Sandia stimulates statewide wind power development

Purchase of wind-generated electricity for WIPP is just the start of a wind industry in state

By Neal Singer

Sandia is purchasing "green" electricity generated by an already-in-place wind turbine near Clovis, N.M., to stimulate development of wind resources essentially untapped in New Mexico.

The ecologically desirable power source is expected to provide electricity for approximately six percent of the DOE's Waste Isolation Pilot Plant (WIPP) total electric services requirement.

Sandia scientists hope this purchase, along with others over a 10-year period, will stimulate the growth of a New Mexico wind power industry, says Henry Dodd, Manager of Wind Energy Technology Dept 6214.

For starters, Sandia's purchase triggers the installation of an additional commercially owned wind turbine in southeastern New Mexico. Eastern New Mexico electricity provider Xcel Energy's Southwestern Public Service Company, through its Windsource program, will deliver energy produced by both turbines.

In addition, says Sandia Executive VP Joan Woodard, "We intend to purchase one megawatt of wind-generated power in 2001, ramping up to 10 megawatts of renewable power within 10 years."

Because wind power sources will be competitively selected, "Sandia's purchase of this wind-generated power should promote wind development in New Mexico, provide economic and environmental benefits, and help meet DOE's goals as well as our nation's. We hope to encourage other government and private sector purchasers to join us in expanding the role of renewable energy."

Michael Loera, DOE/AL's contracting officer for its Utilities and Energy Management Team (UEMT), says, "It is fantastic that we collectively brought this renewable resource acquisition to fruition. Not only are we furthering the State of New Mexico's economic development initiatives but we have set forth a 'benchmark' whereby we can continue to measure, apply, and improve our contracting techniques to foster renewable resource acquisitions in New Mexico, Nevada, and Texas."

Wind blows everywhere sometimes

New Mexico is the 12th windiest state in the nation and, according to a DOE study, is capable of producing, with wind, more than 10 times the current state electricity consumption.

"The wind blows everywhere sometimes," says



THIS WIND TURBINE near Clovis, N.M., and another (site to be determined) are expected to provide electricity for approximately six percent of the DOE's Waste Isolation Pilot Plant (WIPP) total electric services requirement.

Sandia senior scientist Al Zelicoff (5353). "With multiple wind turbines in enough places, electricity can be sent from one location to another, including Albuquerque and buyers out-of-state." Ecologically, he says, "The need for cleaner technologies is unquestioned. Hundreds of tons of carbon dioxide are produced yearly for every house using conventionally generated electricity. In 20 years, there will be twice as much material from human activity going into the atmosphere — from the generation of electricity alone — unless we seek cleaner methods."

When developing countries with huge populations increase their use of electricity, emissions problems are expected to increase unless clean generating methods are available.

The Sandia action responds to a DOE mandate to use renewable resources to generate 7.5 percent of the electricity used at DOE sites by 2010. The funds needed to purchase clean electricity from the slightly more expensive green power source is being paid for by Sandia from cost savings derived through the Labs' energy conservation efforts, thus requiring no additional taxpayer dollars. Sandia purchases should significantly exceed the DOE mandate. In fiscal year 2000, Sandia provided DOE with \$45,000 in funds.

Currently, energy from fossil fuel can be produced for 3 cents/kwh; wind, 6 cents. But the researchers expect the cost of wind power to drop as technology improves. "We expect the market for wind power to be fully competitive in many regions of the United States before 2010," says Henry.

Wind power already in place

California already generates more than a gigawatt (a billion watts) of power from wind power. Texas expects to generate two gigawatts of renewable power, mostly wind, by 2008.

Recent improvements in wind generators involve using much bigger machines that reach higher into the atmosphere to access stronger winds. "You could park a 747 within the diameter of these newer wind turbines," says Henry. Also, better manufacturing processes are creating stronger blades.

"In Europe, wind generators are installed in relatively small groups on plots of public land and considered things of beauty," says Al. "People love them."

Prescription Drug Program mail-order survey shows high satisfaction

The Benefits Department thanks everyone who participated in the telephone survey conducted in late August to early September 2000, regarding the mail-order service provided by Express Pharmacy Services (EPS).

EPS is the mail-order pharmacy, owned by Eckerd Health Services (EHS), that participants enrolled in the TOP Plan may use to get their maintenance prescription drugs. As a part of the contract with EHS, Sandia requires a random survey on an annual basis of participants who have used the mail-order service. EHS contracts with an independent firm, Alliance Research, to conduct the telephone survey on their behalf.

Of the 400 participants surveyed, 92.3 percent ranked their overall satisfaction with Express Pharmacy Services as satisfied, very satisfied, or

extremely satisfied. This satisfaction rating is higher than the typical 89 percent satisfaction rating within this industry, as reported by a survey conducted by the Pharmaceutical Care Management Association.

