

## Keeping a Watchful Eye on Iraq: Sandians Assist in United Nations Monitoring

Back in the days before UN troops began marching across the borders between Saudi Arabia, Iraq, and Kuwait to meet the forces of Saddam Hussein, a Sandia scientist was already thinking about how to keep the peace after a ceasefire.

Most people weren't particularly concerned about it then, because Desert Storm hadn't yet begun. United Nations troops hadn't done any fighting in Iraq or Kuwait, and it wasn't certain that armed conflict would occur.

But John Taylor (9241), whose area of expertise is treaty verification, nonetheless wrote a proposal suggesting steps that might be taken to monitor an eventual ceasefire. He submitted his plan to DOE's Office of Arms Control, where it was put on file.

His proposal illustrates Sandia's ongoing involvement with treaty verification matters through DOE's Office of Arms Control. After Desert Storm, DOE asked the national laboratories to

### "The next big challenge in arms control is . . . non-proliferation."

nominate people to help monitor the ceasefire with Iraq. Since then, four Sandians have helped monitor the ceasefire agreement in Iraq: John worked on behalf of DOE at the State Department; Paul Stokes (9240) served as an advisor to the UN Special Commission in New York; and Paul Cooper (9333) and Charlie Burks (5110) served on UN Special Commission teams in Iraq; in fact, Charlie was there during the infamous parking lot standoff in September.

Their work, along with that of representatives of other countries and other national laboratories, has made it clear that Iraq under Saddam Hussein has not been straightforward with the rest of the world. It has also heightened the world's awareness that clandestine nuclear programs in Third World countries like Iraq are a clear and present danger to international security.

"What it suggests — and a lot of people have come to this conclusion — is that the next big challenge in arms control is probably not going to be the Soviet Union, but non-proliferation," says John.

#### The Case of Iraq

The immediate task of the UN Special Commission, known as UNSCOM for short, is to ensure the destruction of all of Iraq's weapons of mass destruction, which fall into four classes — nuclear,



JOHN TAYLOR (9241) worked at the State Department in Washington while UN teams were uncovering the scope of Iraq's nuclear weapon program.

chemical, biological, and ballistic missiles.

From the start, it was evident that the Iraqis had misrepresented their nuclear weapon capabilities, says John, who was involved in writing position papers in Washington, D.C. from April to August on how to deal with Iraq. First, they said they knew nothing about nuclear weapons. Then they claimed that an enormous electromagnetic isotope separation program for enriching uranium, which had gone totally undeclared, was used to make fuel for nuclear power reactors that they didn't have. After that, a UN team found evi-

dence of a centrifuge enrichment program, another method for enriching uranium. Finally, a UN team found documentation of an actual weapon program.

Besides misrepresenting their nuclear capabilities, the Iraqis also underdeclared their chemical arsenal by more than 100,000 munitions; lied when they said they did not have any biological weapon programs, a claim they later retracted when UN teams found evidence of research using such pestilences as anthrax and rabbit fever; and underdeclared their missile holdings by several hundred. The missiles are essential, notes John, because they provide the delivery system for launching all the other weapons.

"What we're seeing is that they have a very sophisticated, very well-funded, certainly not a backyard sort of program," notes John. "We had thought they might have something crude, but the engineering we're finding is very sophisticated, very well-supported, and the Iraqis who are involved are very proud of what they're doing."

In fact, he adds, one of the advisors from Lawrence Livermore National Laboratory said he would have been proud to have a lot of the test equipment that he was finding in Baghdad.

"While Iraq is a Third World country that has a lot of very poor, illiterate people, it also has a scientific elite that has had a tremendous amount of government support and has been educated in other countries like the United States and Great Britain. They've got scientists that are first-rate, and they've got technicians and engineers and an infrastructure that's first-rate."

#### The Parking Lot Standoff

Nor have the Iraqis shown much willingness to cooperate with UN inspection teams. On one occasion  
*(Continued on Page Seven)*

### LAB NEWS Readership Survey Results — Page Ten

# LAB NEWS

VOL. 43, NO. 22 SANDIA NATIONAL LABORATORIES NOVEMBER 1, 1991

#### Snapshot of Opinion

## "Sandians' Perspective" Survey Results Are In

Sandians are proud of their company, think it's a good place to work, and appreciate the benefits. But they're nervous about job security, question the fairness of the performance appraisal system, and have serious doubts about management effectiveness.

These are some of the findings of the "Sandians' Perspective" survey administered this summer, the most systematic look ever at Labs employees'

**More than three-quarters of Sandians agree that "the job I perform is considered important in this company."**

feelings about workplace issues. The survey results come from the 4,683 employees, at all levels throughout the Labs, who chose to complete a questionnaire this summer.

Sandians' Perspective results were presented to the Sandia Management Council, directors, and Change Ambassadors last week. This article summarizes the results, and accompanying articles tell more about how the survey was taken and what the results mean.

In the five highest-ranked categories of survey questions, 60 percent or

*(Continued on Page Four)*



THIS IS WORK? — Lisa and Karl Upplegger get some help from their mom, Bonnie Livermore (141), manipulating robotic arms to write their names and transport building blocks inside a glass case. The master-slave mockup, similar to those used to move materials around inside a nuclear reactor, was one of many exhibits that drew thousands of visitors to Sandia Oct. 19 for Family Day '91. For more photos, see page eight.

# This & That

The "Survey Special" - That might be a good name for this issue because we've got two survey-results stories in this issue, and I think you'll find both of them interesting. The big one - about the "Sandians' Perspective" opinion survey - begins on page one, and results of our 1991 LAB NEWS readership survey are reported on page 10. The "Perspective" survey is a candid look at the Labs - our strengths and weaknesses - by employees. All employees were encouraged to complete the survey this summer, and nearly 54 percent of us did. The LAB NEWS readership survey was also done this summer and was mailed to a random sample of employees (5 percent) at all locations and to 70 retirees. About 70 percent of these employees completed it, along with 59 percent of the retirees.

\* \* \*

Great Day! - Family Day Coordinator Joe Laval (3163) put in his order several months ago for a beautiful fall Albuquerque day on Saturday, Oct. 9, and got exactly that. More than 15,600 folks turned out for the festivities (see photos on pages one, eight, and nine).

Speaking of Family Day, my boss, Jim Mitchell (3160), was the official Family Day chairman. However, he says that Joe and the others on the planning committee deserve most of the credit for the successful event. In fact, Jim said that his getting top billing as chairman was perhaps the greatest injustice since pork got top billing in pork & beans.

Retired LAB NEWS Editor John Shunny says he sold \$1,350 worth of Sandia caps, T-shirts, and mugs at his Family Day booth, raising several hundred bucks for charity. You can buy these items each workday at the LAB NEWS office (Bldg. 814) for \$7 each.

\* \* \*

Construction Grammarian - You'll probably never see that job posting in the Sandia Weekly Bulletin, but VP Gerry Yonas (9000) thinks we may need one. Gerry says he's sorely tempted to follow directions every time he passes the temporary wall in the construction area on the first floor of Bldg. 802. The words "Kick Out Panel" are painted in bright red on the plywood wall. He also isn't fond of the "Open Slow" sign on the temporary door in the same area. If you see Gerry with a brush and a bucket of red paint, you'll know why.

\* \* \*

Getting Even - Some newspaper editors and publishers can be pretty vindictive (I'm an exception, of course). Donna Coulter (Org. 153) sends a clipping from *South Dakota Magazine* about a small-town publisher who definitely qualifies, though. The publisher reportedly refused to publish obituary notices of townspeople who, while alive, failed to subscribe to his publication. He gave this explanation: "People who do not take their hometown paper are brain-dead anyway, and their passing away has no news value."

\* \* \*

Please Accept My Compliments, Boss - My boss used to think I wasn't interested in what he had to say if I yawned too often while meeting with him. He may understand after reading this.

I only recently came to understand it myself after Renae Dietz, executive assistant to President Narath, said she heard a speaker explain it this way: When you yawn during a meeting, it means you're so interested in what someone is saying that you are making an extra special effort to stay awake - a real compliment to the speaker. ●LP

In Albuquerque and Livermore

## Narath to Hold Series of Town Meetings

Labs President Al Narath will hold Town Meetings in Albuquerque on Thursday and Friday, Nov. 7 and 8, and in Livermore on Monday, Nov. 11. During each meeting, he will talk about results of the "Sandians' Perspective" Survey (see story on page one), the Fall Leadership Conference, restructuring, and some recent success stories. The remainder of each meeting will be reserved for questions and answers. Each session will last approximately one hour.

The Albuquerque meetings will be held in the Technology Transfer Center (Bldg. 825) on Thursday at 10:30 a.m., 1 p.m., and 3 p.m. and on Friday at 8:30 a.m., 10:30 a.m., 1 p.m., and 3 p.m. The Monday Livermore meetings will be held in the Combustion Research Facility Auditorium at 8 a.m., 10 a.m., and 12:30 p.m.

To ensure seating at the Albuquerque meetings, randomly selected employees will receive invitations in the mail. (If you receive an invitation, but cannot attend, please give it to another employee who can.) Attendance at Livermore will be assigned alphabetically according to the first letter of employees' last names; related information will be distributed to Livermore employees soon.

Albuquerque and Livermore sessions will be videotaped and made available for checkout from the Technical Libraries in both locations. ●

### Help Us Recognize Sandians

The LAB NEWS wants to recognize Sandia employees and retirees who receive honors and awards - work-related and community-related - and who have other outstanding achievements.

Has your friend, colleague, boss, or employee been honored for good works in a community or professional group? Named a fellow or elected to an office in a professional society? Received a best-paper award at a meeting? Had a book published?

If so, keep the LAB NEWS in mind so we can give these folks a nod. Give us a call at 844-7841, or send a note with a few details to Division 3162. In Livermore, contact Barry Schrader (8522) on 294-2447.

## LAB NEWS

Published Fortnightly on Fridays

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

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**GOVERNOR VISITS** - Gov. Bruce King (left) visited Sandia recently for a meeting with President Al Narath to discuss the possibility of state support for construction of an Optoelectronic Materials Center (OMC) at the University of New Mexico. The OMC would provide space for optoelectronic materials research and house the Center for High Technology Materials, one of five Centers of Excellence initiated to enhance interaction between UNM, national laboratories, and the private sector.

**Special Event: Paper Airplane Contest**

# Employees Kick Off Annual Fund Drive

The 1991 LEAP (Livermore Employees Assistance Program) Faire kicked off the annual employee pledge campaign Oct. 16 with a paper airplane competition and displays by 33 community agencies that attracted hundreds of visitors. For two days following the event, employees met with their directorates and filled out pledge cards for this year's fund drive, which has set a goal of \$163,000.

The winner of the individual paper airplane flight contest was Dave Neustel (5356), for his homemade entry named "Lightning."

In the directorate competition, first place went to Weapon Development Directorate 5300, led by team captain Phil Zablocki (5376), for an entry titled "Mid-Air Collaboration." Second place went to Component and Applied Research Directorate 8400, headed by Ed English (8445), for "Mulch to be Desired." Third place was won by Administration Directorate 8500, captained by Jack Bishop (8535), for "Aero Space Cadets."

The best-named airplane was "Zero Debris Celsius," belonging to Directorate 5300. The team with the best costumes was also from 5300, wearing newspaper hats and vests. Best single flight was by pilot Carol Flores (8535), who flew "Don't Crash It — Trash It."

The LEAP marathon was won again by Carol Caldwell (8543) for the women, and Jim Reitz (8451) in the men's category.



COMING IN SECOND was a team headed by tuxedo-clad Ed English (8445). The team theme was "Mulch to be Desired," and its entry was the "Paradigm Line Aircraft," shown at right by pilot Bill Replogle (8441).



The best-designed planes included the "Spirit of Recycling" and the F-16 Cardbird. Though they looked great, they failed to make the top three in actual flight competition.



A POPULAR LEAP Faire visitor was this dog, who got acquainted with Jackie Garrett (8543) during the LEAP event. The dog was part of the Canine Companions group from Santa Rosa, which is being funded for the first time this year by LEAP.



## SANDIA LIVERMORE NEWS

### Congratulations

To Teresa (8446) and Arlyn (8341) Antolak, a girl, Danielle Marie, born Sept. 11.

To Margie and Mike (8454) Stewart, a daughter, Samantha Ashley, Oct. 2.



AERO SPACE CADETS placed third. Their squadron leader was Jack Bishop (8535), wearing the big hat.



A SURPRISE ENTRY was the "Stealth" plane piloted by Mike Pendley (8211). The plane was "invisible" to the crowd but could be seen by the crew wearing special "Stealth-seeking" glasses. LEAP Faire emcee Stewart Wavell-Smith (left, 8535) described the plane's flight path as it soared in loops to its final resting place on the lawn.

(Continued from Page One)

# Sandians' Perspective

more of the respondents rate the Labs favorably: benefits, working relationships, company image, job satisfaction, and work organization. (The chart at right shows all 18 categories covered by the survey.)

