have been working with Project Management Champion Dept. 4305 and

Laboratory Information Systems Center 7300 to release an application that allows Sandia's financial data to be integrated into personal computer-based project management systems.

The application retrieves data from the financial system and incorporates it into either Microsoft *Project* or an *Excel* spreadsheet, based on a WBS defined by the project manager. Once the financial data has been integrated into the project management system, project managers can produce reports and graphics that best meet their needs.

System Changes — Procurement

We have teamed with Purchasing and Materials Management Center 7200 and Center 7300 on enhancements to Sandia's Integrated Procurement System (IPS). The efforts benefit our suppliers as well as save time and effort for our staff, and are currently being prototyped with a select subset of our suppliers.

One of the enhancements is the Quick Pay Program, which was recognized at the fall leadership conference as an outstanding quality initiative.

“Our goal for the financial system is to provide a flexible, feature-rich information systems environment.”

This program allows for paying suppliers based on receipt of product rather than after receipt of an invoice.

The concept is quite simple. IPS has line item detail of what has been ordered. When the order is received, the receiving clerk checks it to ensure that the order is complete. If so, a check is prepared and mailed to the supplier. If the order is not complete, other actions are required.

The initial survey of suppliers using Quick Pay indicates a high level of satisfaction with the system. The initial implementation is for commercial, off-the-shelf products. Future plans include some manpower and maintenance contracts.

Another enhancement of IPS is the implementation of an audio response system, called OCTEL, which suppliers can use to inquire about the status of an invoice. Just like the Credit Union's CUROS system, suppliers can call using a touch tone telephone to determine if an invoice has been received, is awaiting approval by the requester, or is in the process of being paid. The system also offers suppliers the option of leaving a voice-mail message.

Working with DOE

One of the objectives in Sandia's *Strategic Plan* is to “strengthen and broaden the DOE's mission.”

One of Division 100's related efforts began in July 1992, at the meeting of DOE lab directors with then-DOE Secretary James Watkins. DOE's chief financial officer, Betty Smedley, indicated that DOE was receiving increased scrutiny and interest in the management of overhead activities at its facilities.

She reported that a great deal of “bad press” had been generated by a series of audits that had been performed by a number of government agencies. This publicity prompted various congressional appropriations committees to ask her questions regarding the efficient and effective expenditure of overhead funds. She said she found the questions difficult to answer with the information currently provided to DOE by its labs.

To assist DOE's CFO, Sandia President Al Narath proposed — and Watkins accepted — that an overhead management improvement initiative be led by Sandia with a short- and long-term focus. The short-term portion was for the labs to provide DOE's CFO with information supporting their

GRISELDA ARMIJO of Cash Management Dept. 103 holds a Sandia check form just printed on the department's Digital Design printer. The equipment prints check forms from blank stock.



overhead levels and presenting their efforts to control overhead costs. The long-term strategy was to use Watkins' existing Three-point Program for Continuous Improvement to improve the management of overhead at the labs by analyzing current practices and adopting best practices.

Al delegated responsibility for "jump starting" this initiative to Division 100. We coordinated several meetings with DOE personnel representing the CFO, Primary Secretarial Offices, and field offices, and with budget officers from other DOE national labs. Sandia has worked with the DOE program manager to plan the agenda for these sessions, provided logistical support, and scheduled Planning and Staff Support Center 4500 to document meeting outcomes.

To date, the group working this initiative has defined, categorized, and projected the various types of indirect costs at the DOE labs. It has developed a process for DOE to review these costs to support their appropriateness and reasonableness to Congress and others. It has also provided guidance and suggested schedules for the FY95 DOE budget call.

A positive outcome for Sandia is that DOE will have a better understanding of our processes for sizing, evaluating trade-offs, and allocating resources for indirect activities. Other implications, however, are that DOE will exert additional oversight and control of our indirect activities, that we will need to incorporate more formality into our indirect activities, that we will have substantially more reporting to DOE regarding our indirect activities, and that we may need to restructure how we manage some of these activities.

The efforts of this group will continue, but it will shift its emphasis to continuous improvement in managing overhead activities within the DOE complex.

Division 100 is also involved in helping strengthen DOE by hosting a "Financial Management Systems Conference." We offered to host this

"Division 100 is ... helping strengthen DOE by hosting a 'Financial Management Systems Conference.'"

conference, and DOE/AL has utilized the forum to prepare for the formation of a Financial Management System Improvement Council at DOE Headquarters. The conference included all of the DOE/AL contractors as well as representatives from Lawrence Livermore and Oak Ridge national laboratories. The purpose of the conference was to provide an information exchange related to financial systems development and management, and to promote common uses of best practices.

Internal Customer Focus

As mentioned earlier, FIN PLAN helped us understand our internal customers' needs for our new financial system. Another area where we have emphasized a customer focus is in the support of the sectors and other management entities at Sandia. A couple of years ago we recognized that we needed to change our way of doing business if we were going to provide the services that our customers were expecting. Some of the changes that we made were a natural consequence of SMC's creating the sectors to manage Sandia's business.

We have been developing our staff as financial consultants to Sandia's sector/program/project managers, who are being held accountable for the success of the activities they manage. We are striving to develop within our "consultants" the knowledge and expertise to help these managers identify issues and suggest alternatives for working the issues, rather than performing the "policing" functions as we have done in the past.