The questions asked and results of the survey are listed below. Results indicated below (in brackets) include responses of satisfied, very satisfied, or extremely satisfied to questions beginning "How would you rate EPS on...":

- ease of understanding instructions for using the mail service? [86.5%]
- time it takes to receive a prescription order? [90.0%]
 - correct fulfillment of your order(s)? [89.5%]ease of understanding the instructions for

using the prescriptions? [94.5%]

- ease of ordering your prescriptions through customer service? [84.0%]
- \bullet ease of understanding the customer receipts provided with your orders? [91.3%]

Finally, 85.0 percent of the surveyed participants felt that, overall they were satisfied, very satisfied, or extremely satisfied with their most recent contact with the EPS customer service department.

Your feedback continues to provide important information to the Sandia Benefits Department and will help Express Pharmacy Services identify where to focus its quality improvement efforts. Thank you again to those who took the time to participate in the survey.

— Karen Roybal (3341)

South-of-the-border renewable energy programs help farmers, ranchers in rural Mexico

Joint US-Mexico efforts to proliferate renewable energy systems

By John German

On Don José Canul's hardscrabble ranch in rural Quintana Roo, Mexico, a deep-rutted footpath harks back to the days, not long ago, when horses, oxen, and people carried water from the ranch well to Canul's cattle and gardens.

Today that back-breaking, daily toil is a memory, says Canul, thanks in part to Sandia's assistance and what he calls "una tecnología muy moderna para una actividad muy antigua" — "a very modern technology for such a very old activity."

An array of solar collectors captures energy from the bountiful southeast Mexican sun and powers a submersible pump that draws enough water from the well to sustain about 40 head of cattle. It is the first electricity to flow on Canul's ranch.

Installation of Canul's photovoltaic (PV) water-pumping station in 1997 was made possible by the Mexico Renewable Energy Program, established by Sandia in 1994. The program has resulted in the installation of more than 250 PV and wind-energy water-pumping systems in 14 Mexican states.

Now Sandia is helping expand efforts to bring the benefits of solar and wind power to more of rural Mexico through new joint programs with the Mexican government, renewable energy suppliers in the US and Mexico, universities, and other partners.

One such effort, the "Renewable Energy for Agriculture" program managed by FIRCO (an agricultural extension service under the Mexican Ministry of Agriculture), is expected to bring as many as 1,200 new PV systems and 55 wind sys-



SIGNING an agreement in Mexico City on Aug. 24 specifying how the two organizations are to work together are Sam Varnado (left), now Director of Infrastructure & Information Systems Center 6500, and FIRCO Director Manuel Contijoch Escontría.

tems to isolated areas of Mexico during the next five years.

The systems will be used primarily for water pumping, but some may be adapted for milk cooling and other uses that improve the economic, social, and health standards in agricultural areas of Mexico.

Benefits north & south of the border

More than 50 US and Mexican suppliers have been involved in past renewable energy projects involving Sandia, and the expanded efforts should help improve markets for technology suppliers north and south of the border, says Labs program manager Michael Ross (6218).

"These programs seek to improve the economies of some of the poorest areas of rural Mexico by increasing the profitability of small ranches while also promoting the use of renewable energy tech-

nology, reducing pollution from fuel-powered generators, and broadening the renewable energy market outside the US," he says. "It benefits everyone involved."

As part of the expanded programs, Labs renewable energy technology experts are helping write specifications for standardized renewable energy systems; helping install many of the systems; training local officials, users, and vendors to install, operate, and maintain the systems; and designing new applications for renewable energy systems.

Sandia consultants also lead "train-the-trainers" sessions during which Mexican program partners and vendors learn how to teach others to install and maintain the systems.

The ultimate goal, says Michael, is to make the use of renewable energy systems in Mexico widespread and self-sustaining.

"When Sandia is finished, there will be peo-



PV PUMPING— Sandian Michael Ross helps build a photovoltaic (PV) water-pumping station at a ranch near Cancún, Yucatan, Mexico.

ple scattered throughout Mexico who will have the capabilities to do this," he says.

Because renewable energy systems cost more to buy (but pay for themselves relatively quickly) than fuel-powered generators, Sandia also has helped set up financing arrangements whereby Mexican ranchers with little capital can get loans to invest in the new systems.

Energy and national security

The Renewable Energy for Agriculture program is funded by \$31 million in loans and grants to FIRCO from the World Bank, the Global Environmental Facility, the Mexican government, and the end users. It is part of Mexico's Alianza para el Campo program for improving agricultural productivity.

Support for Sandia's involvement comes from the US Department of Energy and the US Agency for International Development.