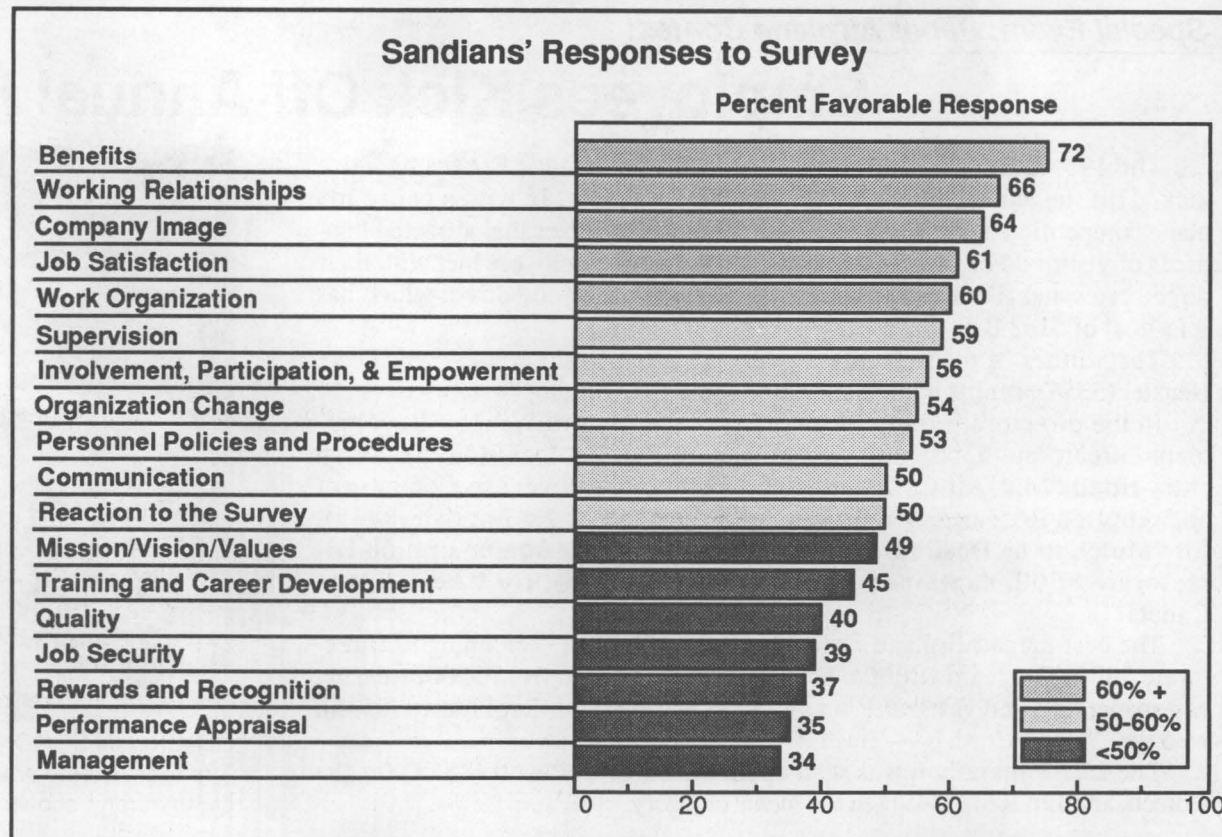
• **Benefits** — One of the most positive items in this category is "Sandia's benefit program fits

## Almost 80 percent would recommend Sandia as a good place to work.

my needs," to which 77 percent of respondents reply favorably. Sandians also feel they understand their benefits program and believe it is comparable to other companies'. Asked about the weeklong holiday shutdown at the end of the calendar year, which Sandia observes instead of several standard holidays throughout the year, 86 percent say they favor the present practice.

• **Working relationships** — Although this is the second-highest-rated category at Sandia, with a 66 percent favorable response overall, the picture is not as simple as that single number suggests. Sandians seem to feel most favorable about their own work group — 86 percent agree that "the people I work with usually get along well together." The same percentage say "the relations between people of different races and ethnic backgrounds are usually good." However, Sandians rate inter-division and inter-departmental cooperation much less favorably. Also, though 70 percent believe that teamwork is encouraged at Sandia, only 36 percent feel that it is given actual recognition.

• **Company image** — In this category, which gauges Sandians' pride in the Labs and their sense of identification with it, most of the items were answered favorably by 70 percent or more. To the



FAVORABLE RESPONSES to questionnaire items in 18 categories. The percentage of favorable responses in each category is the average of favorable responses to all items in the category. The questionnaire contained 92 numbered questions totaling 160 individual items.

statement "I would recommend Sandia as a good place to work," 79 percent reply favorably and only 10 percent unfavorably. Sandians also believe that the local community and their fellow workers regard the Labs highly.

• **Job satisfaction** — More than three-quarters (76 percent) agree that "the job I perform is considered important in this company." Sandians also generally feel that their jobs offer opportunities to use their skills and abilities. Asked to rate what most satisfies them about their job, the respondents give the five highest scores to the people they work with, the type of work they do, benefits, job security, and being treated with respect and fairness. At the bottom of the list of satisfiers are

pay, advancement opportunities, and recognition for performance.

• **Work organization** — This is a mixed category, containing many positive findings along with several negative ones. Sandians say they have a good idea of their job responsibility (86 percent favorable), and they don't report feeling an unusual amount of job pressure. They also believe that unsafe working conditions are corrected when brought to management's attention. Only a minority, however, believe that "the work in my department is well organized" (46 percent favorable) and that "there is usually sufficient staff in my department to handle the

(Continued on Next Page)

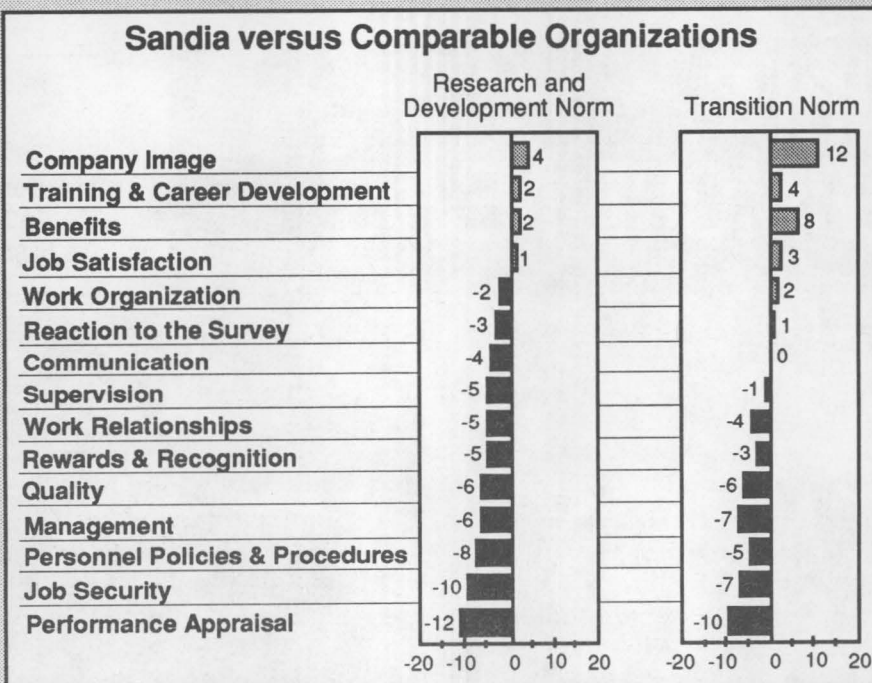
## A Bit More Perspective on 'Perspective'

# How Does Sandia Stack Up to Other Companies?

The responses to the Sandians' Perspective survey don't reveal whether Sandians' attitudes are unusual. But some answers can be found in a data base maintained by International Survey Research Corp., the company Sandia chose to develop the questionnaire and tabulate the results.

ISR compared Sandia to other research and development organizations and other companies in transition (downsizing, reorganization, etc.). The ISR "norms" are the average number of favorable responses given in each survey category by 18,563 people in R&D organizations and 73,381 in companies undergoing transition.

One category that appears in a more favorable light when compared with the norms is training and career development. In the Sandia survey, 45 percent of responses are favorable. That appears low, but it's actually a higher percentage of favorable responses than either norm. So Sandians generally feel more positive about training and career development than employees of comparable organizations, by a margin of 2 percent compared with R&D companies and 4 percent compared with other companies in transition.



SANDIANS' PERSPECTIVE responses in 15 categories of questions are compared here to responses from other R&D organizations and other companies undergoing transition. The chart shows the number of percentage points by which the Sandia responses fall above or below the average for each of those groups of companies.

By contrast, comparison with the norms emphasizes Sandians' lack of confidence in the performance appraisal system. Only 35 percent of Sandians' responses in this category are favorable. The R&D norm is 12 percentage points

higher, and the transition norm is 10 percentage points higher.

In the Sandia-only results, personnel policies and procedures receive favorable responses from 53 percent of Sandians, putting this category near the middle. But that percentage is 8 points lower than the R&D norm and 5 points lower than the transition norm, which indicates that Sandians are more pessimistic about this category than employees of companies that make up the norms.

When a similar comparison is made for management, Sandians' responses move up several positions. Sandians' favorable-response rate of 34 percent is 6 percentage points less than the R&D norm and 7 lower than the transition norm. That means Sandians, compared to the norm, responded more favorably about management than they did about job security and performance appraisal, and about the same as for personnel policies and procedures.

Another category that changes position significantly is working relationships, which receives the second-highest percentage of favorable responses at Sandia. The 66-percent-favorable response is 5 points less than the R&D norm and 4 below the transition norm. Thus Sandians, though positive about working relationships, are less positive than employees of other companies.

**Comments from Survey Experts****Survey Answers Show Sandians Are Thoughtful, Dedicated, Outspoken — and Worried**

"I see a thread running through the Sandia responses," says John Stanek, President and CEO of International Survey Research Corp. "A lot of people have questions like 'Where is the organization now? Where does it want to go? How does it get there? What do I need to do to make it happen?'"

On the basis of his experience with surveys in other companies, Stanek believes that many of the unfavorable responses in the survey are a reflection of the uncertainties facing Sandia. Commenting on the average rating in the management category (34 percent favorable), he says, "I don't think we're seeing management-bashing here. I think there's a recognition that the world is changing and that the changes cause problems internally. It's significant that nearly a quarter of the people responding said they didn't know whether Sandia is well-managed or not."

As one indication of Sandians' concern, Stanek notes that only 32 percent say they aren't worried about the future of the Labs. Among other organizations undergoing transitions comparable to Sandia's, he says, an average of 47 percent say they aren't worried.

Sandians are outspoken, says Susan Hardy, ISR's project manager for Sandians' Perspective.

"Nearly 60 percent of the respondents included comments," she says. "That's unusually high. The comments were longer than normal, too, about 25 lines each. The manager of the group tabulating them told me that these were among the most well-thought-out comments he has seen in a long time."

**High Standard for Management**

Stanek says, "The direction of the comments as a whole is typical of organizations in transition. But the way these read, you might think we had surveyed just the managers, not the whole body of employees. The writers are strongly committed to Sandia, and they hold management to an extraordinarily high standard."

Stanek also notes that survey participants were ready to either blame or praise freely. "You might almost see an inconsistency," he says, "in the strong opinions about matters they consider both right and wrong with the organization. One thing that stands out is company image. In an R&D organization, responses are usually less favorable than the average of all companies. Here, company image is ranked high, and employees would recommend Sandia to others as a good place to work."

"Again, we need to look at the context of the world Sandia finds itself in," he continues. "The combination of this positive attitude with a lot of the negative responses may mean that people are saying it's still a remarkably good place to work, but they're concerned whether it will be so good, or will even exist, in the not-so-distant future."

After Stanek presented the survey results to the Sandia Management Council, he met with the group informally. Asked how SMC took the news — both good and bad — he says, "I was astonished at how well they responded to the critical messages. I would have to place them among the very best, compared to other executives I've dealt with. They didn't try to deny the data, and their concerns about its meaning were right on target."

"The remaining question," he continues, "is what they can do to make things happen throughout the company. In my experience, the most likely place for dropping the ball in a process like this is at the point of making decisions and translating them into action." That's not just a matter of top management, he adds, noting that some things have to be resolved Sandia-wide, but the results by organization (to be presented this month) shows that other problems will have to be resolved at the directorate or department level.

**(Continued from Preceding Page)**

workload" (41 percent favorable).

Sandians apparently have doubts about seven categories of the survey in which fewer than half the respondents answered favorably: mission/vision/values, training and career development, quality, job security, rewards and recognition, performance appraisal, and management.

• Mission/vision/values — Questionnaire items in this category gauge how effectively the Labs is putting its stated values into practice. The percentages of either "effective" or "very effective" responses to the values are: integrity, 58; quality, 54; leadership, 51; teamwork, 52; respect for the individual, 47. In no case is "don't know"

greater than 8 percent. The greatest uncertainty is how well Sandia is putting the *Strategic Plan* into effect — 28 percent respond "don't know." Only 29 percent feel that top management is providing a clear sense of direction, and 51 percent say it isn't.

• Training and career development — Though rated somewhat low overall, the individual items in this category receive highly varied responses. On the negative side, Sandians are skeptical about whether the Labs does a good job of promoting the most competent people — only 22 percent respond favorably, and 59 percent are unfavorable. Two-thirds of respondents (67 percent) don't believe that criteria for career advancement are consistently applied, and 45 percent question whether people new to their department are given a clear understanding of what's expected of them. (For the latter two items, about 20 percent of respondents answer with "don't know.") But the job posting system and skill-based training attract more positive responses. To the statement "There is adequate opportunity for people to learn about available job openings," 64 percent reply favorably. Fairness in the job posting system receives a 54 percent favorable rating. Sandians also say they believe they have opportunity for training needed to increase both their current job skills

and their eligibility for future jobs.

• Quality — Only 44 percent of Sandians agree that "my directorate operates efficiently," and 18 percent say they don't know. This category received many "don't know" responses. Nearly a quarter (23 percent) say they don't know whether Sandia's recent emphasis on quality has resulted in measurable improvements, and nearly half (46 percent) do not believe it has. Items about vendor/supplier understanding and support of quality

**A majority of Sandians say they worry about the future of the Labs.**

receive "don't know" responses ranging from 47 to 53 percent. On a more positive note, 58 percent of Sandians who have participated in quality action teams believe their recommendations have been implemented or will be, and 68 percent consider the experience valuable.

• Job security — A majority of Sandians (59 percent) say they worry about the future of the Labs. Only 32 percent say they aren't frequently worried about this issue. Paradoxically, there appears to be less worry about one's own department and directorate than about Sandia as a whole.

(Continued on Page Six)

**About Sandians' Perspective**

After several months of preparation, the Sandians' Perspective questionnaire was given to Sandians in July and August. It was a full-saturation survey, offered to every employee. Respondents were given a choice of completing the questionnaire at a central location or obtaining a copy and mailing it direct to International Survey Research Corp. of Chicago.

The response rate, 53.8 percent of all questionnaires distributed, is within the normal range for mailed questionnaires.

The questionnaire contained 160 individual items in 92 numbered questions, falling into 18 subject categories.

Representatives of ISR, including the company's president, John Stanek, presented the Sandia-wide results to SMC and other Labs audiences the week of Oct. 21. Responses at vice presidency, directorate, and department levels will be presented this month.

A copy of survey results for individual organizations will go to each organizational level at department and above. Each of those organizations will have a meeting to view the organizational data, as well as the Sandia-wide results.



PROJECT MANAGERS for the Sandians' Perspective survey, Mary Nation (left) and Linda Logan (both 4302), review two of the 100-plus volumes that make up a complete set of survey results. Linda is project manager for Phase 1, which ends when the survey results are presented Labs-wide. Mary is project manager for Phase 2, the follow-up activities.