Of course, this shift in emphasis does not mean Division 100 has relinquished its fiduciary responsibilities to ensure the integrity of Sandia's financial operations. We are making a determined



REPRESENTATIVES from several CFO departments gather to discuss division procedures. They are (from left) Karla Simoes (182), Dolores Grumblatt (183), Don Coates (185), Maggie Gee (181), George Perkins (182), Bonnie Holland (182), Arlene Schaefer (184), and Rachel Lucero (181/185).

effort to balance the desires of our customers with the myriad regulatory and contractual constraints imposed on Sandia, as well as continued pressure for cost containment of our operations.

One of the first changes initiated to sharpen our customer focus was having the sectors determine the size and scope of financial services they desired through the budget process. For the sector-specific services, the sectors provide the budget (employee full-time equivalents — FTEs — and dollars) to Division 100, which, in turn, provides the level of support for which the sectors are willing to pay.

The level of desired service varies considerably from sector to sector, depending on individual needs and structure. For example, the Defense Programs (DP) Sector has budgeted for a full range of business support, including some activities traditionally performed by administrative assistants, while the Energy & Environment Sector has requested a much lower level of service.

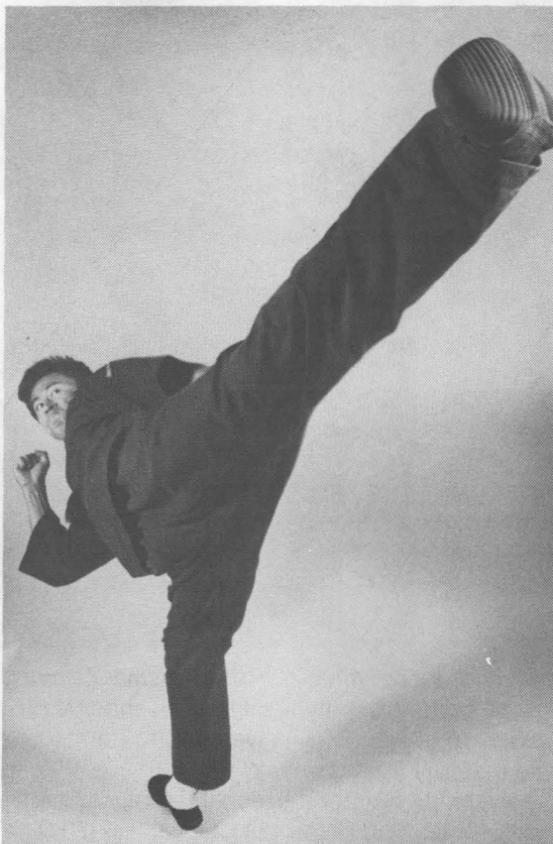
When the DP and Work For Others sectors began paying for the financial consulting services, we reduced the Labs' Administrative Management Council-funded budget by 10 FTEs, which represented the resources that had been provided for these efforts in the past. In addition to paying for the level of support they require, some of the sectors are co-locating the "consultants" with their program managers to create a better teaming relationship and utilize the skills of our staff on a broader range of assignments.

Transition to a New Contractor

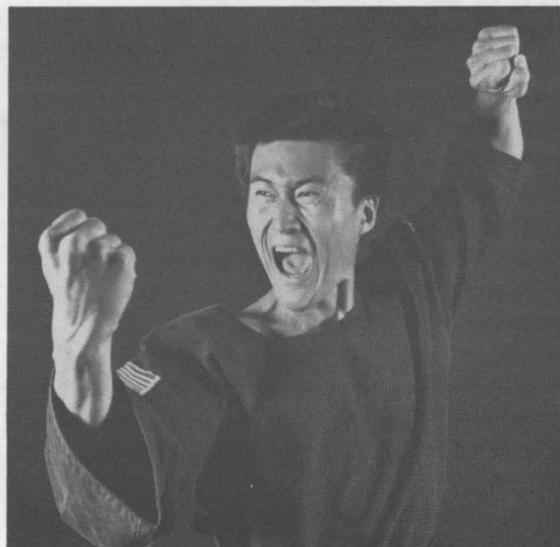
Division 100 has been involved in the effort to position Sandia for the new contract in October. Many of the changes expected will affect official policies under which we operate today. We are researching the areas that may be impacted and are establishing plans in conjunction with the Transition Council's Program Plan. ●

'Turtle Scientist' Really 'Paks' a Punch . . .

Hoyoung Pak, who recently finished two years of postdoctoral work in Dept. 1128, plays the high-kicking Leonardo in the recently released movie "Teenage Mutant Ninja Turtles III." A master of



martial arts, Hoyoung was first asked to don a 35-pound latex turtle suit in 1990 during the filming of "Ninja Turtles II: The Secret of the Ooze," in which he appeared in fight scenes as Donatello. He says three people team up to play each pizza-eating reptile: an actor, a stuntman, and a martial arts expert. Hoyoung now works for an Albuquerque research company specializing in plasma processing. He also owns a martial arts studio. While at Sandia, he gave science and martial arts demonstrations to youngsters at local schools and youth centers as part of Sandia's Education Outreach Program. (Photos by Randy Montoya)



Sandia News Briefs

Labs Graduate Fellow Named Bangladesh Society General Secretary

Sabir Majumder, a University of New Mexico PhD candidate working on his dissertation at Sandia, was recently elected general secretary of the Bangladesh Chemical and Biological Society of North America (BCBSNA). He will serve a two-year term. Sabir is an Associated Western Universities/DOE Graduate Laboratory Fellow working under the supervision of John Shelnett of Fuel Sciences Dept. 6211.