Sam Varnado, now Director of Infrastructure & Information Systems Center 6500, and FIRCO Director Manuel Contijoch Escontría signed a five-year collaborative agreement in Mexico City on Aug. 24 specifying how the two organizations are to work together as part of the expanded program.

"Energy availability is a key element of national security," says Margie Tatro, Director of Energy and Transportation Security Center 6200. "If people throughout the world have access to reliable, nonpolluting, affordable forms of energy, they are more likely to have prosperous existences. Sandia is well positioned to help others get access to renewable, fossil, and nuclear energy systems."

FIRCO held its first of 32 state workshops in Chilpancingo, Guerrero, Oct. 24-26, with assistance from Sandia. Since then, workshops have been held in seven other Mexican states, and Sandia has conducted one "train-the-trainers" workshop in Las Cruces, N.M.

Sandia's effort involves several Sandians plus various subcontractors in both the US and Mexico.

"When I'm in Mexico I see the effect this technology is having on the lives of people who probably haven't had electricity in their lifetimes," says Michael. "That's the type of reward I cannot get by just sitting in my office."

Feedback

Are there special parking places on Fridays?

Q: On Fridays, are there any other special parking spaces besides carpool spaces that can be used by the general population?

A: Only spaces marked as Carpool Only are authorized to be used for general parking on Fridays. Sandia's parking policy and descriptions of the types of designated parking, along with times when they are valid, are presented in the *Safeguards and Security Guide*, which can be referenced on the

Web at http://www-irn.sandia.gov/security/safeguards_man/home.html.

Vanpool parking, by the way, is not the same as carpool parking and these slots are not available for general parking on Fridays. The reason is the vanpools operate every day and should have parking available. The number of reserved vanpool parking slots is minimal.

- Ed Tooley (7850), Sites Planning Program

Recent Patents

Douglas Drumheller (6211): Acoustic Transducer.

William Alford and Arlee Smith (both 1118): Backconversion-Limited Optical Parametric Oscillators.

Michelle Griffith, Donald Greene (both

14184), and Gary Pressly (14402): Energetic Additive Manufacturing Process with Feed Wire.

Kim Reed (1643), Bobby Turman, Ronald Kaye (both 15335), and Larry Schneider (1643): X-Ray Tube with Magnetic Electron Steering.

Timothy Boyle (1843) and Mark Rodriguez (1822): Perovskite Phase Thin Films and Method of Making.

New training program to increase numbers of people working in skilled trades

Some 100 positions will need to be filled over the next few years due to attrition

By Chris Burroughs

Journeyman Eddie Ayon (14112) peers at a schematic of a piece of test equipment he is building for a Sandia engineer, making sure he has the wiring in the right place.

The task of building the equipment from scratch is complicated, but one Eddie knows he will complete competently.

Eddie was promoted to the ranks of journeyman in July — an honor that indicates he has all the skills required to perform his trade of electronics fabricator. He gained his skills through a new Sandia program designed

to recruit and train people in the crucial trades areas of electronics fabrication, machining, and materials science.

Eddie and colleague Angelique Balli (14112) are the first to graduate from the program.

"This has been a good program for me and my family. I've learned a valuable trade and have a great career at Sandia."

"This has been a good program for me and my family," Eddie says. "I've learned a valuable trade and have a great career at Sandia."

The program was established in 1996 as a way to replenish people working in skilled trades who are retiring or being promoted to other parts of the Labs. Up until the late 1980s Sandia trained skilled trades personnel through a formal apprenticeship program that consisted of a student working full-time at Sandia and receiving classroom instruction by Labs personnel. The apprentices worked side-by-side with experienced Sandians and went from apprentice to journeyman as their skill levels increased. This formal five-year apprentice program, specifically funded by DOE until 1989, could not be maintained through center support due to the high cost.

Since then attrition has reduced the number of experienced trades people. Over the next several years some 100 people will need to be hired to fill vacated positions.

"The attrition slowly became a real problem," says Phil Gallegos, Manager of Electronic Fabrication Dept. 14112. "Morale was slipping because experienced journeymen would look behind them and see no one there to pass on their skills. They thought the department was





FIRST GRADUATES — Eddie Ayon, top photo, and Angelique Balli (both 14112), bottom photo, are the first graduates of the new Trades Training Program established in 1996 as a way to replenish people working in skilled trades who are retiring or being promoted to other parts of the Labs.

(Photos by Chris Burroughs)

going to be shut down."

He turned to his director, Jim Searcy (ret.), who said more people needed to be brought in and trained but at an affordable cost.