(Continued from Page Five)

## Sandians' Perspective

• Rewards and recognition — This category includes both financial and non-financial rewards. Sandians generally believe their pay is adequate for the work they do. They also believe they are fairly paid compared to new hires at their level. But they express doubts about how their pay compares with others in their department, in other departments, and in other companies. They also doubt whether there is a clear link between pay and performance, and they question whether the Labs does a good job of keeping pay in line with the times. Nearly two-thirds (64 percent) do not believe that Sandia makes adequate use of non-monetary rewards and recognition to encourage good performance.

• Performance appraisal — Apparently of great concern to Sandians, this category consistently brings low ratings. Only 47 percent agree that "I understand how my performance on the job is evaluated." To "I think my performance on the job is evaluated fairly," only 48 percent respond favorably. Sandians also express doubt about how useful their most recent review was in helping them identify strengths and weaknesses, improve job performance, and plan their career. In one of the most unfavorable responses of all, 71 percent believe Sandia is too easy on poor performers; only 11 percent disagree with the statement "Sandia is too lenient with people who perform poorly."

• Management — Sandians credit managers with understanding the problems people face on the job. But respect for management and belief in managers' credibility and leadership is generally low. In a number of management items, such as stating objectives clearly, establishing priorities, providing leadership, and communicating with employees, only 26 to 30 percent of Sandians give rankings of good or very good. Poor and very poor ratings range from 33 to 40 percent. The respondents' immediate supervisors or managers (rated as a separate category) are more highly thought of than management as a whole. Sandians say that immediate managers/supervisors are receptive to suggestions for change and are technically competent. The ratings are less positive for favoritism,

### Comparison with 1989 Communication Survey

## Are Sandians' Opinions Changing?

Although Sandians' Perspective is the most comprehensive survey ever made of Labs employees, a 1989 survey of opinions about communication gives several points of reference and suggests Sandians see bright spots, or at least think there's improvement in some areas.

In the 1989 survey conducted by Stanley Peterfreund Associates, Inc., 25 percent of the respondents said they believed that communication from management was straightforward and honest. In Sandians' Perspective, 41 percent say they believe what they're told by management.

In 1989, 59 percent said they felt their jobs had an important impact on the overall success of the Labs. In 1991, 76 percent believe their jobs are considered important by Sandia.

In 1989, 61 percent said their supervisors are interested in their ideas and suggestions about how their organization might function better. In 1991, 67 percent say staff in their de-

partments are encouraged to come up with innovative solutions to work-related problems.

In 1989, 35 percent said that communication had improved during the preceding year, and 20 percent said it had become worse. In 1991, 63 percent say communication as a whole is generally good and has either changed for the better or stayed the same in the past year. Only 5 percent say that communication has changed for the worse over the past year.

Several items in Sandians' Perspective ask for opinions about changes over time. According to one of them, 52 percent believe that "the way people are managed" at Sandia is generally good and that it has either improved or stayed the same during the past year. Only 8 percent say that it has become worse.

As a whole, say 66 percent, Sandia is a good place to work and has either changed for the better or stayed the same during the past year.

availability, feedback to subordinates about performance, and people-managing skills.

### The Middle Rankings

For six categories, 50 to 59 percent of respondents give favorable ratings: supervision (discussed above); involvement, participation, and empowerment; organization change; personnel policies and procedures; communication; and reaction to the survey.

Some general findings in these middle-rated areas are that Sandians feel free to speak up, and they believe that their opinion is solicited. However, only 39 percent believe they can take important matters above their immediate supervisor/manager if necessary. And only 37 percent agree that "Sandia does an excellent job of keeping people informed about matters affecting them."

Asked to rate individual communication channels for their effectiveness as a source of Labs-wide information, Sandians give highest scores to the LAB NEWS and *Weekly Bulletin* (81 percent), co-workers (70), newsletters (68), and their immediate manager/supervisor (65).

Sandians say they are certain that any decisions reached as a result of the Sandians' Perspec-

tive survey will be communicated to them, but they are less certain that survey-related issues will be acted upon.

"How Does Sandia Stack Up to Other Companies?" (page four) tells how Sandians' responses compare to employees' elsewhere.

### What Next?

The next step in the survey process, explain Linda Logan and Mary Nation (both Organizational Effectiveness Div. 4302), is to analyze the results and take action at both the corporate and the individual organization level.

Linda is project manager of the first phase, which continues through Labs-wide distribution of the results. Mary is project manager of the second phase, which involves following up at various organizational levels.

Linda says, "After the survey results were presented to SMC, the Survey Cabinet met to begin formulating problem statements and determining root causes. After we finish that process, we'll present our findings to SMC, probably between mid-November and early December." The Cabinet, she explains, is a team of Sandians formed to analyze the survey data, make recommendations to SMC, and evaluate and monitor progress.

The recommendations will address Labs-wide problems, says Linda. The group expects to focus its recommendations on two or three key issues that can be thoroughly addressed within the next year.

### Bringing Results to Organizations

While the Survey Cabinet's work is going on, another group of Sandians will be helping Labs organizations understand and respond to the survey results from their own areas. Mary says, "We're not just going to send out reports and let the matter drop. At each level from vice presidency to department, trained coordinators will help the people in each organization understand the survey results and respond to them."

"We'll start with our own organizational effectiveness consultants, who will train two people in each directorate as coordinators and facilitators," she continues. "We're focusing on the directorate, because from there it's possible to work in two directions, toward the department and vice presidency. As facilitators, these people will help departments, directorates, and vice presidencies identify their problems, decide which are most important, find the root causes, and recommend an action plan. The root-cause step is crucial — the survey shows what Sandians think the problems are, but it doesn't show what causes them."

"As coordinators," Mary says, "these people  
(Continued on Next Page)

## Sandia Managers Talk about Survey

Two Sandia managers, Dan Hartley (VP for Energy and Environmental Programs 6000) and Ralph Bonner (Director of Human Resources 3500), were "champions" of the Sandians' Perspective survey — they took responsibility for sponsoring and energizing it. Along with Labs President Al Narath, they took time to reflect on the survey results.

Al says, "This survey is a tool for strengthening communication throughout the Labs. I believe that Sandians at all levels have made honest, perceptive judgments about what they feel is right and wrong about the Labs. The message is clear to me: We have a long way to go to deliver on the commitments we have made to ourselves and to our customers. I continue to be optimistic about the future. But now it's up to all of us to build on Sandia's strengths and to do our part in correcting the problems. I expect future surveys to give evidence of substantial rapid progress. The time to act is now. I pledge my personal support to every Sandian in this process."

Dan points out that the message of the survey responses isn't unexpected and that it confirms the direction already taken by the Labs.

"The amazing thing about the Sandians' Perspective results is how well they validate the Sandia *Strategic Plan* we wrote in 1990," says Dan. "The changes we wanted to implement then are painted in fluorescent colors by the survey. We're a data- and fact-driven culture — as long as we lacked metrics, we spent emotional energy debating the needed changes. Now we know better the depth of change that's needed. I believe these results will motivate all of us to work together to be the best we can be. We now have some real goals to shoot for."

Ralph says Sandia has begun to realize that the Labs' main competitive advantage is its people. That's a view articulated in the *Strategic Plan* objectives and the Labs' stated values, he notes. "There's a difference, obviously, between stating the objective and achieving the result," Ralph continues. "This survey provides the data for management to focus action and measure performance in issues involving the needs and concerns of Sandians. Our objective is to create a national leadership role for Sandia through its people. Our credibility will be measured on how we respond to the challenge."

*(Continued from Page One)*

## Watching Iraq

sion, they fired warning shots over the heads of UN teams that were on the verge of finding something, says John. They also unsuccessfully attempted to cover up much of the evidence, either by altering weapon sites to make them appear to be something else, or by withholding documents, as they did in the recent parking lot standoff in Baghdad.

Charlie witnessed first-hand the determination of the Iraqis to protect their information about weapons of mass destruction when he was detained in the parking lot for four days. He was one of 44 United Nations inspectors who slept outside, many of them on unfolded cardboard boxes, while the Iraqis demanded that they hand over documents and film. Charlie slept in a bus, with his head hanging out a window to get some air.

The most revealing documents seized during that visit had to do with Iraq's efforts to develop nuclear explosives. One such document, known to the news media as the "smoking gun" document, is a progress report that covers all of the elements needed to build a nuclear device. Many of the most revealing documents had been packaged in metal crates when UN inspectors found them, says Charlie, obviously to be shipped elsewhere.

"We knew that time would be of the essence," he says, "so we tried to cover as much territory as we could. We did not know for sure we'd even get in. I think arriving at six in the morning, before working hours, was one of the reasons we did gain entry. The Iraqi bureaucracy was not yet in place to react."

Although the Iraqis did recover a large number of the documents that were initially found, UN teams were able to get sufficient evidence to incontrovertibly confirm the existence of a nuclear weapon program. Inspectors were able to communicate with the outside world via satellite, and the UN Security Council brought a lot of pressure to bear on Iraq.

The International Atomic Energy Agency (IAEA), which is responsible for the nuclear aspects of the UN inspections, has since estimated that Iraq may have been within 18 months of developing a nuclear bomb. Right now, the documents that were taken by the UN team are being translated from the Arabic at the IAEA in Vienna. Some are procurement documents that may provide information about countries or companies that have cooperated with Iraq.

"I don't believe that prior to this inspection there had been any hard evidence discovered that really described a nuclear weapons program. All the evidence before that was circumstantial," says Charlie.

Though Charlie says he never feared for his physical well-being, the situation in the Iraqi parking lot did grow tense at times. The detainees got some brooms from the Iraqis to sweep the parking lot, which was still littered with shells; built fires with scraps of wood to make coffee; and took

*(Continued from Preceding Page)*

## Sandians' Perspective

will serve as liaison with management and the Sandia quality organization. They'll also help form quality action teams. We expect this process to go on from about the beginning of December until next May."

In the summer of 1992, a follow-up survey may be conducted. If so, it will probably be administered to a randomly selected portion of Sandians — full-saturation surveys requesting responses from every employee are unusual. The 1991 Sandians' Perspective will serve as a benchmark; any future survey will begin to show how much progress has been made both in keeping the strengths revealed by Sandians' Perspective and addressing the challenges. ●CS



CHARLIE BURKS (5110) was one of 44 members of a UN inspection team that was detained by the Iraqis for four days in a Baghdad parking lot.

showers beneath a garden hose that the Iraqis had extended into a toilet area. They placed the documents they had taken on a vehicle that they parked in the center of the lot so they could point the headlights of all the other vehicles at it at night to keep it under constant surveillance.

### The Future of Non-Proliferation

Of course, the situation with Iraq illustrates the difficulties involved in preventing nuclear proliferation. For now, the United Nations has the authority, under UN Resolution No. 687, the ceasefire agreement, to either remove or destroy anything it finds that has to do with weapons of mass destruction. But the long-term problem is more daunting.

"I think Iraq is hoping that the UN will lose interest or run out of money," says Charlie, "that this will all blow over after a while. And the Iraqis will lie low until that day comes. No matter what we do as far as destroying equipment and documents, it's still in the heads of all the people who worked on the project. So it's a little scary."

What Iraq has demonstrated to the rest of the world, notes John, is that a country with sufficient resources and determination can maintain a clandestine nuclear weapon program. Iraq has both. It bankrolled its operations with oil revenues and mined radioactive materials from uranium-rich

phosphate ores in Western Iraq. What it doesn't have in the way of access to components like switches, it has tried to develop on its own.

"I think all of us who have been dealing in this situation feel that there's a time element here," says John, "that there's going to be enough going on in the world that enthusiasm for wandering around Iraq and looking under rocks for Scuds or digging into nuclear programs eventually is going to wane. The question is, what do you do to monitor Iraq in the long term?"

Some of the options include tracking down and imposing sanctions against national or corporate entities that have overtly participated, notes John, along with formal and informal export controls and technology transfer measures that are designed to keep information from getting into other nations' hands.

Though Iraq has been suspected for years of having a nuclear weapon program, other countries are also suspected of having nuclear weapon programs, says John, including North Korea, Taiwan, Pakistan, South Africa, Brazil, Argentina, and Iran. India is known to have detonated an atomic bomb in the 1970s, and many experts believe that Israel has nuclear weapon capability.

"The full extent of the program in Iraq is sobering," notes John. "Intellectually, we've known for a long time that these kinds of things have been going on and that countries have clandestine nuclear programs. But it's quite another

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**"We knew that time would be of the essence, so we tried to cover as much territory as we could."**

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thing to actually have the evidence. It's alarming. When you see a project that looks like it could have been done by Lawrence Livermore, but instead it's been translated from the Arabic, that's pretty sobering."

Charlie notes that Iraq does not behave like a defeated nation, and that in some ways, it wasn't totally defeated. People still go to work each morning, and except for smart-bomb damage to key facilities like bridges, Baghdad did not suffer a lot of damage.

"As long as there are inspection teams visiting Iraq, I don't think they'll be able to run an active nuclear weapon development program," he adds. "But my concern would be that, if and when the time comes that inspections are no longer conducted, then I think their intentions are pretty clear — they'd try to revive this activity." ●LD



BACK INJURIES were the predominant type of injury at Sandia last quarter, so Security and Facility Support Services Org. 3400 initiated a back care training program for all of its employees. Larry Suzuki (contractor) uses a model of a human spine to teach Transportation Services Div. 3423 (Motorpool) workers about proper lifting techniques and muscle strengthening exercises for the back. From left are Bobbie Welch, Fred Raether, Pat Abeita, and Charles Tenbroeck.

### Family Day '91 Draws More Than 15,600

After the last of the balloons was carried away and security guards closed the gates for the evening, Sandia took a head count of the folks who had visited the Labs on Family Day '91. The results compared very favorably with those of previous years.

This year's Family Day drew a total of 15,628 visitors, says Family Day Coordinator Joe Laval (3163). That tally includes 3,836 employees and 65 retirees, who were accompanied by 10,759 family members and 968 non-family guests.