The goal of the society, which has about 200 members in the US and Canada, is to encourage technical communication among scientists from Bangladesh and to contribute to scientific and educational development in that country. Sabir was also appointed as editor of the *BCBSNA Newsletter*.

American Welding Society Honors Two Sandia Scientists

The American Welding Society (AWS) recently honored two scientists in Physical and Joining Metallurgy Dept. 1831. Mike Cieslak received the 1993 Professor Masubuchi/Shinsho Corporation Award for a scientist or engineer under the age of 40 whose body of research has made a significant contribution to the science and technology of materials joining.

Mike Maguire is a recipient of the Charles H. Jennings Memorial Award, presented annually by AWS for the best university research paper published in the *Welding Journal*. The paper, titled "Weldability and Hot Ductility of Chromium-Modified Ni₃Al Alloys," was based on Mike's PhD dissertation work. Co-authors Prof. Glen Edwards (Colorado School of Mines) and Stan David (Oak Ridge National Laboratory) share the award.

Experiment Chosen for Flight aboard Future Space Shuttle Mission

NASA has chosen an experiment proposed by scientists at Sandia and the Jet Propulsion Laboratory (JPL) to fly aboard a possible future space shuttle mission. The experiment will be developed by Robert Duncan of Electrical Standards Dept. 4342 and Ulf Israelsson and Talso Chui of JPL. NASA will support the project through the flight-definition phase, with flight-phase funding expected later.

The experiment would study, in the microgravity condition of earth orbit, the fundamental science of continuous phase transitions by measuring the way in which liquid helium transports heat at -271 degrees C (referred to as its superfluid state). The measurements will be made using the world's most precise thermometer, capable of detecting temperature changes as small as one tenth of one billionth of a degree. Results of the experiment may refine current measurement technologies and test our understanding of the fundamental science of phase transition.

Four Sandians Win Award for Transferring Technology to Industry

The Federal Laboratory Consortium (FLC) has selected four Sandians — Johnny Biffle, Ted Blacker, Ray Meyers (all 1425), and Randy Lober (2811) — to receive a 1993 FLC Award for Excellence in Technology Transfer. In all, 28 FLC Awards are being given this year to federal laboratory employees who have successfully transferred technologies to other government agencies or the private sector.

The award recognizes the Sandians' work in establishing cooperative research and development agreements for mesh generation software with Fluid Dynamics, Ford Motor Company, McNeal-Schwendler, and PDA Engineering. Awards were presented recently at the FLC National Technology Meeting in Pittsburgh.

Paul Dressendorfer Named Editor of IEEE Nuclear Science Journal

Paul Dressendorfer, Manager of Optoelectronic Device Development Dept. 2235, was recently named editor of *IEEE Transactions on Nuclear Science*, the nuclear science journal of the Institute of Electrical and Electronics Engineers (IEEE).

The appointment recognizes his work in semiconductor device physics, basic radiation damage mechanisms, radiation effects characterization, radiation-hardened technology development, hardness assurance, and nonvolatile memory technology. IEEE is an international society with more than 320,000 members.

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

Labs Joins Search For Mysterious Hum

Sandia has joined the list of New Mexico research organizations hoping to find the source of the mysterious "Taos hum," an alleged background noise described as a low-frequency rumbling or irritating grinding sound by the people who hear it.

Some residents of Taos, N.M., began complaining about the hum in spring 1991. They say it often keeps them awake at night and disrupts their lives. Many other residents don't hear the sound.

Although it appears to be centered in Taos, the hum has been heard in neighboring communities as far north as the Colorado border. A few Taos residents allege that secret military operations may be causing the noise, but Defense Department officials say no project they know of, classified or otherwise, can be responsible for the hum.

The sound might be a product of nature, say some scientists. Similar hums have been heard in other areas, often close to mountains. For example, the faint ground motion resulting from ocean waves pounding the California and Gulf coasts can be measured in Albuquerque, and the jet stream rushing over mountains can cause channels of sound.

Health Hazard?

New Mexico's Congressmen have expressed concern that the noise might be a health hazard, and Rep. Steve Schiff recently asked the state's research organizations to study the sound. The team comprises researchers from the University of New Mexico (UNM), Air Force Phillips Lab, Los Alamos National Lab, and Sandia. UNM is the programmatic leader.

Early infrasound measurements made by Los Alamos in September were inconclusive. Beginning in May, the study team plans to take a complete round of measurements using seismic, acoustical, and electromagnetic measurement techniques.

"We are participating on a largely voluntary basis, contributing existing technical expertise and equipment when needed," says Gil Herrera of Government Relations Program Office 4504.

Sandia researchers will contribute electromagnetic radiation detection techniques originally used in weapons vulnerability testing, as well as geophones. Sandians are also working with UNM to develop more sensitive microphones that "hear" sound in the range of the human ear. Organizations 2753, 5902, and 5909 are participating. ●JG



RUSSIAN INTEREST in US technologies has changed during the past three years. In the photo at left, Dave Nokes (left, 5801) shows Yuri Trutnev, deputy scientific director of the Russian laboratory known as Arzamas-16, a container designed by Sandia for the storage and shipment of fissile material from dismantled nuclear weapons. The container is part of a US assistance program — the Safety, Security, and Dismantlement (SSD) program — meant to help



Russia dismantle much of its nuclear stockpile. In the photo at right, Sam Bono of the National Atomic Museum explains SUBROC, a US submarine-launched weapon, to (left to right) Russian interpreter Steve Seymour, Trutnev, Glen Whiting (5609), Vladimir Mordvintsev, representing the Committee of International Relations at MINATOM in Moscow, and Evgeny Avrorin, Chief Scientist of Chelyabinsk-70. The Russians visited Sandia/New Mexico April 12-13.

UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS

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

Ad Rules

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

MISCELLANEOUS

UPRIGHT FREEZER, Carrier, 21 cu. ft., good condition, \$175. Romero, 299-3296.

STERLING SILVER FLATWARE, "Spring Glory," by International, 61 pieces, \$450. Dunlap, 884-0232.

COMPUTER TABLE & matching printer stand, solid wood, excellent condition, \$100. Shurtleff, 296-7870.

DOG HOUSE, for small dog, never used, \$25 OBO. Whelan, 255-3529.

FARM/RANCH GATE, 12-ft. x 53-in., galvanized steel, never used, \$30. Wilde, 281-4511.

ONE-DAY PASSES TO DISNEYLAND, two, valid until 5-31-93, regularly \$65, sell for \$30; wire fence, 40' x 4', w/poles & gate, free. Bower, 292-8350.

KITCHEN TABLE, w/6 chairs, Formica wood grain, oval, Kays Dinetette City, \$75 OBO. Borgman, 299-6010.

TRUMPET, silver G., LeBlanc Paris, w/2 carrying cases, 2 mouth pieces, metronome, & music stand, \$1,200. Hansen, 275-9917.

VANITY TABLE/MIRROR, antique oak, \$150; 50 scalloped-edge landscaping tiles, \$20; Weber-style barbecue grill, \$25. Kallio, 237-1344.

STOCK TANK, Rubbermaid, used slightly, would make great fish pond, \$65. Gomez, 291-0691.

SPEAKERS & EQUALIZER, Bose 901, new, still in boxes, paid \$1,498, sell for \$900 firm. Shay, 294-7624, leave message.

CAR BRA, for '85 or '86 BMW 528e or 533e, excellent condition, \$30. Kallenbach, 869-5237.

SCHWINN EXERCYCLE, hardly used, make offer. Hampton, 293-1824, leave message.

BUNK BEDS, dark finish, 1 year old, \$225; double papasan rattan, w/cushion, 4' x 6', 1 year old, \$150. Newquist, 281-2674 after 6 p.m.

STAIR MACHINE, good condition, \$150. Pompeo, 277-6085 or 265-5396.

COMPLETE WATERBED, queen-size, 6-drawer pedestal, light oak stain, 9 months old, linens included, \$200. Greer, 275-5668.

ATARI 800XL COMPUTER, w/books, mouse, program recorder, & tapes. Rogers, 256-0066.

ZAPOTEC INDIAN RUG, 5' x 8', \$190 OBO; leather briefcase, 4-in., dual locks, new, \$70 OBO. Stephens, 766-6674.

WEIGHT LIFTING BENCH, w/leg extension, barbell stand, & 110 lbs. of weights, never used, \$110. Matthewson, 883-6649 after 5 p.m.

COLOR TV, 13-in., w/remotes, very good working condition, \$50. Williams, 266-6552.

RCA COLOR TV, 25-in., cabinet, not cable ready, excellent condition, \$150. Ferguson, 292-3824.

COMMODORE 64 COMPUTER, sick, complete w/Epson printer; Sears portable electric typewriter. Best offer for each. Vancil, 299-7211.

PIANO, upright, dark finish, \$550; dorm-size refrigerator, \$50. Nagel, 298-2779.

WINDSURFER, complete for the beginner, \$200; box spring & mattress, twin-size, excellent condition, \$65; gas wall furnace, \$100. Russell, 294-0229.

SLEEPER, queen-size, \$250; dining table, w/6 chairs, \$150; console color TV, dark wood, \$200. All great condition. Jaramillo, 296-7516.

TURKEY FEATHERS, wings, tail, & body, all for \$10; shotgun shells, 16-gauge, 1-3/4 box, \$5. Murphy, 881-1520.

CAR COVER, heavy-duty, used 4 times, fits '86 & newer Mustangs and other 2-dr. cars, \$75; seat cover, brown, for '88 & newer Chevy pickups, \$20. Jackson, 281-8927.

GARBAGE DISPOSER, 1/3-hp, new, still boxed, \$20; child's booster-type car seat, \$25; high chair, \$10. Liguori, 256-3613.

TWIN & TRUNDLE BED COMBINATION, maple finish, without mattresses, \$85. Richard, 293-4017.

ELJER WET BAR SINK, stainless, w/teak trim & garnish tray, new, lists for \$700, asking \$200; push lawn mower, an oldie but goodie, \$30. Curzi, 296-5386.

WEDDING DRESS, size 6-8, would make a nice prom dress, \$50. Mozley, 299-4204.

LASER TAG, two complete sets, caps, vests, holsters, guns, sensors, \$50; 286SX motherboard, w/math coprocessor, \$40. Manley, 281-9446.

COMMODORE 64 COMPUTER, 5-1/4-in. floppy disk drive, Epson printer, word processing software, some games, \$150. Biffle, 293-7043.

KENMORE REFRIGERATOR, 15 cu. ft., \$60; moving boxes, 25¢ & 50¢/ea.; auto ramps, \$5. Seager, 299-7629.

TELESCOPE, Tasco 3-in. reflection, 140 power, w/zoom, Barlow, & two standard lenses, includes tripod, \$175. Nava, 299-3017.

SEARS CHAINSAW, 17-in., extra blade, recent overhaul, \$75; two large metal folding dog crates, \$30/ea. Robinson, 865-7787.