Working with the Metal Trades Council, to which all people in skilled trades belong, Phil, other managers who have many trades people in their departments, and critical staff from several areas throughout the Labs developed a program that involved Albuquerque Technical-Vocational Institute (T-VI) and Sandia's existing Student Intern Program.

The Metal Trades Council has been supportive of the program since the beginning and has played a critical role in making it a success,

Phil says.

Students are recruited from T-VI trade and technologies departments where they go to school for two years and obtain an associate degree in an applied science. Simultaneously, they work at Sandia 20 hours a week during the school year and 40 hours a week in the summer. Upon completion of their associate degree, they spend the next three years at Sandia as limited-term employees, building their skills until they reach the journeyman level. Once they become journeymen, they can be hired as regular full-time Sandia employees.

The first class, electronics fabrication, started in 1996. The second class, machining, began a year later. The third, materials science, started in 1998. Currently nine people participate in the electronics manufacturing program, 10 in machining, and two in materials science.

Phil says they will be seeking four new people in electronics fabrication, 10 in machining, and eight in materials next year.

Besides T-VI, Sandia has also started recruiting students for the program at the high school level. Scouts go to high school job fairs and encourage students to apply for the program and attend T-VI.

Paul Lemke (14100) says an important aspect of the program is the use of formal skill standards that describe tasks a fully qualified person can perform. Students are expected to perform increasingly complex key operations each year they are in the program. For example, by the end of the first year, electronic fabricators should know how to solder. The use of skill standards and the performance level associated with each provide a metric for evaluating students' progress and the program as a whole.

In developing the skill standards, the Sandia team used some existing standards established by the National Coalition for Advanced Manufacturing and the National Institute of Machinists. In areas where no standards existed, Lucy Justice (14112), Tom Souther (14186), Carol Forrest (3535), and other members of the team created new ones.

Sandians now sit on the board of Manufacturing Skills Standards Council, which is creating national skill standards for manufacturing personnel. Thus, says Paul, "Sandia is having a national impact."

Phil and Dominique Wilson-Foley (3535) of Sandia's student outreach program are also sharing appropriate standards with the Albuquerque Public Schools and T-VI to ensure that students entering the workforce are learning what industry needs.

The trades training program is designed to take five years to finish — the same amount of time as the old apprenticeship program. However, Phil notes, since the program is performance-based, a quick learner can complete the program in less time.

People throughout the Labs are beginning to take note of the effectiveness of the new program. It recently won a silver President's Quality Award and the Center 14100 Gold Recognition and Team Award.

Phil says the program has been so successful that efforts are now being made to expand it to other organizations.

"This program has caused motivation in my department to go up 200 percent," Phil says. "It's been one of the best things to happen for the skilled trades employees."

Open-enrollment changes final deadline is Dec. 31

A reminder from Benefits:

Remember that if you enrolled in either the Health Care or Day Care Reimbursement Spending Account, or both, during Open Enrollment, you can change or cancel the amount up until 11:59 p.m. on Dec. 31, 2000.

To do this, call the Open Enrollment Phone System at 844-3200 (if outside Albuquerque, call 1-800-417-2634, then 844-3200). You can also change your medical premium tax election or you can waive your medical coverage through 11:59 p.m. on Dec. 31.

Please remember that if you decide to waive your medical coverage, you will not be allowed to call back into the system and re-enroll for medical coverage. Also, if you waive your medical coverage through the phone system, you must also complete the Waiver of Medical Coverage Form that is included in your Open Enrollment booklet, and it must be received by the Benefits Customer Service Center by Dec. 31, 2000.

If you have questions, call the Benefits Customer Service Center at 845-BENE (2363).

New team cleaning approach leaves Labs facilities looking brand-spankin' new

By Bill Murphy

The Machine is comin' at you. And the Pirates. The Swarm. The Storm. The Wolfe Pack, the PETL Pushers, the Tornadoes. No. those aren't the names of the new XFL teams. They're Sandia/New Mexico's custodial cleaning teams and they're sweeping through the Labs' buildings faster, better, and cleaner than ever before.

The team-cleaning approach, called OS1, is described by its developer, Salt Lake Citybased ManageMen, Inc., as the cleaning industry's first "operating system."

Until recently, Sandia's custodial paradigm was the "zone" system, in which one

person had full responsibility for keeping a building or collection of buildings clean. In the OS1 system, cleaning tasks are identified by function: i.e., vacuuming, cleaning restrooms, emptying trashcans, dusting. Members of a team take turns performing various functions within the OS1 system.

Anyone in a building that is being served by



TIM VANDERBERG



THE MACHINE — Custodians Tim Vanderberg (left), Greg Vigil, and Roy Flanders (all 7845) apply their team approach to the lobby of Bldg. 800. (Photos by Randy Montoya)

tis being served by the OS1 system and that's about 70 percent of the square footage at the New Mexico site and growing sees a difference right away. More cleaning is getting done. And it's getting done faster

and more often.