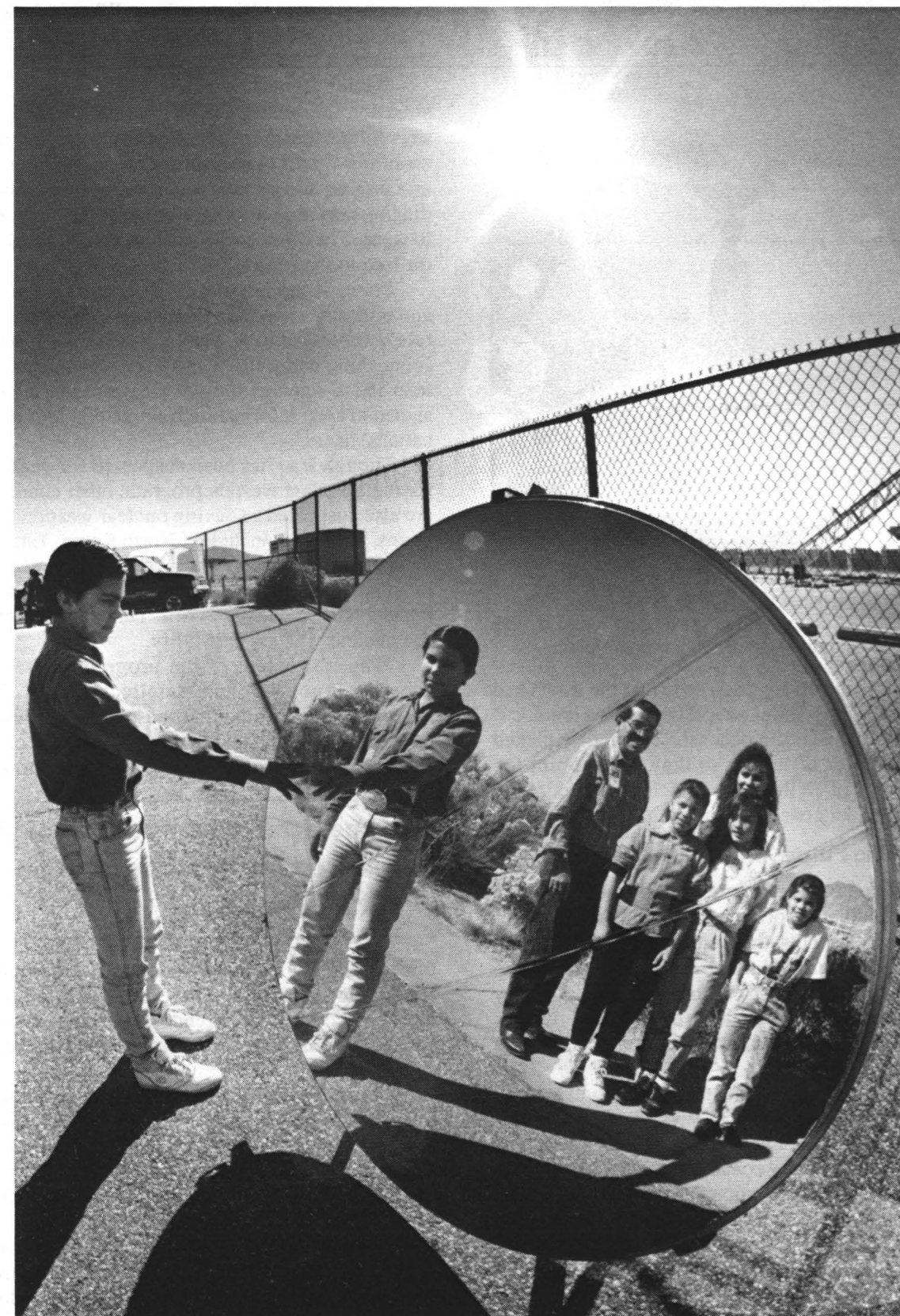
LAB NEWS photographers Randy Montoya and Mark Poulsen took a look around at the visitors and displays, and this page features some of the goings-on.



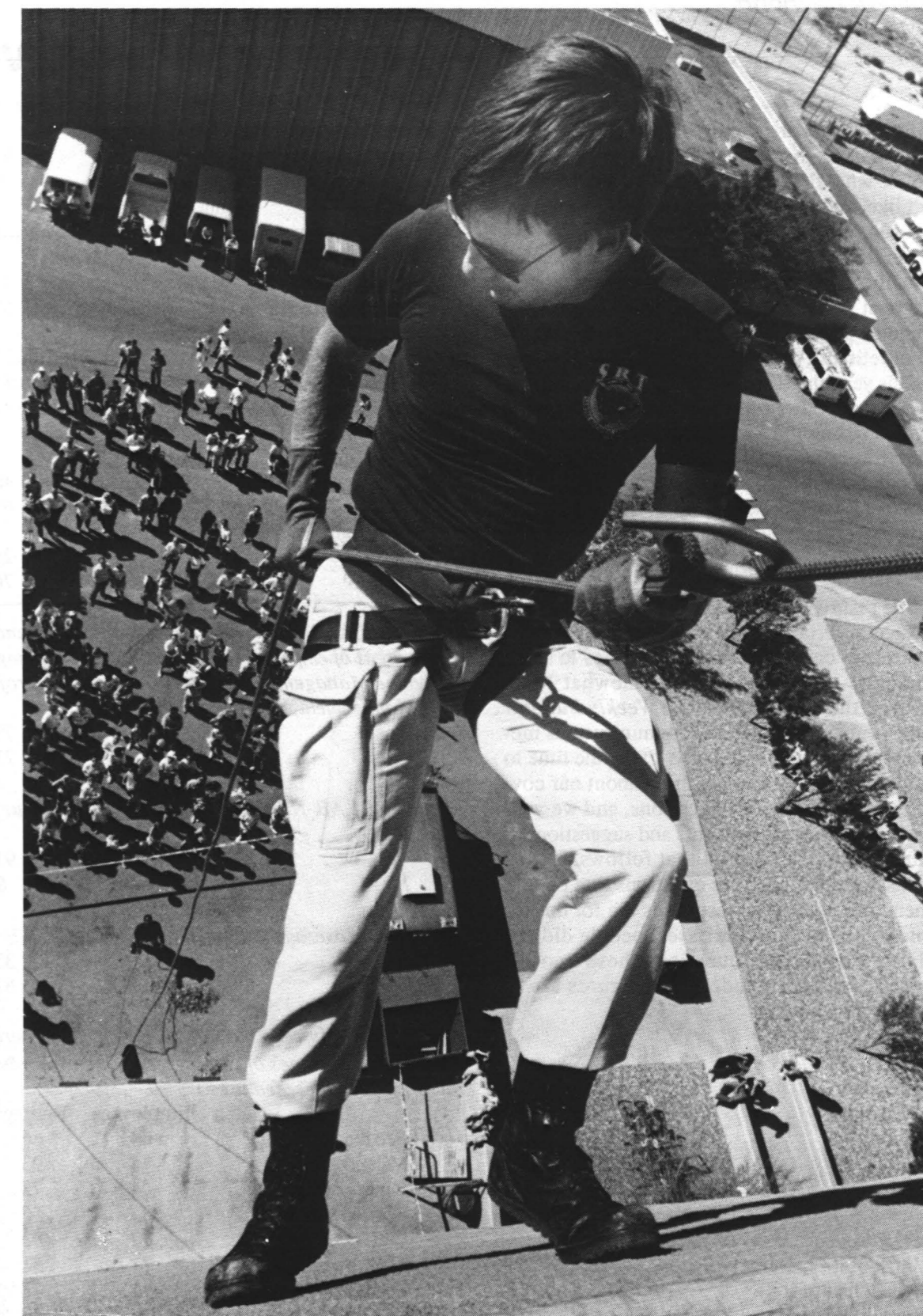
VISITORS VIEW the glow from the radioactive core of the Annular Core Research Reactor in Area V.



PBFA II (Particle Beam Fusion Accelerator) drew lots of Family Day spectators, who also got to watch divers inspect the facility after a test shot the night before. They were diving in the deionized water that insulates the components of the pulse-forming section of PBFA.



AT THE SOLAR TOWER, Richard Chavez (2413) and his grandkids see their reflection in a model of a stretched membrane heliostat used to focus sunlight.



LT. RAY PAGE (3435) begins his descent down the west side of Bldg. 821 during a Family Day rappelling demonstration.



DON OATLEY (2476) works in the Glass Lab as visitors look on.



THE SLED TRACK, always a popular event, drew thousands of onlookers who squinted in the sun to get a better look at the rockets firing down the track.



THE END — This weary youngster gets a lift from Dad on the way through Gate 2 at the end of a long day.



Readers Respond

# LAB NEWS Readership Survey Results

by Larry Perrine, Editor

Every few years, the LAB NEWS asks a sample of Sandians to complete a readership survey to indicate what they read and don't read, like and don't like, and how they think the paper could be improved. We did that in August, mailing surveys to 5 percent of employees (430 persons selected randomly) at all sites and to 70 retirees.

About 70 percent of employees (304 persons) completed and returned the survey, as did 59 percent of retirees (41 persons).

This year, the survey was expanded to ask employees about other communications media at the Labs, including the *Weekly Bulletin*. Because of this, retirees received a special version of the survey pertaining strictly to the LAB NEWS (retirees get the LAB NEWS, but not the *Weekly Bulletin* or most other communications).

### Additional Comments Welcome

The results presented here — in the form of tabulated material, comparison with previous surveys, reader comments, and my replies to some comments — are altogether somewhat long. However, the LAB NEWS and *Weekly Bulletin* are the primary Labs-wide communications media, and I hope many of you will take the time to consider what other readers think about our coverage. These are *your* publications, and we welcome any additional comments and suggestions.

In the tabular material that follows, retiree responses are included for questions that pertain to them; otherwise, the responses are for on-roll employees only. In some cases, people did not reply to a particular question; these "no responses" are not included. The figures are in rounded percentages.

In general, how do you rate the LAB NEWS?	%
Excellent	14
Very good	55
Good	25
Fair	5
Poor	1

How much of each issue do you usually read?	%
Most of it	43
About half of it	46
Very little	11

Do you usually take it home with you?	%
Yes	60
No	40

Do any family members usually read any part of it?	%
Yes	54
No	46

Do you find the LAB NEWS historical context interesting/valuable?	%
Yes	89
No	11

Do you think you get timely info in the LAB NEWS and Weekly Bulletin?	%
LAB NEWS: Yes	81
LAB NEWS: No	19
Weekly Bulletin: Yes	93
Weekly Bulletin: No	7

Would you like to see the LAB NEWS and Weekly Bulletin combined and published weekly, or kept separate?	%
Yes (combine)	27
Keep Separate	64
No Opinion	9

Considering all communications media and methods being used today to convey information to employees, do you consider either the LAB NEWS or

the *Weekly Bulletin* to be your primary source of information about Labs-wide activities?

Yes	91
No	9

If answer to above question was yes: Which do you find most useful?

LAB NEWS	43
Weekly Bulletin	57

The LAB NEWS tries to have at least one Sandia technical/scientific feature article in every issue. Do you think these articles are either too long or too complicated?

Too long:	%
Yes	40
No	60
Too complicated:	%
Yes	24
No	76

Has the LAB NEWS coverage of initiatives and new areas of emphasis (ES&H, Strategic Planning, Change Management, Technology Transfer, Project Management, etc.) been helpful to you?

Yes	79
No	21

Has the LAB NEWS emphasized these issues enough?

Yes	91
No	9

Too much coverage to these issues?

Yes	33
No	67

Do you usually read the following? (Figures here are the percentages of employees and retirees who usually read these features.)

	Employees	Retirees
Feedback Items	84	66
Milepost Photos	74	93
Supervisory Appts.	74	73
"Unclassified" Ads*	73	56
Employee Benefits	72	83
Management News	71	51
Technical Features	71	76
Photo Features	70	80
This & That Column	68	66
Favorite Old Photos	67	80
Medical Corner	66	76
Sandia News Briefs	64	88
Employee Activities	58	93
Employee Awards/Honors	55	59
ES&H Articles	53	37
Unusual Vacations	50	93
Events Calendar*	42	46
Fun & Games Items	42	29
Take Note	41	66
Livermore News*	33	42
Coronado Club Activ.*	29	41
ECP Campaign*	24	22
Savings Bonds Campaign	21	20
Community Focus Items	19	20

\*Total readership of these items is highly influenced by employee/retiree location. For example, several of these items apply primarily or exclusively to folks in Albuquerque, and readership is generally higher in the Albuquerque area than is indicated by these figures. The Livermore News, usually printed on page three of the LAB NEWS, is the best-read item by Livermore employees. Some Sandians question why the LAB NEWS continues to publish a separate Livermore News page when the "one-Laboratory" idea is emphasized strongly today. This is done primarily for the convenience of Livermore site employees — because many indicate that they want to be able to find "their news" easily. Livermore news, however, is not "confined" to page three; we frequently print stories about Livermore activities elsewhere (including page one) when we believe these stories are of particular interest to all Sandians. We hope all employees will notice and read all stories of interest, no matter where they are located in the paper.

Comparisons with previous surveys are difficult for three reasons: (1) We reworded many of our questions this year and revised the rating system, (2) the 1991 survey included questions about the *Weekly Bulletin* but earlier surveys didn't, and (3) the 1991 survey included retirees and employees from all sites (previous surveys included on-roll Albuquerque employees only).

Keeping these differences in mind, here are a few comparisons:

(1) Overall LAB NEWS rating — In both 1985 and 1988, 8 percent of respondents gave the LAB NEWS the top rating (top rating called "great" in those years). This year, 14 percent of respondents gave us the top rating of "excellent."

(2) How much of the LAB NEWS do you read? — In '85, 39 percent of respondents said most of it; in '88, 41 percent said most; this year, 43 percent said most.

(3) Do you take the LAB NEWS home to share with family members? — In '85, 65 percent said yes; in '88, 56 percent said yes; this year, 60 percent said they take it home and 54 percent said family members read some part of it.

(4) Top-rated items — In both '85 and '88, the top-rated items in the LAB NEWS were the technical stories, followed in both years by management news. Among on-roll employees, Feedback items are top-rated this year, followed by Milepost photos and supervisory appointments; technical features and management news are still well read, but not as well as in previous years.

Top-rated items (all at 93 percent readership) among retirees are unusual vacation features (I wonder why!), Milepost photos, and employee activities.

### Reader Comments and Suggestions

The 1991 survey included several areas where readers could provide comments — how the paper could be improved, possible new features, areas that need more emphasis, etc. We received several hundred comments — far too many to include, but here are some typical comments and my replies:

*Expand coverage of Feedback items and encourage management to give better responses.* (The Feedback system — Sandia management's responses to employee questions/comments — is coordinated by Employee Communications Div. 3162, which also publishes the LAB NEWS.)