GE REFRIGERATOR, 16 cu. ft., single door, brown, \$85; Bentwood rocker, \$20; front axle for Wagoneer, \$100. Bentz, 299-3448.

CAT, white, neutered male, 1 year old, gentle disposition, litter trained, free to a good home. Locher, 266-2021.

GOLF BAG; golf pull cart. Both in good condition. Worden, 881-4486.

CARDCO DAISY WHEEL PRINTER, \$125; Pentax 645, 55mm, 75mm, 150mm, extension tubes & filters; Novoflex, 400mm, 600m, \$750. Swanson, 281-2735.

LEATHER SOFA & LOVESEAT, brown, \$500; couch, extra long, slate blue, \$200; glass & brass chandelier, \$15. Syme, 828-1784 or 822-1321.

LOVESEAT RECLINER, \$375; sofa table, \$125; full-size bed, w/mattress, boxsprings, headboard, footboard, \$250; roll-top desk, \$150; computer table, \$50; stereo; much more. Castillo, 294-5182.

TRAILER HITCH, Class II, fits '85-'93 Caravan or Voyager, excellent condition, \$80. Torres, 831-3539.

CAMERA, 35mm, A.F. telephoto zoom, macro, 4 auto-exposure programs, continuous shooting mode, manual mode, \$250 OBO. Rainhart, 821-3690.

PORTABLE TV, 19-in., Hitachi, w/remotes, excellent condition, has never needed repair, \$200. Gordon, 892-5358.

WESTINGHOUSE DRYER, \$95; large couch, wood arms, \$115; coffee table & two end tables, \$25. All very good condition. Filusch, 299-5932.

PROJECTOR LAMP, ELH tungsten halogen by GTE Sylvania; projector lamp, AV/Photo, Wiko ENX. Both new. Wagner, 823-9323.

SOFTBALL GLOVES: man's Rawlings, \$40; woman's Rawlings, \$30; Wilson, \$25; woman's golf cart/bag, \$35; soccer balls; volleyball; tennis balls. Martel, 293-1892.

SOUND BLASTER PRO CARD & Labtec amplified speakers, for PC compatibles, \$120 OBO. Miller, 883-0218.

AVITA 950SL ROWING MACHINE, spa-quality design & construction, w/owner's manual, excellent condition, asking \$150. Becker, 821-4494.

WINDSURFER, HI-Per Tech, race board, 9-4, 16-lb., mast, North two-piece EPX, w/13' & 15' tops, fin, tittle box, 11-in. wave/slalom. Ritchey, 298-4311.

SOFA/SLEEPER; swivel rocker; twin mattress, spring, & frame; antique wicker chair; washer; dryer; refrigerator/freezer, side-by-side; miscellaneous. Trembl, 856-0662.

'71 COLEMAN TENT TRAILER, sleeps 4, towed easily, \$500; propane tank, regulator, & holder, furnace for RV, \$100. Koeppe, 294-7136.

GUNS: Remington, 12-gauge, 870 pump, new, in box, \$325; mini-14, like new, \$320; handguns, .22, 9mm, & .357. Rader, 256-3069.

ANTIQUES: Edison Disc Phonograph, \$300; leatherette armchairs, two, red, \$150. Aas, 271-8211.

Feeling Rejected? Please Follow the Rules

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

SKI EXERCISER, Fit-One, \$250 OBO; push-type lawn mower, w/grass catcher, like new, \$50. Harris, 299-4559.

COCKATIELS, white, w/cage, \$110; gray, w/cage, \$100; Magnavox wooden console stereo; old TVs. Smith, 294-4531.

DYH AMAZON PARROTS, home-bred, hand-fed, closed-banded, microchipped, Zoogen-sexed females, friendly and already talking, \$900. Tucker, 298-3876.

FLIP-UP TOW BAR & base plate, for '84 Honda or similar models, \$100. Skogmo, 881-4526.

APRICA LA BELLE STROLLER, \$100; Little Tykes Creative Railway, \$40; Little Tykes I-80 Expressway, \$30; Fisher Price Zoo, \$10. Korbin, 821-8461.

QUICKSILVER MONO AMPLIFIERS, new tubes & extra set, all packing, \$750; Nitty Gritty record cleaning machine, standard model in oak, \$150. Damkroger, 897-7017.

PRINTER, Epson LQ-2550, \$600; slide projector, B&H TDC, 100 slide trays; barn and house wrecking sale, May 8-9. Moore, 345-4030.

BEDROOM FURNITURE, full-size bed, chest of drawers, dressing table w/round mirror & chair, \$250 OBO. Cabe, 857-0639.

LARGE METAL STORAGE SHED, free, you haul; Tiny Tike's cars, \$7/ea. Patterson, 822-1196.

SAVANNAH MONITOR LIZARD, 18-in. long, adult pet, \$60; Krell KMA 100 Mark II audio amplifiers, pair. Van Den Avyle, 898-6474.

TRANSPORTATION

'89 FORD BRONCO II XLT, 4WD, 5-spd., AC, cruise, PW, PL, AM/FM cassette, 69K miles, new clutch in 1992, \$8,950. Westrich, 281-4236.

'82 PLYMOUTH SAPPORO, 4-cyl., AC, 5-spd., cruise, new clutch & brakes, \$1,900 OBO. Zamora, 294-3737.

'88 FORD ESCORT GL, hatchback, 4-dr., AT, AC, FWD, 4-cyl., AM/FM, gray w/red interior, 55K miles, great car, \$450 below NADA, \$2,400 OBO. Garcia, 888-3686.