That's good
news from a customer point of
view. The upside
for Sandia's custodians is that most
of them seem to
prefer the OS1
approach, too.

Greg Vigil, Roy Flanders, and Tim Vanderberg are charter members of the Machine (all the teams name themselves, a spontaneous practice that started with one group and spread throughout all the teams). Roy, who's been with the Labs for more than 15 years, has cleaned

buildings under both systems — and he likes the OS1 approach better. The systematic approach, which defines processes for everything, right down to the type and amount of cleaning chemicals used, makes is easier to do a good job, Roy says. Roy recalls that the Labs tried a team approach years ago, adding that it didn't fly at that time because there really wasn't a system. "This [system] is much more formalized than the old way was," he says.

Jim Kadlec, Acting Manager of Custodial Matrixed Services Dept. 7845, an early and vocal advocate of adopting the OS1 approach, calls that old team approach "gang cleaning." Functions weren't well-defined; it really wasn't comparable



ROY FLANDERS, acting team leader for "The Machine," one of the custodial teams sweeping through the Labs.

to OS1 at all, Jim says.

Tim, a new Sandian, never worked the old zone approach, but he doesn't feel he missed anything. "I like being part of a team," Tim says. "I think we're all a lot more effective working together than we would be working alone." Tim says he also enjoys the camaraderie, an element of work that was sometimes missing in the old zone approach where a custodian might spend most of the day separated from his or her colleagues.

Greg, also a new Sandian (both he and Tim have been at the Labs for less than six months), likes the team approach — and he likes the team he's on. He recalls how the

Machine got its name. "We were just clicking along one day," he says of himself and his teammates, "when one of us said, "Whoa! We're like a machine."

The OS1 approach is more than just teamcleaning, says Jim. It's a way to manage workflow processes and to team as well. The approach, which is taught at ManageMen's renowned Janitor University in Salt Lake, places heavy emphasis on training, process audits, and continuous improvement.

"Our training is always evolving, based on what are teams learn and what our customers tell us," Jim says. "We are trying to ensure that the custodial commitments made by the Facilities Site Management to customers in the Internal Lease Agreements are met."

Customer feedback, Jim says, has been overwhelmingly positive — maybe even *too* positive. "We have heard comments that we're cleaning too much," he says. "We'll take that any day over 'not cleaning enough.' The fact is, though, our teams are still learning how much to do and how often to do it."

The decision to migrate to the OS1 cleaning system was made at management level, but the day-to-day reality of making it work falls to the guys and gals with the vacuums, the brushes, mops, and wipes. Their buy-in is critical.

The key to success, says Greg, "is having good relations with your team. When you have that, you succeed."

Says Roy: "When we run into problems [as a team] we kick it around. We support each other. We don't leave any of our soldiers behind."

SNAPSHOT: Sandia budget picture

Total Revenue and Full-Time Equivalent (FTE) Staffing

FY00 Actuals and FY01 Projections (Dollars in 1,000s)

	r i 2000 Actuai		r i 2001 Estimate		
	<u>Revenue</u>	<u>FTEs</u>	Revenue	<u>FTEs</u>	
Nuclear Weapons	\$ 809,856	4,213	\$892,834	4,518	
NonProlif/ Mat.Cntrl	\$ 263,976	1,316	\$301,804	1,332	
Energy/Crit Infrastrctr	\$ 207,757	1,066	\$217,191	1,008	
Emerging Threats	\$ 120,587	582	\$115,000	601	
Sci & Tech.	\$ 60,779	240	\$ 45,000	234	
TOTALS	\$ 1,462,955	7,417	\$ 1,571,829	7,693	

NOTE: Indirect staffing allocated to the Strategic Business Units. *Of the 7,417 Sandian FTE's for FY00, 6,576 FTE's were at the Albuquerque site.*