As indicated earlier in this story, among on-roll employees Feedback items are the best-read items in the LAB NEWS. We have long realized that, and we print most Feedback questions and answers that are of interest to most Sandians. There are a few that we do not publish: ones that pertain solely to a particular employee's private situation (for example, concern about his or her salary, or complaints about a colleague or supervisor), items that duplicate others that we've published recently, and ones that involve potential or pending legal issues. However, everyone who submits a Feedback question or suggestion gets a personal reply in a private envelope.

Regarding better responses from management, we encourage management to respond as thoroughly, precisely, and candidly as possible. President Narath endorses this and has asked us to work with Labs managers to improve responses. We will continue to do that, but we can't guarantee that you'll always like the answers. If you aren't satisfied with a particular answer, we encourage you to contact the person who provided it; the names of Sandians who answer Feedback questions are listed with the answers.

*Let Sandia, Livermore information go past one page. I feel like a "second-class" citizen out here.*

We do not confine Livermore news to a single (Continued on Next Page)

(Continued from Preceding Page)

## LAB NEWS Survey

page, but usually run it on page three because many Livermore Sandians seem to prefer "their news" where they can find it easily (see footnote to earlier item about features that Sandians usually read). In the Oct. 18 issue, we filled page three with Livermore news and continued it onto another page. And in the Oct. 4 issue, we filled page three with Livermore news and also ran a page-one story (that continued onto another page) about a Sandia, Livermore weapon quality program.

The ratio of Albuquerque Sandians to Livermore Sandians is about 7 to 1, and our coverage probably reflects that to a large extent. However, I sincerely hope Livermore Sandians don't feel like they get second-class treatment in the LAB NEWS just because they don't get as much coverage. Contact Livermore reporter Barry Schrader or give me a call in Albuquerque at 844-1053 if you have ideas for additional Livermore stories.

*More coverage on testing.*  
Good suggestion. We'll try.

*More news about administrative and support employees. Don't just focus on technical staff members and managers.*

I realize your concern here, and I share it. Sometimes, we probably don't give enough credit to Sandians "in the trenches" who contribute to the success of particular projects and to the Labs in general. We're going to get better at this.

*More sports news.*

I'm a sports fan myself, but the LAB NEWS just can't devote much space to sports news. We don't have the staff time or space, and company sports and recreation news is well-covered in the SERP (Sandia Employees Recreation Program) newsletter.

*More reader comments.*

Good suggestion. We're going to do more of this in future issues by calling readers to get your reactions to current issues, then print your responses (with your permission). And we're going to call Sandians at all levels of the company. Also, feel free to call us any time with story ideas and comments.

*Two separate comments from different folks: (1) Please include more technical and scientific development stories, and (2) You print too much technical information.*

Uh, OK.

*Do more human-interest stories about Sandians — what they do outside of work.*

Just about every writer I know likes to write human-interest stories, and the LAB NEWS staff is no exception. As space and time allow, we'll try to do more, but please keep in mind that there is a lot of "hard news" that we have to cover today with the many initiatives and changes going on at the Labs. Maybe things will settle down one of these days, and we'll have a little more "option time and space." Hope springs eternal!

*Add a section on Sandian's favorite restaurants, vehicle repair shops, and galleries.*

Sorry, but no can do! The LAB NEWS (published with DOE money) cannot even appear to endorse commercial establishments.

*Less censorship!*

Although several people review the LAB NEWS copy before we publish it, I honestly don't think this is "censorship." We pretty much write what we think we should write within the confines of good taste and hopefully good sense. Our news sources review stories for accuracy along with

classification, legal, and patent specialists, but this is standard for any Labs publication, and I don't view this as censorship.

*Why can't you include "for rent" ads in the ad section? I rent and would like to support Sandia lessors.*

The LAB NEWS does not accept commercial ads, including ads from Sandians who run businesses "on the side." We generally consider rental houses to be business ventures. We do make an exception for Sandians who accept temporary out-of-town assignments and wish to rent their primary residence during this time.

*The LAB NEWS is too large and too inky — I avoid it usually.*

I'm not sure I understand this one, but subway commuters have issued similar complaints about the *Wall Street Journal* and the *New York Times*, so I guess we're in pretty good company.

*Include information for Sandia singles and club for singles.*

The Coronado Club has recently begun sponsoring a "singles' mingle" on certain weekend nights, and we include info about these events in the Coronado Club activities column. If a bona fide Sandia singles club has announcements to put in

the LAB NEWS, get in touch with us and we'll work with you.

*Maybe include a humor column just to ease the seriousness a little.*

Gee, that hurts! I thought I was writing one ("This & That"). At least I try to throw in a few zingers along with the serious stuff.

*If Larry Perrine is as cute as his column writing, he should run his photo with it.*

Borrowing a line from a famous humor writer, "I am not making this up." I'm going to respond with several different replies, so take your pick: (1) Yes, I am that cute, but our LAB NEWS photographers just cannot seem to get a good shot of me, (2) I'm a former mafia member with a new identity and don't want to be recognized, or (3) I don't want to be swamped with calls and letters from admirers.

In addition to the specific suggestions, we got some nice words for various reasons from many readers and a few jabs from some other folks. We appreciate all the nice words, and we'll try to analyze the reasons for the jabs to see how we can do better. Thanks to all Sandians and retirees who responded to the LAB NEWS survey. ●

## feed iiback

*Q: The division where I work requires frequent foreign travel. The rules and regulations regarding preparation of foreign travel requests and trip reports are extremely confusing. Neither my division or department secretary seems to have a handle on this; rules change frequently, excessive delays are common, and requests and reports are often returned for corrections.*

*Before my last trip to Europe, I personally had to place a call to DOE Headquarters in Washington to find out if my trip was approved. The call was placed late Friday afternoon before the Memorial Day weekend. I was scheduled to leave the following Tuesday morning. Of course, the person I needed to contact took that Friday off. Although the six or seven people I spoke with were very responsive and understanding, it took most of the afternoon to find out the trip had been approved.*

*After my trip, I wrote the trip report well in advance of the 30-day deadline. I then went through five or six revisions of the report to get the correct distribution, but with all the correcting and editing, my report still had not been submitted by the time the 30-day period had elapsed.*

*Overall, I probably spent more time trying to navigate the maze of delays and regulations than I spent on the actual trip. That does not include the time spent by three different secretaries.*

*I take my job responsibilities seriously, yet the tangle of rules and regulations seems to have impeded my best efforts to follow them, be responsible to my customers, and get my job done. Can something be done to make foreign travel arrangements and trip reports more straightforward?*

*A: We are sorry you experienced problems in obtaining DOE approval on foreign travel. Security Access Control and Administrative Services Div. 3437 issued a document on Aug. 15 updating foreign travel procedures. The document is titled, "Policy Change in Processing Foreign Travel Request Packages." Although there have been some additional changes since the document was issued, it provides line-by-line guidance.*

*Division 3437 staff will help the traveler complete the package, promptly enter it into the DOE system, and immediately notify the traveler of approval or disapproval by DOE Headquarters.*

Jim Martin (3400)

*Q: During the course of my current project, I was required to ship 30 capacitors to Sentrol Inc., a company that is manufacturing some motion sensors for us but could not obtain the parts in time to meet our schedule. I filled out a shipper form, made two copies of mailing labels, traveled to 887 to get the buyer's signature, and then went to shipping, where the clerk refused to ship because I had signed block No. 36 "Authorizing Signature," and I am not a division supervisor.*

*The total cost of these parts was \$15; my time spent on the process was 1 hour and 15 minutes. In light of the cost, simplicity, empowerment, and the fact that the components were coming back to Sandia anyway, I did not hesitate to sign. After hearing of this, my associates suggested that I should have taken the envelope with the parts to the mail room. They have done that before, even though they know it's not exactly proper, but it works and gets the job done. Can the authorization level be linked to the value of the shipment?*

*A: Your question is reasonable, and I trust you will find the response equally reasonable and encouraging.*

Under AT&T's system of internal controls for an organizational management structure, shipment or movement of items that leave the company must be authorized by a supervisor. Given our contractual obligation to follow AT&T policy, our fiduciary obligations to the government, and our present organizational management structure, it is Sandia's corporate policy to require the authorization of a division supervisor.

However, authorization levels for all transactions are likely to change as Sandia implements a formal project management structure, expected to begin in FY93. AT&T's policy is to empower the project management hierarchy with the authority and accountability otherwise held by organizational managers. That same policy will be reflected in Sandia's project management hierarchy.

Meanwhile, you should continue to rely on the transaction approval levels specified in the SLIs (such as SLI 6950, "Shipment and Handcarry of Property and Material"). All SLIs are accessible electronically and have a key word search capability. If you would like more information on electronic access, please contact Organization 113.

Paul Stanford (100)

*Helping the 'Little Guy'***Technology Transfer Program Helps Smaller Businesses**

What do synthetic tombstones, green chile shipping containers, bath salts, and jewelry-making equipment have in common? Not much. But a program launched Oct. 1 by Technology Transfer and Industrial Relations Org. 4200 is bringing them all together, allowing the Labs to help make these products better, safer, cheaper, and more environmentally sound.

The new program, called the Technology-based Regional Economic Development program (TRED), helps transfer some of Sandia's unique expertise, services, equipment, and intellectual property to small- and medium-sized businesses in and around New Mexico, although interested companies anywhere in the US are encouraged to participate, says Mark Allen (4212), TRED project leader.

**TRED Works in Two Ways**

The TRED program works in two ways. In the "widget transfer" mode, Labs intellectual property (patented or copyrighted technologies) with potential commercial value is publicized to private firms. If a company is interested in a particular technology, the rights to the widget can be trans-

**Transferring Labs Technologies to Small Businesses**

Employees who know about a small- or medium-sized business that could benefit from Sandia technical assistance are encouraged to contact TRED project leader Mark Allen (4212) on 5-8191 or one of Sandia's TRED case workers: Dave Menicucci (6217), 4-3077; Pam McKeever (7823), 4-1223; or Mike Mundt (5151), 4-4460.

ferred to the company directly or through a "partnership intermediary" — an agency that agrees to provide the business support necessary to make the transfer occur.

In the "technical assistance" mode, companies may approach Sandia with requests for technical assistance, services, or equipment loans. A Labs case worker is assigned to fulfill each request, often with the help of employees in Sandia line organizations. Requests may come directly from a company or through a business assistance organization — a federally or state-funded agency

that provides business advice to private firms. Mark expects this method to account for 90 percent of the technologies transferred via the program.

"Employees who know about a small company that could benefit from Sandia's technical assistance are encouraged to work directly with that company in solving technical problems under the TRED program," says Mark. (See box, "Transferring Labs Technologies to Small Businesses.")

**Already Solving Problems**

TRED is already helping several small New Mexico companies do better business. Labs chemists, for example, are helping a Roswell entrepreneur solve the difficult problem of manufacturing synthetic tombstones that don't fade in the sun, and other Labs researchers are helping a Las Cruces plastics company reduce toxic pentane emissions at its styrofoam container plant.

Other TRED projects include helping a Roswell woman make better containers for shipping frozen green chile across the country and helping an Albuquerque maker of jewelry-manufacturing equipment reduce chemical waste and increase worker safety using a new electroplating process.

Besides helping small business, another important goal of the program is building relationships with other laboratories and with business experts in the region. Kevin Murphy (4212) is co-chairing a steering committee in the Albuquerque Mayor's Office that brings together local businesspeople, economic development professionals, and representatives from the state senators' offices to forge new alliances and to develop a regional business strategy.

"The Labs has been transferring technologies to industry for 30 years," says Mark. "This program broadens our tech transfer efforts and demonstrates Sandia's commitment to helping businesses. We must all work together to promote economic development." ●JG

RIO GRANDE Albuquerque Inc. is one New Mexico business benefiting from Labs technical expertise. Sandia chemists are helping RGA Technical Director Eddie Bell, seen here with RGA machinist apprentice Jesse Sanchez (right), replace a lost wax casting process used in jewelry manufacture with an improved electrochemical process. The new process will reduce energy consumption, waste output, and hazards to workers.

**Sandia News Briefs****CRADA May Eliminate CFC Use in Weapon Circuit Board Manufacturing**

Sandia has signed a cooperative research and development agreement (CRADA) with Motorola's Government Electronics Group (GEG). The agreement is expected to reduce the use of chlorofluorocarbons (CFCs) and other ozone-depleting solvents in certain circuit board manufacturing operations by as much as 22 million pounds per year.

Printed circuit boards are manufactured using a rosin flux solution that allows solder to adhere to a board's surface. For boards used in weapon components, military specifications require that certain solvents be used to clean flux residue from the board's surface after the solder is applied. A new no-clean wave solder process, however, will allow manufacturers to replace the flux with an adipic acid that leaves no residue, eliminating the use of the ozone-depleting solvents.

As part of the agreement, Labs researchers — including Bob Cranwell, Ron Iman (both 6613), and Maria Armendariz (6474) — will run reliability tests on no-clean circuit boards manufactured by Motorola and collect the data necessary to show the military that the new circuit boards are at least as reliable as boards manufactured conventionally. If convinced, the military is expected to change the specifications to allow for no-clean wave soldering.

**CRADA Signed With Foam Filter Manufacturer**

Sandia has signed a Cooperative Research and Development Agreement (CRADA) with Permcharge Corporation, an Albuquerque-based company that manufactures air and liquid filtration devices made from electrically charged foams. The agreement marks the third CRADA signed by Sandia with a private company.

The foams manufactured by Permcharge, called electret foams, have a permanent electrical charge that helps pull small particles out of the air, similar to the way articles of polyester clothing attract dust and hair.

Last year, Sandia granted an exclusive license to Permcharge to use a microcellular foam process developed and patented by Sandia for producing similar filter media. Under the new agreement, Permcharge will develop new commercial uses for the Sandia-developed foams. Potential uses include air filters for hospitals, semiconductor clean rooms, and computer disk drives; liquid pre-filters that extend the lifetimes of membrane filters; and battery separators for improved automobile batteries.

Roy Hamil, Technology Transfer Applications Div. 4212 supervisor, says, "This agreement has tremendous potential for supporting industries with critical filtration requirements."

Send potential Sandia News Brief items to LAB NEWS, Div. 3162.