'75 CHEV. IMPALA, rebuilt engine, needs work, runs, \$1,100 OBO; '50 Ford, 4-dr., restorable, complete, make offer. Moya, 865-5765.

GIRL'S BIKE, 12-in., \$30. Patterson, 822-1196.

'90 MOTOR HOME, Airstream "Land Yacht," 33-ft., 18K miles, excellent condition, loaded. Patton, 281-3789 or 298-9987.

'78 GMC TRUCK, 4 x 4, PS, PB, AC, 350 engine, 40K miles, new tires, clean, like new, \$3,500. Chacon, 344-6913.

'73 VOLVO 145, runs well, \$925. Reese, 828-0113.

'82 PLYMOUTH RELIANT STATION WAGON, 90K miles, rebuilt engine, 4-spd. standard transmission, 4-dr., \$1,150 OBO. Gomez, 291-0691.

BICYCLE BUILT FOR TWO, French made, good condition, 24-in. frame. Babcock, 299-3121, leave message.

'79 HONDA ACCORD LX, 5-spd., 50K miles on engine, \$1,400. Mink, 832-6749.

'81 SUZUKI GS650E, Vance and Hines four-into-one exhaust, 24K miles, runs well, \$575. Hesch, 298-4902.

'78 SUZUKI TS250 ENDURO, street-legal, good condition, \$375. Roeske, 255-6188.

'84 TOYOTA CAMRY LE, 4-dr., loaded, 74K miles, PW, PL, cruise, AC, AM/FM cassette, AT, overdrive, \$3,900 OBO. Caldwell, 821-7110.

BOAT, '61 kite, 12-ft. sailboat, spruce mast & boom, trailer, one free lesson, this is a classic, \$500. Hollowell, 296-2111.

'79 HONDA CX MOTORCYCLE, deluxe, 500cc, very sporty, economical, clean, \$900. Normann, 291-1860.

'85 FORD 250XL SUPERCAB, 45K miles, with '85 NuWa fifth-wheel, 30-ft., loaded, bath, both excellent condition, \$27,000. Zarrella, 892-0822.

RACING BICYCLE. Syme, 828-1784 or 822-1321.

BOY'S BMX BICYCLE, 20-in., chromoly frame, \$45. Richard, 293-4017.

'68 DODGE MONACO STATION WAGON, well maintained, good running condition, \$1,000 OBO. Mozley, 299-4204.

'90 TOYOTA PICKUP, extended cab, 4-cyl., 4WD, 37K miles, \$9,000. Alderson, 293-5112.

'66 CADILLAC FLEETWOOD LIMOSINE, 90% restored, white, new paint, cover, service manuals, more, runs great, \$4,000 OBO. Manley, 281-9446.

'82 HONDA ACCORD, 4-dr., cruise, AM/FM cassette, AT, \$2,400 OBO. Seager, 299-7629.

'91 MERCURY CAPRI XR2 CONVERTIBLE, soft & hard tops, 5-year extended warranty, 9,500 miles, \$12,500 OBO. Bentz, 256-4954.

'80 MAZDA RX-7 GS, 5-spd., 79K miles, red, AC, sunroof, sheepskins, custom AM/FM cassette, 1 owner, \$2,500 firm. Miller, 281-9470.

'73 PORSCHE 914, \$1,200 OBO. Widler, 294-4263.

'84 CHEV. CONVERSION VAN, loaded, captain chairs, sleeper sofa, front & rear AC/heater, \$4,500. Ferguson, 292-3824.

'87 TOYOTA 4 X 4, 5-spd., LB, wing vents, 50K miles, insulated camper, roof vent, lights, screened windows, \$6,800. Swanson, 281-2735.

'81 HONDA TRAIL CT110, like new, 1,339 miles, \$800. Rader, 256-3069.

'64 MALIBU SS CONVERTIBLE, silver/white w/red interior, PS, PB, rebuilt 283 w/195 hp, powerglide, new paint, top, & tires, wood wheel, \$7,100 OBO. Hole, 266-3573.

'84 MAZDA 626 LX, loaded, 123K miles, engine replaced (62K miles), new brakes, muffler, & trailer hitch, \$2,400. Bower, 292-8350.

10-SPEED BIKES: 26-in. wheels, \$25; 27-in. wheels, \$30. Maloney, 828-9610.

REAL ESTATE

3-BDR. MOBILE HOME, '82 model, 14 x 80, at Four Hills park, 2 baths, needs new bathtub, refinance \$14,744, zero down to owner. Huff, 296-3349.

4-BDR. HOME, 1-3/4 baths, brick, pitched roof, solar, hardwood floors, redwood deck, hot tub, 6 blocks outside gate. Gonzales, 266-2302.

3-BDR. HOME, 1-3/4 baths, 1,365 sq. ft., wood stove, corner lot NE, three miles from Sandia, \$72,000. Normann, 291-1860.

4-BDR. HOME, 2-1/2 baths, open 2,638-sq.-ft. floorplan, 3-car garage, fully landscaped, NW heights, 18 minutes to water tower lot, great condition, \$159,100. Evans, 831-4736.

3-BDR. HOME, 1-3/4 baths, 1,380 sq. ft., sprinklers, drapes, washer, dryer, refrigerator, new roof, carpet, vinyl, paint, & gas range, La Cueva HS area, cul-de-sac, \$105,000. Stirbis, 299-8442.

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

1.67 ACRES, in mountains, Moriarty schools, vaulted ceiling, million dollar view, WBFP, no down, no problem, \$95,000. Epperson, 281-8691.