Mileposts

California photos by Lynda Hadley New Mexico photos by Iris Aboytes



Edwin Kjeldgaard



Manuel Vigil



Steve Haney



Arthur Hayes



Jeffrey Philbin



James Sweet



Paul Attermeier



Victor Baca



Paul Brannan



Charles Draper







Steven Johnston



Jeff Moore



Norman Schwentor



Bert Tate



William Wenrich



Janet Ahrens



Kathleen Diegert



Joann Herrera



Brenda Langkopf



Steve Orth



William Pasco



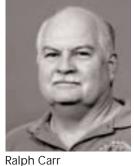
Stephen Rosenthal



Suzanne Weissman



Teresa Antolak



Ralph Carr







Connie Nenninger



Melanie Florez

Elmer Opichka





Shawn Kerr



Alice Kilgo

Grace Thompson



Janet Williams



Patricia Zamora

Sandia Classified Ads Sandia Classified Ads Classified Ads Classified Ads

MISCELLANEOUS

- CROSS-COUNTRY SKIS, size-9 boots. poles, never used, \$50. Brannon, 296-6674.
- FIFTH-WHEEL HITCH, quality S, 12K removable, good condition, \$250 complete. Sanchez, 861-2346, after 6 p.m.
- BREADMAKER, Welbilt, 1-lb. loaf, good condition, \$15. Coverdale, 268-3040.
- BOY SCOUT LUMINARIAS \$5/doz., free metro delivery w/4 doz. or more; Troop 183 says thanks. McInteer, 256-1656
- ANTIQUE WALNUT BUFFET, 60" x 38" high, 2 large drawers, 2 doors, \$450. Martin, 298-7035
- BEAUTIFUL NEW DRESSES for the holidavs: Karen Miller, size 10, jade, long: Caterina Collection, size 10. ivory, long; Marilyn Graham, size 12, black, short. Morales, 821-3352.
- ANTIQUE CHINA CABINET, \$295; kingsize wicker headboard, \$55; entertainment center, must sell, \$60 OBO. Salazar, 899-0483.
- STAFFORDSHIRE TERRIER CROSS, 7-moold male, intelligent, personable, housetrained, all shots, to loving, active family. Johnson, 884-1728.
- CAMPER SHELL, 5' x 7' fits Ranger-type pickup bed, excellent condition, dark gray, tinted windows, padlock, \$75. Butler, 856-6186.
- " RUNNING FREE" NORITAKE DISHES, eight 5-piece place settings, 9 serving pieces, 1 dinner plate missing, \$75. Keeling, 275-8191.
- OLYMPIC WEIGHTS, 39¢/lb.; dumbbells, 39¢/lb.; hoist bench, \$250; leg press to 900 lbs., \$600; power rack, \$250. Denney, 299-8595.
- PARAKEETS, 1 male, 1 female, 2 years old, hand-trained, cage, playpen, toys included, \$50 OBO. Ruby, 821-0982.
- LOBO BASKETBALL SEASON TICKET. single, row 33, section 24, will take remaining face value. Contreras, 344-2492
- SKI BINDINGS, Salomon 800, used once. \$60. Edenburn, 869-2911.
- MAN'S NEW BOMBER JACKET, brown leather, w/hat, size tall/medium, \$135; maple wooden toilet seat (old), \$32. Anderson, 296-3352.
- OAK DINING ROOM TABLE, 6 chairs, & hutch, \$350. Manning, 896-8921.
- SEARS EAGER-1 LAWNMOWER, circa early 1980s, free to inquisitive engineering types. Nelson, 294-2785. TELESCOPE, Simons, 67.5 power, 60mm,
- \$95. Eaves, 268-0461.
- UPRIGHT PIANO, antique Emerson, \$700 OBO. Bronkema, 271-2389.
- COMPUTER, P2-300 MHz, 8GB HD, 64K RAM, DVD-ROM, 17-in. monitor, 120MB drive, \$700. Thomas, 822-1923, after 5 pm
- DOGHOUSES, igloo-style, extended entrance, insulated, extra-large, like new, 2 @ \$65 ea. Wilson, 821-6703.
- UTILITY TRAILER, originally for snowmobiles, tilt bed, new tires; Coleman generator, 5KW, extended run, like new; \$450 ea. Warner, 281-7217
- OUEEN-SIZE BED, dresser, & chest of drawers, dark wood, \$400 OBO. Aragon, 255-8451.
- WASHING MACHINE, working, \$50; 2 sets of twin mattresses, \$40 & \$60; upright freezer, \$85. Wiseley, 286-9473.
- DeVilss, 120-psi max., \$100 OBO; NordicTrack Pro, used very little, \$100 OBO. Hall, 298-8617.
- WASHER & GAS DRYER, Whirlpool, al-
- \$175 for the pair. Mayes, 821-0698. SOUTHWEST AIRLINE TICKETS, anywhere SW flies, fully transferable, round-trip, \$290/ea. Sampson, 892-7258.
- FOUR GOODYEAR Wrangler Mud Grip tires, 7.0-15LT, M+S, practically new, \$250 w/rims, \$150 w/o rims. Logsted, 281-3130.
- TWO-ROOM CONDO FOR HAMSTER, nearly new, wheel, supplies, food, & cool toys, \$25; our hamster died. Davis, 344-2915
- LIFESTYLER TREADMILL, 4 programmed exercise options, 0-10 incline, manual, new belt, \$300. Sanchez, 898-9598
- SCHWINN AIRDYNE STATIONARY BIKE, digital display, minimal use, gelfoam seat cover, very good condition, \$250. Rockwell, 884-4206