**Take Note**

A "Gathering of Friends" will be held Monday, Nov. 4, at the monthly meeting of the Friends of the Indian Pueblo Cultural Center (IPCC) at the Center (2401 12th St. NW). The gathering promotes a search for volunteers for the IPCC museum. The gathering, free and open to the public, begins at 10 a.m. with a lecture by Judy Mocho of the New Mexico Quilter's Association titled "Quilts, the Gathering of Friends and Fabric." Following the lecture, the Friends will entertain members and guests in a quilting bee atmosphere. Refreshments will be served. The next training class for docent work will be held later this month. Other volunteers will be trained on a weekly basis. For docent information, call Gary Green on 823-4491. For volunteer information, call Pat Jankowski on 294-9745.

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Each year, nearly 400 Albuquerque Youth Symphony musicians (grades 6 through 12) and their families make and sell luminarias to help finance their annual musical tour. In the past the Symphony has toured several US states, Mexico, England, and several European cities. This year's projected tour is to Mexico and Costa Rica, but the Symphony needs to sell 4,500 dozen luminarias first. Luminarias are \$5 a dozen, with free delivery for orders of three dozen or more. To order, call 298-0138, 299-0872, 296-0941, or 884-3542. For information about the Youth Symphony, call Hank Shefelbine (5031) on 298-1674.

**Sandians Help DOE Design New System**

# New Labs Appraisal System Now Being Used

An appraisal system now evolving at Sandia National Laboratories could become the standard for evaluating all Department of Energy labs.

Suggested by Labs President Al Narath and former DOE Kirtland Area Office (KAO) Manager Al Chernoff, the system allows Sandia to participate with DOE in establishing areas and activities to be appraised and the appraisal criteria to be used.

The responsibility for the actual appraisal remains in DOE's hands, but the system provides for Sandia self-appraisal throughout the year.

Chernoff transferred recently to another DOE post, but the KAO remains committed to the new process.

All DOE installations have been subject to periodic evaluations, and an earlier version of the system is being used to evaluate the Labs' performance for last year.

## Identifies Activities Up Front

"We feel this is a much better technique," says Jay Chamberlin of Corporate Self-Assessment Div. 4312. "We work with DOE to identify up front the activities and milestones by which we'll be appraised. In the previous process, DOE gathered information from various audits and reviews conducted throughout the year to use in evaluations."

Jay is a member of the team of Sandians and DOE representatives who designed the new appraisal system, and is Sandia coordinator of the system.

"We don't do any of the actual evaluation, although we help set some of the criteria to be used and help pick areas to be appraised," he says. "We also do interim internal appraisals throughout the year to measure our progress."

"A lot of people looked at the old system and said there's got to be a better way to do this and, at the same time, allow the Labs to be more intimately involved in how they're evaluated."

Debby Miller of the Kirtland Area Office also is involved in designing the new system. She agrees with Jay's assessment of the old process.

"There has always been a program to appraise the Labs, but it has been a re-iteration of other reviews that have been done that year," she says. "We felt that was not very meaningful, though, so we came up with this plan."

Debby says it is important to stress that although it is a DOE appraisal, the areas to be appraised and the scoring process were designed jointly by Sandia and DOE.

Evaluations of all DOE labs have always been based on compliance with requirements, she says, but the team designing the new system took a different tack.

## Moving from Compliance to Excellence

"The approach with this new system is to move from compliance to excellence," Debby says, "not just 'Did you do what you're supposed to do,' but 'Did you do the best job that could be done?'"

Although FY92, which began Oct. 1, will be the second year the new appraisal process is used to measure Sandia's performance, it will be the first year in which an expanded list of categories will be used. Eleven areas were used in the prototype year; there are 32 areas this year (see chart).

"It was developed to appraise only a few areas at first," Debby says, "always stressing ES&H as a large percentage of the total. The number of areas to be appraised has grown, however, and the process is more extensive today."

Charles Tapp, Director of Quality Improvement 4300 and Sandia's "owner" for the system, says several Sandia organizations were involved in planning the new system, although the lead was provided by the Quality Improvement Directorate.

"This system was designed to help us increase our efficiency so we can provide better service to our customers," he adds.

Even while the process is being defined, improvements are being planned, Charles says. "A Process Management Team [PMT] will be formed with DOE/KAO and Sandia to improve the process for FY93," he says. "We want to broaden the review to focus on major business objectives and to include Malcolm Baldrige National Quality Award criteria."

Perhaps one of the most important by-products of the new system is cooperation, says Terri Olascoaga, Supervisor of the Corporate Self-Assessment Division. "It's making the appraisal process more of a partnership," she says. "It creates a team effort with DOE."

Paul Longmire, Manager of Corporate Quality Dept. 4310, echoes that point: "This allows Sandia to have a voice in what's to be used in our evaluation — it lets us exercise some control over our own destiny," he says. "It promotes the team approach and atmosphere: We're all in this together."

●HKercheval (3163)

### FY92 DOE/SNL APPRAISAL SYSTEM

Categories	Percentages	Subject Areas
Corporate Requirements	4 4	Corporate Requirements, Phase II
ES&H Compliance	25 7 7 6 5	Conduct of Operations (5480.19)
		Occurrence Reporting (5000.3A)
		Performance Indicators (Sen 29-91)
		Self-Assessment Implementation
ES&H Improvement	15 5 4 3 3	Electrical Safety
		Explosive Safety
		Construction Safety & Environmental Practices
		Radiation Protect., Worker Health, Indust. Hygiene
Strategic Goals & Values	10 4 3 3	Quality
		Empowerment
		DOE Mission Expansion
Weapon Projects	18 4 4 2 2 2 2	W88/Mk5 Program Activity
		W89 Weapon Development Project
		AL-SX (Shipping Container Program)
		Stockpile Testing (Tonopah)
		Preferred Parts Activity
		Stockpile Stewardship
Non-Weapon Projects	8 3 3 2	Yucca Mountain
		Waste Isolation Pilot Plant (WIPP)
		Combustion
Research Projects	8 3 3 2	Lab-Directed R&D (LDRD)
		Inertial Confinement Fusion (ICF)
		Massively Parallel Computing
Administration	8 4 2 2	Procurement & Contract Administration
		Affirmative Action
		Personal Property Management
Other Areas	4 2 2	Supercomputer Consolidation
		Personnel Security Assurance Program
Totals		100

## Congratulations

To Joanna and David (5113) Clements, a son, Nathan, Sept. 4.

To Melinda (3531) and Dave (5145) Marks, a daughter, Stephanie Brianne, Oct. 1.

To Elena Inge (9222) and Jerry Holland, married in Albuquerque, Oct. 5.

To Renee and Nick (5153) DeReu, a son, Joshua Nicholas, Oct. 8.

To Emily and Maurus (3435) Wanya, a son, Jamie Maurus, Oct. 8.

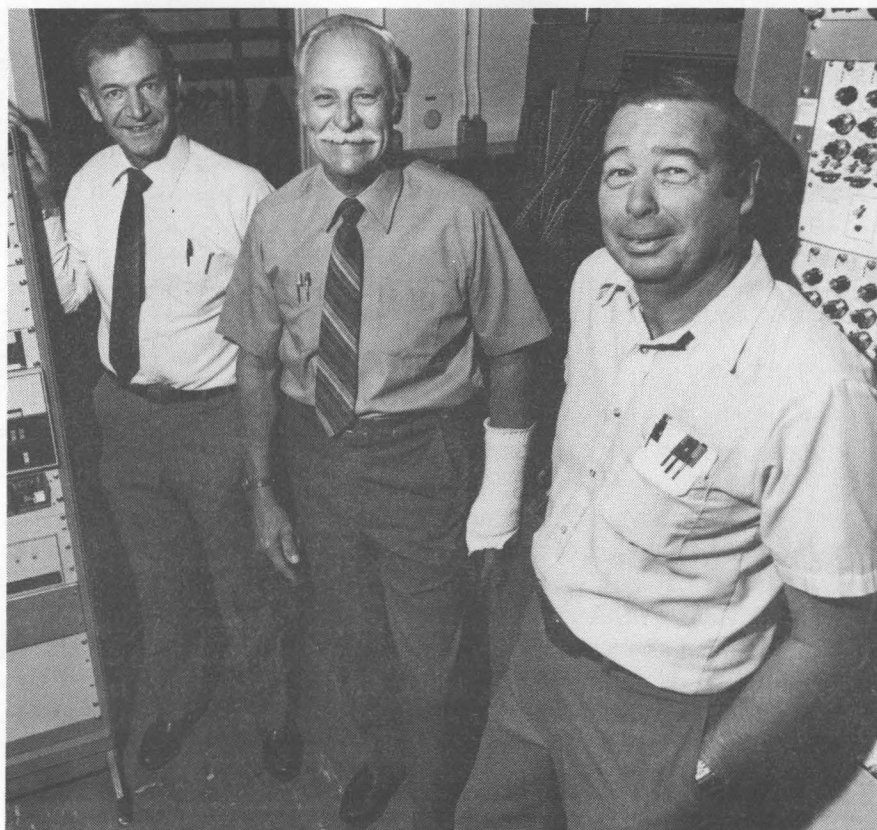
To Yvonne (9221) and Ray Krause, a daughter, Shannon Kay, Oct. 8.

To Tricia Crotty (9568) and Dan Sprauer (2313), married in Albuquerque, Oct. 11.

To Debbie and Thomas (5113) Henderson, a son, Thomas Edward, Oct. 14.

To Carol Ritter (110) and Kent Christensen (5512), married in Albuquerque, Oct. 19.

To Diane Behar (2735) and Douglas Trump (2733), married in Albuquerque, Oct. 27.



WHEN THEY RETIRED recently from Experimental Mechanics Div. II 2742, Fred Cericola (left, 32 years), James Doggett (32 years), and Harlan Richardson (39 years) had all worked in the same division for 32 years. They all retired the same day, but say they didn't deliberately plan it that way. Harlan says he believes he may hold some kind of record for Sandia — 39 years without once forgetting to bring his badge to work.



# Supervisory Appointments

ROSS YINGST to Supervisor of Weapon Procedures and Logistic Support Div. 5512.

Ross joined Sandia in 1960 as a member of the Advanced Data Development Division, developing magnetic storage devices. In 1967, he transferred to the Product Tester Design Division and in 1973 to the W80 Development Division as a test engineer for the Tomahawk cruise missile/W80 Test Program. He worked in several W80 Development and Test divisions from 1977 to 1991. At the time of his promotion, Ross was project manager responsible for integration of the W80 with the Advanced Cruise Missile.



ROSS YINGST

He has an AS in electrical engineering from Central Technical Institute (Kansas City, Mo.). Before joining the Labs, he served with the Air Force as a weather observer.

Ross enjoys hunting and fishing. He and his wife Loretta live in NE Albuquerque. They have three children and six grandchildren.

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BARBARA HOFFMAN to Administrative Assistant to Vice President of ES&H and Facilities Management 7000.

Barbara joined Sandia's Purchasing Planning Division in 1983. She wrote purchasing instructions, did purchasing audits, and developed and implemented the Purchasing Excellence training program. In 1986, she became Supervisor of the Integrated Contractor Orders/Federal Agency Orders and Property

on External Loan to Contractors Section. In 1988, she was on special assignment to the purchasing director, where her work included the contract manpower study and the "make vs. buy" study. She joined the Business Planning Division in 1990 as a business planning consultant and worked with various organizations and committees for Sandia and DOE to develop strategic and business plans.



BARBARA HOFFMAN

Barbara has a BS in business education from Oklahoma State University and an MBA in management from Central State University in Oklahoma. Before joining Sandia, Barbara worked as a civilian resource manager for the US Air Force Postal System in Germany. She has been a United Way account executive for three years and was a United Way Loaned Executive in 1988. She is a graduate of Albuquerque Chamber of Commerce's Leadership Albuquerque program.

Barbara enjoys traveling and reading, and is involved in her children's sports activities. She and her husband Patrick (9334) have two children and live in the NE Heights.

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JUDITH MEAD to Manager of Risk Management and Safety Engineering Dept. 7730.

Judy joined Sandia in 1976 as a member of the Chemistry of Organic Materials Division, where she studied new polymers, materials problems, and materials aging. In 1980, she transferred to the Advanced Development, Mechanical Systems Division and

developed permissive action link (PAL) systems. Judy was project manager for a program sponsored jointly by the three national weapon labs to study dispersal of plutonium in a weapon fire.



JUDITH MEAD

Judy was promoted to Supervisor of Weapon Training and Evaluation Division in 1984, which provides the operational interface between DOE and DoD for support of the nuclear weapon stockpile.

In 1989, she transferred to the Weapon Procedures and Logistic Support Division, and this February was appointed ES&H and Quality Coordinator for the Systems Evaluation Directorate. She has a BS in chemistry and mathematics and an MS in organic chemistry from UNM. She's a member of the American Chemical Society and the New Mexico Network for Women in Science and Engineering and is vice president of the YWCA board. She received a 1986 YWCA "Women on the Move" award in the science and high technology category.

Judy enjoys water sports, reading, gardening, needlework, and underwater photography. She and her husband Keith (ret.) live in Peralta. She has two adult daughters and one grandson.

## Sandia News Briefs

### Researchers Look at Removing Contaminants from Groundwater

Eric Lindgren and Matt Kozak of Waste Management Systems Div. 6416 and Earl Mattson (contractor) are developing an environmental cleanup technique that may help remove heavy-metal contaminants from soil and groundwater.

Called electrokinetic remediation, the new technique uses electrodes implanted in soil to separate contaminant ions from soil or groundwater. As direct current is passed between the two electrodes, positively or negatively charged contaminant ions in the soil or water migrate toward the oppositely charged electrode, and soil-water begins to move toward the cathode.

Once separated from the soil or water, contaminants can be removed from the area surrounding the electrodes using one of several methods, including electrode electroplating (some metals such as lead will deposit onto the electrode's surface), precipitation or co-precipitation, or pumping the water to the surface and electrically removing contaminant ions.

Experiments are determining the types of contaminants that can be removed and the soil conditions that are best for using the technique, says Eric.

### American Statistical Association Honors Ron Iman

Ron Iman of Manufacturing Systems Reliability Modeling Div. 6613 is one of five recipients of the 1991 Founders Award of the American Statistical Association (ASA), an annual award given by the ASA Board of Directors to recognize distinguished members.

The award — presented at the ASA annual meeting in Atlanta — cites Ron's work improving the public image of the field of statistics by working with a variety of people, authoring several books and articles about statistics applications, and helping the Association with financial matters.

He has served on the ASA Board for seven years, has been ASA treasurer for four years, and was on the Executive Committee for six years. He has also chaired several ASA committees and is an ASA fellow. The international association has more than 15,000 members.