WANTED

NORDICTRAC, prefer to buy outright, will consider renting while rehabilitating from back injury. Schaub, 865-8807.

USED CAR OR TRUCK, reliable, \$2,000 price range. Strosinski, 281-9451, leave message.

SOMEONE to haul away river bed rock from approximately 12' x 6' area, payment negotiable. Patterson, 822-1196.

HOST FAMILY, for young woman this summer, in exchange for your son/daughter to live with her family in Seville, Spain. Saylor, 298-7377.

HARDY BOYS BOOKS, prior to 1960; Happy Hollister books, by Jerry West. Torczynski, 292-7191.

BABY CLOTHES, toys, & accessories, for 16-lb. boy (or bigger). Forster, 293-7231.

NEED TO RENT, LEASE, OR HOUSE SIT, returning from TDY, approximately July 1 for one year, ideally 3-bdr. near Juan Tabo/Montgomery. Graham, 1-522-8261 or leave message at 294-7740.

VAN CONVERTED FOR CAMPING, to rent for 2 weeks at end of June, will negotiate acceptable terms. Becker, 821-4494.

GOOD HOME, for adult male Cocker Spaniel, rescued stray, reddish, 30 lbs., housebroken, loveable, pay only vet/grooming costs. White, 275-3880.

SHARE-A-RIDE

CORRALES/RIO RANCHO VANPOOL, space available for new riders. Kuzmaul, 892-4466, or Boatman, 892-3570.

LOST & FOUND

LOST: To the person who took the visor from the '81 silver 4-dr. Honda in TTC/823 parking lot on April 19: please return gold ring, keep the visor, no questions asked. Newman, Org. 6331, 4-1083.



Coronado Club Activities**Kids' Bingo — Plus Movie and Cartoons**

KID SPECIAL — Tonight, April 30, the Club offers a chance for family fun: Kids' Bingo. The whole family will enjoy the low-cost buffet (it's served 5-9 p.m.), and all children playing bingo will get a free hot dog and soft drink. Cartoons and a movie will help everybody warm up for the bingo action, which begins at 7 p.m. Among the prizes: coupons to play five bingo games free.

BRUNCHES GALORE — Some great Sunday brunches are coming up this month. For starters, May 2 is the date for the next brunch and tea dance. The food (served 10 a.m.-2 p.m.) is sure to be fine, varied, and plentiful. Bob Weiler and Los Gatos will begin playing at 1 p.m. for all you dancers, and they'll continue until 4 p.m. Cost is \$6.95 for adult members, \$7.95 for guests, \$2.50 for kids 4-12, and free for kids 3 and under.

Then, a week later (May 9), is an event that's sure to be popular: the Mother's Day Buffet Brunch. Note the extended serving hours: from 10 a.m. to 3 p.m. Cost is \$7.95 for adult members, \$8.95 for guests, \$4.95 for children 4-12, and still free for the 3's and under. Reservations required for either brunch— call 265-6791.

IT'S MAY! Next Friday evening, May 7, you'll want to be at the Club for the tuneful music of Together and the spirited dancing of Ballet en Fuego. They're providing some unmatched entertainment for Fiesta de Mayo. You can count on the Club's kitchen crew to provide unmatched eatables, too: beef or chicken fajitas for \$7.95, combination plate for \$6.95, or the all-you-can-eat buffet for \$6.95. This one's sure to draw a crowd — make your reservations soon by calling 265-6791.

feed Aiback

Q: With an increased focus and budget on energy and environment, it would seem prudent to include biology as an approved degree program to support the new Sandia mission. Are there any plans to do so?

A: A recent survey of Sandia VPs whose missions might point to a need for biology degrees indicates that no demand currently exists. Therefore, we do not plan to include biology on our list of approved degree fields in the immediate future.

However, if a line organization can demonstrate that a strong need exists for a degree not currently supported, an exception can be granted by Individual and Management Development Dept. 7521. We maintain this flexibility in order to support Sandia's rapidly changing business needs.

Past examples of these exceptions include various degree fields related to ES&H, such as fire protection and safety management.

Ralph Bonner (7500)

Q: I have worked in Bldg. 823 through two summers. At the beginning of the first summer, a majority of the summer-hire students came to work in very, very short gym shorts, cutoff coveralls with no blouse or shirt, and some of the female students came to work in midriffs. Evidently something was said to them, because the mode of dress improved immediately.

Last summer, however, these students again

came to work in the same types of clothing and continued to do so throughout the summer.

I think Sandia is giving these summer hire students the wrong message about how to dress in the working world. By the way, I do not include jeans, tank shirts, or walking shorts (2-3 inches above the knee) in this criticism. However, Sandia is not a resort, gym, or beach area, and the kind of attire described is not suitable.

Sandia is trying to acquire new contracts, and many visitors, both US and foreign, are touring the Labs. I think Sandia needs to present a more professional image and make sure these students understand appropriate dress for work.

A: Thank you for your concern regarding Sandia's image. Dressing appropriately is an important item that all Sandians, not only students, need to keep in mind. The "Code of Conduct" section addressing dress is covered with students during their orientation.

Often students are simply not aware that their dress is considered inappropriate by fellow employees — the viewpoint of someone that age can be very different from the viewpoint of a more experienced or mature worker. When the issue is discussed with them in a non-critical, caring way, however, they are very willing to adapt their dress.

We will again ask managers to assist us by counseling their student workers on what is and what is not appropriate dress for their organizations.