- WATERBED, queen-size, oak frame, storage drawers, & bookshelf headboard, \$200. Low, 299-7395.
- BARBIE VANITY/MIRROR & padded chair, child-size, white/pink accents, excellent condition, \$20. Rightley, 293-9780.
- DIGITAL P133 COMPUTER, 1.2GB HD. 32MB RAM, CD-ROM, modem, speak ers, monitor, Windows 98, \$275. Fuentes, 821-3324, ask for Jacob.
- FRESH 25-IN. CHRISTMAS WREATHS, Los Lunas Boys Basketball fund-raiser, \$18.50. Ortiz, 869-3278.
- ENTERTAINMENT CENTER, \$125; Schwinn Airdyne, \$120; queen mattress set, \$25; girl's bike, \$50; floor lamps, \$30 pr. Nutt, 856-8267.
- SHEERLING COAT, brown, size 8-10; mink & leather 3/4-jacket, size 10-12; \$200 ea. Everett, 268-7818.
- PUPPIES. 7 mos. new, Rottweiler/ German-shepherd cross, 2 females, adorable, playful. Turner, 450-4412 (mobile)
- PRIVATE-LAND ELK-HUNTING PERMIT, antlerless, Dec. 19-31 or Jan. 19-31, \$150. Maestas, 888-0955.
- WHEELCHAIR, standard-size, hospitaltype, \$175; walker, \$40; crutches, pair, \$15; exercise bicycle, \$25; vaporizer, \$5. Martin, 296-6727
- 55-ALIVE DRIVER-SAFETY CLASS, Corona do Club, Jan. 13 & 23, 5 p.m., SERP, 844-8486, or Jim Porter, 884-4577.
- SOUTHWEST AIRLINES round-trip ticket, transferable, good anywhere SW flies until 9/19/01, \$300. Perrine, 293-1429
- CARPET, used, 141 sq. yds. for 1,600-sq. ft. home, \$75; two 36-in. ceiling fans, \$10 ea.; 48-in. ceiling fan, \$15, OBO. White, 294-5692.
- AQUA FLOOR LAMP, 46-in. high, contains plastic fish, used 6 times, paid \$60, asking \$25. Locher, 323-0722
- WEIGHT BENCH, leg lift & inclining press back, includes some free weights & foot straps, \$100. Chavez, 275-0490.
- CHRISTMAS TREE, deluxe fir, 6-ft., stand, lights, ornaments; old exercise bike; diet scales 16-oz. measurements. Beck. 294-4591.
- WOOD, \$140, cord. Vigil, 873-2720. BACKPACK, Jansport, framed, used once. Ewen, 836-3563.
- HEATER, radiant-infrared propane, up to 25K Btu, new in box, \$100. Lenberg, 266-8988
- TELESCOPE, 8-in. Meade, Dobsonlan, Telrad, & 6x30 finder scope, 2 eyepieces, excellent condition, 2-in. focuser, \$550. Barnette, 861-2450.
- CABOVER CAMPER, 8-ft., for full-size pickup, great for hunting & fishing, jacks included, must sell, \$300 OBO. Welch, 292-2706.
- TENNIS BRACELET, 14K, custom designed, 86 round diamonds, total of 4.15 cts., safety chain, brand new, \$1,150. Burstein, 821-6688.
- SOUTHWESTERN SOFA, \$150; formal dining room set, \$500; wicker stand, \$50; king-size mattress set, \$100; fullsize mattress, \$50. Harris, 821-3001
- NORDICTRACK SKI MACHINE, \$100: gym-quality padded flat bench, \$75; free weights, \$25; 3-pr. bar-bells, \$15, or all \$150. Peek, 286-4258.
- BLACK LEATHER COUCH, 4-piece sectional, w/recliner & full bed, \$675; oak kitchen table, 4 padded chairs w/rollers, \$125; round bed w/padded frame & mattress, one-of-a-kind, \$125. Maxey, 880-0047.
- OIL-FREE AIR COMPRESSOR, 1-hp, 3-gal., NINTENDO 64, video game system, excellent condition, \$50; Nintendo 64 games, \$20 per game, like new. Anderson, 897-2772.
 - POOL TABLE, classic, full-size, heavy thick M/leatner pockets, green feit \$200. Denney, 877-9788.
 - WASHER & DRYER, great condition, \$250. Jaramillo, 296-7516.
 - ANTIQUE WOOD STOVE, \$1,500; new OEM Jeep soft-top (white), \$500; Yamaha MX100, \$275; '78 Honda CT70, \$900. Habbit, 856-1117.
 - NIKON, 50mmf1.2AI, \$200; 200mmf4, \$125; 105mmf2.5AI, \$100; Vivitar, 28mmf1.9 for Nikon, \$100. Sides, 296-1744.
 - JACK RUSSELL TERRIER, 9 mos. old, all shots, trained, housebroken, accessories, good with kids. Campos, 275-7830.
 - LAMPS, shades, \$10 ea.; recliner, \$35; nightstand, \$10; videocassette player, \$30; Hitachi speakers, \$20. Kiro, 255-0890.
 - MATCHING SOFA & LOVESEAT, sofa is queen-size sleeper, brown, very good condition, \$200. Dwyer, 271-0741.