### Dan Brewer Recognized by AT&T Headquarters

Dan Brewer (6341), formerly of Staff Recruiting and Employment Div. 3531, was honored recently by AT&T Corporate Headquarters for his outstanding contributions to AT&T programs responsible for attracting college graduates to AT&T.

The award was presented during an annual Campus Coordinators Conference in New Brunswick, N.J. Campus coordinators are assigned by AT&T to individual campuses to organize AT&T recruiting activities at each campus. Sandia is responsible for AT&T recruiting at 11 schools. Dan has been a recruiting coordinator at Oklahoma State University, UNM, and NMSU.

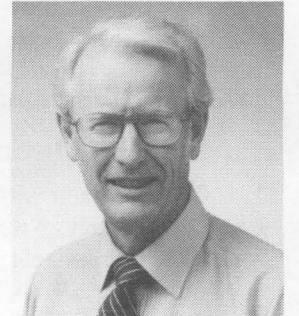
The award also recognizes Dan's service as a Sandia liaison to AT&T's recruiting program and his participation as an instructor and leader at 3-day training workshops for new campus recruiters. He now works at the Waste Isolation Pilot Plant, where he helps integrate Sandia bin-scale test activities with DOE and Westinghouse.

Send potential Sandia News Brief items to LAB NEWS, Div. 3162.

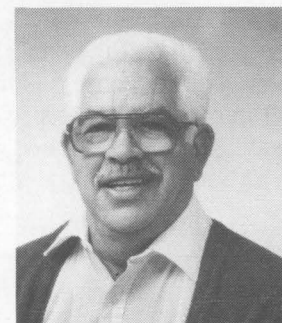
## Recent Retirees



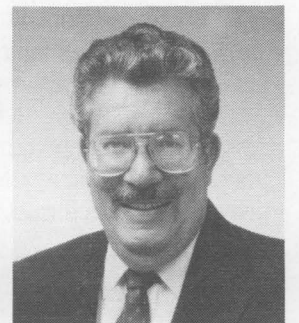
Bob Evans  
5126



John Kinney  
2311 35



George Garcia  
332



Felix Almaraz  
153 39

## Earnings Factors July 1991

Long-Term Savings Plan for Management Employees (LTSPME)	Earnings Factors
AT&T Shares	1.0422
Government Obligations	1.0119
Equity Portfolio	1.0474
Guaranteed Interest Fund	1.0073
South Africa Restricted Fund	1.0533
Long-Term Savings and Security Plan (LTSSP)	
AT&T Shares	1.0425
Guaranteed Interest Fund	1.0073
South Africa Restricted Fund	1.0545
Equity Portfolio	1.0483
Employer Stock Fund	1.0424

# Volunteer Opportunities for Sandians

Sandia's *Volunteers In Action (VIA) program* has received several requests for volunteers. Sandians or retirees who are interested in the following opportunities should contact Al Stotts, Community Relations Div. 3163, on 844-2282.

• La Cueva High School (7801 Wilshire Ave. NE) needs more math and science tutors for its ongoing Wednesday evening tutor program.

• The Albuquerque Business Education Compact needs volunteers for its Job Mentor Program. Mentors assist and encourage high school students who have the potential to succeed but are at risk of dropping out of school. Students are identified by counselors at participating schools (Highland, Valley, Del Norte, and Rio Grande high schools). To

participate, students must commit to good school attendance, maintain a minimum "C" average, develop a graduation studies plan, and work with assigned mentors.

• Highland High School's science department has scheduled an April 23-26, 1992, tour for 35 students at Biosphere 2, Kitt Peak, and the Sonoran

Desert Museum in Arizona. The department would like to have some Sandia scientists attend and interact with students as they view the biosphere, Kitt Peak optical telescopes, and the animal and plant species of the Sonoran Desert. The cost will be approximately \$300 per person.

• Dave Menicucci (6217) needs active and retired Sandians to work in a science and engineering fair self-help development program at Washington and St. Charles middle schools. The program, affiliated with the Northwest New Mexico Regional Science Fair, focuses on helping the schools to develop a complete internal science fair effort that includes proper judging, student mentoring, and logistical support.



## UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS

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

### Ad Rules

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

### MISCELLANEOUS

OLD SHOPSMITH, Model 10ER, on wooden frame w/casters, accessories & extras, \$450 OBO. Freyermuth, 299-2053.

C-64 COMPUTER, w/monitor, disk drive, printer, desk, fast-load cartridge, joystick, disks, \$350 OBO. Young, 298-6449, leave message.

NAVAJO RUG, grey hills pattern, black/gray/white/wine, 30' x 53', \$400. Tremel, 265-3507.

DA-LITE PROJECTION SCREEN, 50' x 50", in original box. Wagner, 823-9323.

EMERSON VIDEOCASSETTE PLAYER, \$100; General Electric hairsetter hot rollers, \$5. Ottinger, 242-5944.

SQUARE DANCE DRESSES, size 6 petite, \$20/ea.; shoes, 5-1/2M and 6N, \$5/ea.; slippers, \$5/ea. Anderson, 293-2490.

BUTCHER-BLOCK-STYLE COUCH, w/matching ottoman, large, medium brown upholstery, \$150. Lehrer, 898-2581.

FILE CABINET, 5-drawer, legal, w/hanging folders & frames, \$125; somma-style (tube) king-size waterbed mattress, \$200. Esherick, 299-8393.

LAWN MOWER, Snapper, self-propelled, extra blade, owner's manual, \$60. Koch, 296-2923.

SILVER WEIMARANER, 2-yr.-old male, neutered, w/papers, needs room to run, \$100. James, 344-7854, leave message.

LA-Z-BOY RECLINER, soft brown velour, \$95; exercise bike, stationary, shows mileage & time, \$90. Gipson, 298-7073.

YOUTH GOLF CLUBS, MacGregor, w/bag, \$50; Wards exercise bike, \$75; youth skis, poles, & boots, best offer. Strance, 298-0258.

KENMORE FREEZER, 20 cu. ft., '78 or '79 model, \$150. Kadlec, 299-2034.

NELCO SEWING MACHINE, model 1000, solid wood cabinet & chair, \$100; reel-to-reel TEAC A-2300 series, \$60; dinette table & chairs, \$80. Lucero, 296-1747.

LAPTOP COMPUTER, IBM-286-compatible, 20MB HD, CGA monitor, printer, software, purchased 1 yr. ago. Heffelfinger, 281-1733.

COLOR/B&W DEVELOPING SYSTEM, complete, for film & prints, Super Chroma D 4x5 enlarger, 8x10 to 16x20 trays, film holders, print dryer, etc., \$750. Berman, 296-5640.

SAMOYED PUPPIES, white; Dachs-hund puppies, black & tan; AKC-registered males & females; \$200/ea. Puccini, 877-5494 or 255-0568.

PORTABLE SATELLITE DISH, complete w/instruments; '85 Alpine Lite 5th wheel, 25-ft., twin beds, new awnings, extras, \$13,500. Chavez, 242-6078.

NINTENDO ACTION SET, controllers, zapper gun, Super Mario & Duck Hunt cartridge, \$60; other accessories & games available, \$10-\$20/ea. Garrison, 821-6859.

NEW MEXICO CAMP RESORT MEMBERSHIP, affiliated with coast-to-coast, \$550. Eaton, 869-2847.

COMPAQ DESKPRO COMPUTER, 640KB, 20MB hard drive, 360KB 5.25-in. floppy drive, Princeton CGA/EGA color monitor, \$600. Smith, 243-0714.

SNOW CHAINS, new, Campbell twist-link for 225-14, 205-15, 215-15, H78-15, etc., \$49. Brammer, 266-5158.

SKI BOOTS, Lange TII Comp, man's size 8, used 2 seasons, \$125. Downs, 898-6641.

TELEVISION, \$49; washer & dryer, \$375; dinette set, \$79; bed, \$149; lawn mower, \$79; Apple personal computer, \$800. Tripp, 822-8580.

JVC RECEIVER, RX-703V, \$350; "6+1" CD player, XL-M403, \$250; dual tape deck, TD-W803, \$250; all less than 1 yr. old. Herther, 298-4823.

SEARS STACKED WASHER/DRYER, \$200; answering machine, \$35; salesman's desk, \$25 OBO. Campbell, 889-0961.

SOLID-CORE DOOR, 36-in., prehung, LH, w/threshold, \$40. Schmale, 883-4841.

COMPUTER, XT clone, 8MHz, 20-Meg. HD, coprocessor, runs, but needs work, EGA (not working) and CGA (working), best offer. Hueller, 296-0976.

NORDICA SKI BOOTS & skis, size 10, \$40; polybutylene tubing, 3/4-in., hot/cold water, 44¢/ft. Everts, 822-1767.

RABBIT CAGE, less than 1 yr. old, w/water bottle & large bag of cedar chips, \$35. Poulter, 291-0607.

ANTIQUO OAK DRESSER, w/beveled mirror, child-size, \$250; SC-TP1 daisy-wheel printer, \$50. VanDevender, 821-9435.

DOUBLE SLIDING DOORS, complete w/frame & hardware, \$40; 2 Windsor dining room chairs, \$40/both. Gonzales, 344-4933.

NORITAKE CHINA, "Norma," six five-piece place settings, w/extra pieces, 6 gold-rimmed wine & sherbet stemware. Hitchcock, 299-2581.

YAMAHA TENOR SAX, w/case, 2 mouthpieces, other accessories, \$650 OBO; Suzuki violin, 3/4-size, w/case, bow, other accessories, \$135 OBO. Aragon, 888-3473.

WINDSURFING EQUIPMENT: Wind-wing sails, 4.0 convertible, 5.0 & 5.6 camber race; Aerotech 5.2 mylar RAF; aluminum mast, 15'-1", 7.4DIN, constant curve. Ritchey, 298-4311.

CASIO CT-650 KEYBOARD, 61 full-size keys, \$180. Prins, 821-0490 after 6 p.m.

KAYPRO II COMPUTER, w/software, writer, spell, calculator, filer, manuals, BASIC, disks; Commodore 64, make offer. Roberts, 255-9527.

BLONDE COCKER SPANIEL, 3 yrs. old, female; 10-mo.-old collie/chow (?), female; moving, free. Ek, 892-3529.

RODGERS SILVER COFFEE SET, w/tray, \$100; peacock-design-print king-size bedspread, \$95. Biffle, 293-7043.

SCHWINN AIRDYNE EXERCISE BIKE, 2 yrs. old, \$500; Sharp 20MB laptop computer, \$1,500; Sharp 56K pocket computer, w/color printer, \$300. Rogers, 821-0109.

SUPER-SINGLE WATERBED, book-case headboard, sheets, padded rails, child-proof mattress, \$100. Tyree, 296-7115.

KING-SIZE WATERBED, headboard, 12-drawer pedestal, 2 sets of sheets, comforter, padded railings, heater, \$150. Schmitt, 884-5092.

GARAGE SALE: years of accumulation, 9615 Rosas Ave. NE, Saturday, Nov. 2, 8 a.m.-3 p.m., follow signs from Paseo del Norte & Ventura.

RECLINER, new mauve wall-hugger, cost \$600, asking \$300; Sears exercise cycle, \$50 firm; backpack, \$20. Patteson, 836-0140.

NEIGHBORHOOD RUMMAGE SALE: Saturday, Nov. 2, 9 a.m.-3 p.m., Georgia O'Keefe Elementary School parking lot (11701 San Victoria NE). Chinn, 296-5172.

MOVING SALE: sofa, \$75; Sears electronic furnace filter, \$50; barbecue grill, \$25; electric floor polisher/scrubber, \$25. Terwilliger, 294-7667.

POWER SIDEWALK EDGER; Emerson AM/FM 8-track record player stereo, \$50; Yamaha guitar w/case; canning jars; engineering books. Mills, 299-2130.

CAMPER SHELL, fits small pickup (Toyota, Datsun, etc.), aluminum, \$150. Manzanares, 296-3828.

FURNITURE: 4 Conant Ball dining chairs, 2 easy chairs, sofa, full-size bed, dresser. Hill, 884-4721.

TWO TICKETS, Mel Torme, Nov. 9, NMSO Pops Series, Popejoy Hall, 10 rows from stage, \$40. Pucket, 298-6067.

80-200MM ZOOM LENS, 55mm skylight filter & case, Olympus or certain Pentax mounts, \$50 OBO. Lee, 898-3725.

DANISH TEAK furniture: stereo cabinet, \$50; two stacking tables, \$20 each; end table, \$40; floor lamp, \$40. Paulsen, 880-0485.

'80 CUTLASS ENGINE, 4.3-liter; rebuilt transmission, \$500 OBO; tires, size 14 on Cutlass rims, \$150. Chavez, 260-1378.

OLYMPUS OM-10, w/50mm f1.4, Vivitar 70-210mm Series I & teleconverter, Prinz mirror 30mm, Vivitar 3700 dedicated flash, case, more, \$250. Broyles, 344-3872.

### TRANSPORTATION

'84 HONDA 650 NIGHTHAWK, 14K miles, Kiwi helmet, removable luggage rack & passenger backrest. Miner, 275-0689 evenings.

TANDEM BICYCLE, single-speed, \$50. Johnson, 884-8250.

'63 INTERNATIONAL TRUCK. Padilla, 898-0620 or 1-471-3655.

'83 FORD PICKUP, 460, extras; '83 Holiday Rambler Traveler Imperial, 35-ft. Russell, 299-6973.

WOMAN'S BIKE, Raleigh 10-spd., \$100. Anderson, 293-2490.

'78 DODGE CHALLENGER, 2.6L, 5-spd. manual, recent engine work, \$1,875 OBO. Tockey, 822-0358.

'76 PLYMOUTH VOLARE, 4-dr., 6-cyl., AT, new tires, brakes, shocks, \$1,000. Wavrik, 298-4094.

'86 HONDA MOTORCYCLE, VFR700 Interceptor, 27K miles, garage-kept, saddle & tank bags, helmet, gloves, \$2,650. Zagar, 867-3722.

'73 INTERNATIONAL TRAVELALL 10-10, 392 engine, tow package, complete records, ready to tow, \$1,750 OBO. Hayes, 299-1200.

'73 MUSTANG GRANDE, 351 Cleveland, AT, AC, new paint & tires, custom wheels, have stock rims, all stock. Yingst, 884-3812.