Ralph Bonner (7500)

Fun & Games

Bowling — February Bowlers-of-the-Month include: Scratch — Bob Barton (7221), 664; and Cheryl Barton, 615; Handicap — Reyes Chavez (2412), 641 and 719; and Margie Gaddy (5951), 507 and 657.

Winners of the five-person-team No-Tap Tournament held at Iceland Bowl March 13-14 were Daniel Baca (7813), Frances Baca, Elisa Chavez, Dwayne Ballenger, and Mark Monroe with a combined handicap series of 3528. Second place went to Sally Frew (7524), Dee Dee Frew, Tanya McMullen (5701), Jim McMullen, and Brian Gowler with a combined handicap series of 3371.

Golf — The Cadillac Invitational Amateur Golf Tournament to benefit the National Kidney Foundation will be held May 17 at Tanoan Country Club. Hole-in-one prizes include a new Cadillac Sedan DeVille and two round-trip tickets anywhere Northwest Airlines flies. The local winning team will qualify to enter the playoffs held at the Doral Resort and Country Club in Miami. Call the National Kidney Foundation of New Mexico office on 266-4573 for details.

Annual Retiree Picnic Date Set

Retirees and their spouses (now numbering more than 4,200) are invited to gather for food, fun, and frolicking at the 30th annual get-together (and 23rd picnic) on Wednesday, May 19, 4-7 p.m., at the Coronado Club.

Parking will be available at the Coronado Club, the Base Chapel, Que Pasa Recreation Center, and the Sandia Base School east of the Club. Handicapped parking will be available in front of the Club, and handicapped persons only may use the main entrance. All others will be admitted through the swimming pool/patio entrance. A shuttle bus will operate from the parking lots on "B" Street to and from the patio entrance, and security guards will direct traffic to the parking areas. It is important to observe "No Parking" signs along the streets in the residential area and any "Reserved" spaces for delivery vehicles in all lots.

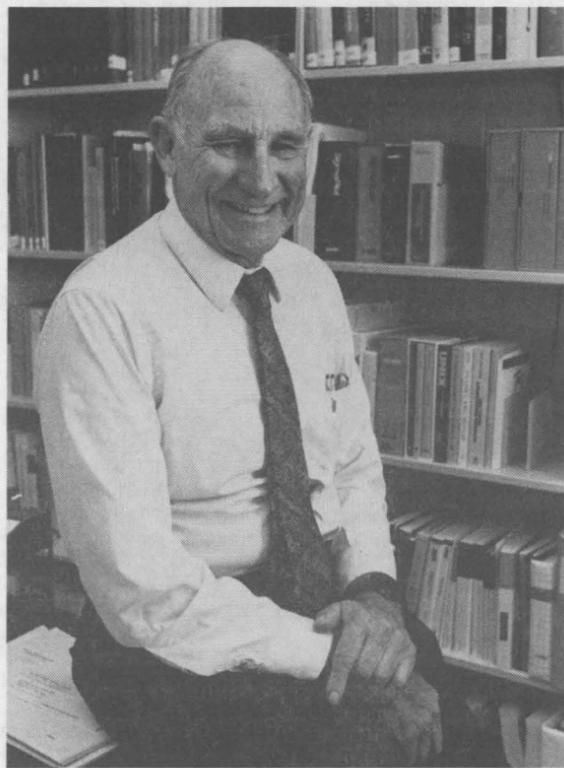
The Bob Weiler Band will provide music. The picnic is for adults only. Members of Large Staff will join retirees and their spouses.

Open House

The Labs is holding an open house in honor of retiree **Hal Bennett** (9614) in Bldg. 822, conference rooms A & B, on Friday, May 7, 1-3 p.m. Refreshments will be served. Friends and acquaintances are invited.

Take Note

Learn what is being done to protect water, conserve its use, and preserve its quality. Bernalillo County Cooperative Extension Service's second annual educational water fair, "Be Water Wise," will be held May 8, 10 a.m.-2 p.m., at the 4-H Center (1500 Menaul NW). Free water testing, commercial exhibits, educational programs about home and agricultural water use, activities and workshops for youth, and door prizes are offered. Admission is free. Call 243-1386 for more information.



WALT HERRMANN (1020), Senior Fellow in the Research and Exploratory Technology Division, was recently named a fellow of the National Academy of Engineering. He is one of 73 engineers elected to NAE membership and eight elected as foreign associates this year, bringing total membership to 1,682 members and 142 associates. Walt's election recognizes his "technical and managerial leadership in material models and tools for numerical simulation of nonlinear dynamic phenomena."

Recent Patents To Sandians

Leonard Beavis (2471), Maurice Karnowsky, and Frederick Yost (both 1831): Solder Extrusion Pressure Bonding Process and Bonded Products Produced Thereby.

Carol Ashley, Jeffrey Brinker (both 1846), Scott Reed (2476), Clifford Renschler (1812), Timothy Shepodd (8711), Robert Walko (2231), Bob Ellefson, John Gill (both EG&G Mound Applied Technologies), and Leroy Leonard (DOE/HQ): Solid-State Radiation-Emitting Compositions and Devices.

Bill Cowan (1221), Billy Duggin (ret.), and Melvin Widner (former Sandian): Apparatus for and Method of Operating a Cylindrical Pulsed Induction Mass Launcher.

Eldon Brandon, Frederick Hooper (both 2473), and Marvin Reichenbach (dec.): Precision Wire Feeder for Small Diameter Wire.

Jess Wilcoxon (1153): Method for the Preparation of Metal Colloids in Inverse Micelles and Product Preferred by the Method.