'89 BRONCO XLT, \$12,500; 2-axle flatbed trailer, 7' x 16', \$1,000; 2 Morris Minors, not running, best offer. Campbell, 889-0961.

'73 DODGE TRAVCO MOTORHOME, 27-ft., 34K miles, sleeps 6, self-contained, \$5,500. Wilde, 266-4596.

'82 NISSAN PICKUP, diesel, long bed, w/camper shell, minor body damage, will consider selling shell separately, \$750. Anderson, 281-5535.

'86 OLDS. CALAIS SUPREME, gold, 2-dr., cruise, AC, 2 new tires, recent tune-up, 63K miles, \$5,500. Camal-Elder, 891-3643.

BRIDGESTONE ROAD BIKE, 27-in., w/Dia-Compe & Suntour components, \$200 OBO. Poulter, 291-0607.

'65 MUSTANG COUPE, engine (25K miles) & all mechanical rebuilt, new paint, AT, AC, \$5,500 firm. Kawulok, 877-7660.

'80 PLYMOUTH HORIZON, new clutch & other parts. Gibson, 344-8056.

'79 HONDA CIVIC HATCHBACK, 127K miles, rebuilt engine, new clutch, tires, brakes, maintenance records, \$1,650. Levan, 293-0079.

'80 JEEP CHEROKEE LAREDO, full-size, 64K miles, AT, AC, PS, cruise, AM/FM cassette, locking hubs, \$4,900. Louissena, 243-2662.

'87 HONEY MOTORHOME, 34-ft., twin beds, hitch, TV antenna, top rack, 34K miles, extras, \$22,500 OBO. Spatz, 299-0410.

### REAL ESTATE

3-BDR. HOME, 1-3/4 baths, 1/3 acre, fenced, 2-car garage, custom home, vaulted ceiling, city utilities, SW area,

lease/purchase, \$5,000/down. Jobe, 877-0269.

3-BDR. HOME, 1,365 sq. ft., 3 miles from Sandia, assumable balance of \$68,500, \$752/mo. includes taxes & insurance. Normann, 291-9909.

'85 MOBILE HOME, 14' x 56', on river (519 N. Riverside Dr., Truth or Consequences, N.M.), extra long lot from street, \$52,500. Eaton, 869-2847

2-BDR. PATIO HOME, custom, Tanoan, 2,200 sq. ft., study, designer features, 15-yr. credit union mortgage. Owen, 822-9544.

2-BDR. MOBILE HOME, '84 Piedmont, 14' x 70', 1 bath, separate kitchen & dining room, washer/dryer, appliances included, \$16,000. Griego, 888-7906 evenings or leave message.

### WANTED

LIVE-IN HOUSEKEEPER/COMPANION, female, for elderly man, must be 65 or over, non-smoker, honest, able to drive, salary. Starz, 512-793-6518.

MEDIUM-SIZE AMERICAN-MADE CAR, heavy, all automatic, for elderly parent. Stefanov, 299-7009.

HONDA 90 TRAIL BIKE or other small street-legal model, will pay for condition. Holmes, 897-0916.

MINI-MOTORHOME TO RENT, for Nov. 21 through 24. James, 294-6837.

GOAL KEEPER for Div. 2 men's soccer team, beginning Feb. 26. Cropp, 296-1877.

SOMEONE WITH A HORSE willing to give Daisy Girl Scouts brief rides & an explanation about horse care. Keener, 255-8482.

ROOMMATE, nonsmoker, share 3-bdr., 2-bath home in NE Heights, references preferred, \$350/mo. plus utilities. Hueller, 296-0976.

ROOMMATE, Taylor Ranch area, private bath & kitchen privileges, nonsmoker, responsible, references required. Baird, 899-1904 after 6 p.m.

HOUSEMATE, to share 3-bdr. home in NE Heights, 2 baths, nonsmoker, \$350/mo plus 1/2 utilities. Smid, 296-2863.

BUILDABLE LOT in Sandia Heights. Hale, 275-7870.

ENGINE STAND, for rebuilding automotive engines. Hoskie, 292-5472, leave message.

### LOST AND FOUND

LOST: wallet, brown, contains British credit card & US currency, vicinity of Atomic Museum or Tech Area 5. Townsend, 899-1507.

### SHARE-A-RIDE

CEDAR CREST VANPOOL, \$35/mo., Frost Rd., N-14, Tijeras. Yelton (281-2893) or Burns (281-3922).



**Coronado Club Activities****November's Great, From First (Tonight!) to Last**

START THE MONTH RIGHT with dinner at the Club. Tonight, Nov. 1, it's the Bourguet Brothers playing from 7 to 11, with first-rate music for dancing or just listening. The menu is prime, too — starting with the roast prime rib of beef. Other great choices are grilled halibut, steak neptune, cajun style catfish, and chicken teriyaki. Dinner is from 6 to 9, and reservations are recommended. By the way — next Friday night (Nov. 8), those Club favorites, the Isleta Poor Boys, will be featured.

THE PEOPLE HAVE SPOKEN in the Club elections, and the new C-Club Board of Directors has gone to work. Officers elected by the Board are president, John McAuliffe (3562); vice president, Jackie Kerby (9540); secretary, Frank Villareal (112); and treasurer, Paul Graham (142). Other board members recently elected: Harold Barnett (ret.), Anna Bachicha-Reynolds (DOE), Janice

Bauer (154), Willy Morse (5267), and Archie Stanish (3714). Thanks for their faithful service to outgoing officers Ruben Muniz (2000), Carolyn Lange (123), Charlie Kaspar (ret.), and former president Mike Quinlan (7852).

GREAT DEAL for new members — The Club is going all out to make you welcome. If you join between Nov. 4 and Nov. 8, or if you're a current member and bring in a friend who joins, you could win a trip for two to Las Vegas, Nev. The trip and other prizes will be given at a drawing Nov. 8, at 6 p.m. New members who sign up during the membership drive can choose between two months' free Club membership or having their Coronado Ski Club dues paid. Current members who are present at a friend's sign-up will get a \$10 discount at a Friday night dinner. To help you get acquainted with the Club, representatives of

special-interest groups will be available Friday, Nov. 8, from 4 to 6 p.m. to answer questions — that's the Ski Club, the Aquatic Club, Junior Bowling, Junior Tennis, Thunderbirds, and Pool & Patio.

SPEAKING OF DEALS, there's always a good one when the T-Bird card players get together. You'll find them at the Club every other Thursday (except for holidays). These days, it's usually bridge, says that master card shark Jim McCutcheon — but the folks there have many talents and can play many card games. The fun starts at 10 a.m. and continues until about 3 p.m. (with a break for lunch, naturally — they're dedicated, but not fanatics). Coffee and cookies are available, and newcomers are always welcome. The next four sessions are Nov. 14, Nov. 21 (early because of Thanksgiving), Dec. 5, and Dec. 19.

**Events Calendar**

*Events Calendar items are gathered from various sources. Readers should confirm times and dates of interest whenever possible.*

Nov. 1-2 — "Vengeance on Burro Alley (the Murder of Jose Antonio Griego and the Lynching of James Dunnigan)," an historical account of an actual hanging on Santa Fe's Burro Alley in July 1880, presented by UNM Continuing Education Series for the Arts; 8 p.m., UNM Continuing Education Center Theatre (Indian School & University NE), 277-4624.

Nov. 1-9 — "Cabaret," musical, long-running Broadway hit, exposes the scintillating underground world of Berlin before World War II; 8 p.m. Thurs.-Sat., 2 p.m. Sun.; Albuquerque Little Theatre, 242-4750.

Nov. 1-10 — "Brilliant Traces," by Cindy Lou Johnson, New Mexico Repertory Theatre presentation of a wacky romantic comedy about a young bride who leaves the altar, drives to Alaska, and is caught in a blinding snowstorm where she finds shelter in the house of a stranger who is also running away from life; 8 p.m. Tues.-Sat., 2 p.m. Sat. & Sun.; KiMo Theatre, 243-4500.

Nov. 1-17 — "Waiting for Godot," tragi-comedy by Samuel Beckett about two tramps waiting on a country road for the man they think will save them, presented in celebration of the Vortex Theatre's 15th anniversary; 8 p.m. Fri.-Sat., 6 p.m. Sun.; Vortex Theatre, 247-8600.

Nov. 1-22 — Exhibit, "El Camino Real: Un Sendero Historico," colorful and informative 36-panel display that takes viewers on a fascinating journey through time as it explains the Royal Road between Mexico City and Santa Fe; 9 a.m.-5 p.m., New Mexico Museum of Natural History and Science, 841-8837.

Nov. 1-Dec. 1 — Exhibit, "Awards in the Visual Arts 10," 25 works of art by 10 artists from throughout the United States, sponsored by the Southeastern Center for Contemporary Art in Winston-Salem, N.C.; 9 a.m.-5 p.m. Tues.-Sun.; Albuquerque Museum of Art, History, and Science, 243-7255.

Nov. 1-Dec. 22 — Exhibit, "An American in Italy: Photographs of Tuscany by Bill Adams," history and archaeology of ancient hill towns in the Val di Chiana; 9 a.m.-4 p.m. Tues.-Fri., 5-9 p.m. Tues.; Van Deren Coke Gallery, UNM Art Museum, 277-4001.

Nov. 1-Jan. 9 — Exhibit, "The Sagebrush Ocean," more than 60 Cibachrome color and black & white prints by author and photographer Stephen Trimble, based on his book *The Sagebrush Ocean: A Natural History of the Great Basin*, shows wide range of desert ecosystems from salt-encrusted dry lake beds to 13,000-ft. alpine peaks, a map, and text excerpts from the book; 9 a.m.-5 p.m., New Mexico Museum of Natural History and Science, 841-8837.

Nov. 1-Feb. 9 — Exhibit, "USS New Mexico Battleship," in commemoration of the 50th anniversary of World War II to honor veterans from all branches of the service, sponsored by the Navy League of the United States and the Albuquerque Museum; 9 a.m.-5 p.m. Tues.-Sun.; Albuquerque Museum of Art, History, and Science, 243-7255.

Nov. 1-Feb. 9 — Exhibit, "Horse Tales: An Evolutionary Odyssey," produced by the Natural History Museum in a collaborative program with the Hubbard

Museum of the Horse in Ruidoso Downs, tells about the horse from its first appearance in North America to its reintroduction by the Spanish to its modern-day place in the natural world; 9 a.m.-5 p.m., New Mexico Museum of Natural History and Science, 841-8837.

Nov. 2 — Second Annual Bountiful Autumn Bazaar, sponsored by Kirtland Officers Wives Club; 9 a.m.-4 p.m., Kirtland Officers Club (enter at Wyoming Gate), 255-1754.

Nov. 2 — "Modern Dance," presented by the Bella Lewitsky Dance Company; 8:15 p.m., Popejoy Hall, 277-3121.

Nov. 2-3 — 42nd Annual Hollyherry Fair Christmas Bazaar; 9 a.m.-3 p.m. Sat., 9 a.m.-1 p.m. Sun.; St. Mark's on the Mesa Episcopal Church (431 Richmond Pl. NE), 262-2484.

Nov. 2-3 — Collector's Showcase, Albuquerque dolls, miniature toy show, and sale; 9 a.m.-5 p.m. Sat., 10 a.m.-5 p.m. Sun.; Creative Arts Building, State Fairgrounds, 883-6986.

Nov. 2-30 — Día De Los Muertos Exhibit: altar, Chicano, santero, and faurist art; 8:30 a.m.-5 p.m. Mon.-Sat., South Broadway Cultural Center, 848-1320.

Nov. 5 — Subscription Concert: the Chamber Orchestra of Albuquerque performs "Conte Fantastique" by Andre Caplet, "Ancient Airs & Dances Suite No. 1" by Respighi, "Symphony No. 6 in F Major" by William Boyce, and "Symphony No. 59, 'Feuer'" by Joseph Haydn, with Anne Eisfeller on harp; 8:15 p.m., St. John's United Methodist Church (2626 Arizona NE), 881-0844.

Nov. 6 — "Martin," La Compañía presentation of play about Chicanos as detribalized Indians; 7 p.m., free, South Broadway Cultural Center, 848-1320.

Nov. 7 — People of the Southwest Lecture: "Pre-historic Ceremonies Portrayed in Anasazi Kiva Murals" by Helen Crotty, adjunct professor, Native American

Art History at Colgate University; 7:30 p.m., Maxwell Museum of Anthropology, 277-4404.

Nov. 7 — Hispanic Culture Foundation Quincennial Lecture Series: Adrian Bustamante speaks about Mestisaje; 7 p.m., South Broadway Cultural Center, 848-1320.

Nov. 7-10 — 19th Annual Southwest Arts and Crafts Festival, 200 entrants from across the US compete in this invitational, juried show; 10 a.m.-9 p.m. Fri., 10 a.m.-6 p.m. Sat. & Sun.; Exhibit Hall, State Fairgrounds, 262-2448.

Nov. 8-9 — Pops Concert, New Mexico Symphony Orchestra with Mel Torme; 8:15 p.m., Popejoy Hall, 842-8565.

Nov. 11-12 — Veterans Day Celebration: traditional Indian dances and special activities in honor of Native American veterans, performed by various Native American dance groups; call for times, Indian Pueblo Cultural Center, 843-7270.

Nov. 12-Dec. 22 — Exhibit, "Cows," everything you wanted to see and hear bovine (Nov. 12, 5:30 p.m. gallery talk with Peter White, UNM professor of English and co-author of *The Lore of New Mexico*, will talk about cow lore and present a video/talk about cattle mutilations); 9 a.m.-4 p.m. Tues.-Fri., 5-9 p.m. Tues.; study gallery, UNM Art Museum, 277-4001.

Nov. 12-Jan. 10 — Exhibit, "Abstract Art: A Manifesto of Liberation," presentation of art from the '30s that emphasizes spiritual liberation through color and non-objective form; 9 a.m.-4 p.m. Tues.-Fri., 5-9 p.m. Tues.; UNM Jonson Gallery, 277-4967.



SCIENTIFIC COMPUTING Directorate 1900 recently won the INTEROP Achievement Award for 1991 for the government business sector. Accepting the award from INTEROP representative David Brandin are Helen Chen (center, 1912) and Arthurine Breckenridge (1944). INTEROP is a computer networking and communications educational organization. Sandia was selected by a panel of 11 judges from various networking organizations. The award honors companies that lead the way in implementing sophisticated multi-vendor internetworks and organizations that make the most effective use of inter-networking technology to further their business aims.