How to submit classified ads DEADLINE: Friday noon before week of publication unless changed by holiday. Submit by one of these methods:

- · E-MAIL: Sandy Smallwood, (sksmall@sandia. gov)
- FAX: 844-0645
- MAIL: MS 0165 (Dept. 12640) DELIVER: Bldg. 811 Lobby
- INTERNAL WEB: On Internal Web homepage, click on News Center, then on Lab News frame, and then on the very top of Lab News homepage Submit a Classified Ad." If you have questions, call Sandy at 284-3704. Because of space constraints, ads will be printed on a first-come basis.

Ad rules

- 1. Limit 18 words, including last name and home phone (We will edit longer ads).
- Include organization and full name with the ad submission
- 3. Submit the ad in writing. No phone-ins.
- Type or print ad legibly; use accepted abbreviations
- One ad per issue.
- We will not run the same ad more than twice
- No " for rent" ads except for em-
- ployees on temporary assignment No commercial ads
- For active and retired Sandians and DOE employees.
- 10. Housing listed for sale is available without regard to race, creed, color, or national origin
- 11. Work Wanted ads limited to student-aged children of employees.
- We reserve the right not to publish an ad.

Next ad deadline is Jan. 5 The next issue of the *Lab News* will be Jan. 12, 2001. The ad deadline is noon, Friday, Jan. 5

- DRUM SET, '66 Slingerland Professional, 5-piece w/hardware, \$900 OBO. Levan, 293-0079.
- SONY PLAYSTATION, 2-game console, unopened, w/receipt, \$500 OBO, cash only. Harris, 480-2369.
- LODGE-LOOK FURNITURE, solid pine: couch, chair, ottoman, coffee table, 2 end tables, see photos @ http:// members.aol.com/lawishard/, \$500 negotiable. Wishard, 292-4802.
- GARAGE SALE, 12/16/00, 2865 Tramway Circle NE, baby items, toys, clothes 0-8 yrs., furniture, kitchen items. Martinez, 856-6210.
- WASHER, 3-yr.- old Whirlpool, 8-cycle, white, excellent condition, \$200; figure skates, girl's size1, \$40. Clement, 293-1416.
- TEXTBOOKS, College of Santa Fe: Business Law I & II, Marketing, Spanish 101, 102, make offer. Chavez,
- SOLID OAK TABLE, 48-in. round, 1.5-in. thick, \$225; 6.5-ft. artificial Christmas tree, \$50; http://members. home.net/ rick.kris/forsale.html. Kominek 856-5424
- BABY GOODS, Childcraft crib + bedding, excellent condition, \$300; Graco portacrib, \$50; hiking backpack/carrier, \$100; small slide, \$15; rocking horse, \$10. Hendrickson, 275-3119.
- ETHAN ALLEN COFFEE TABLE, 22" x 56" \$200; 2 end tables, 26 in. square, African mahogany, traditional, \$150 ea; 92 in. rose velvet couch, \$600; 88 in. turquoise/rose couch, \$400. Pappas, 881-3440.
- AB DOLLY, deluxe, \$75; SUV club, \$30; truck club, \$20; 33.6K U.S.R. modem, \$25; all like new. Johnson, 296-3431.
- FREE, old kitchen stove & old dishwasher, they still work. Reif, 262-2652.
- WALL HEATERS, 37-ft.; 2 air conditioners; awning, like new; washer & dryer built-in ironing generator. Ward, 884-9266
- 35-YEAR COLLECTION, Road & Track, and Car & Driver, free to good home. Moss, 242-7843. REESE EQUALIZER HITCH, never
- used,\$175 OBO. Patton, 898-3524. SOFA, good shape, light tweed, \$150; treadmill, incline, speed electronic control, like new, \$100. Kajder,

298-9353.

TRANSPORTATION '92 OLDS 98 REGENCY ELITE, like new,

76K miles, CD, leather, digital gauges,

BABY JOGGER II w/ large 20-in. wheels,

condition, \$200. Heffelfinger,

281-1733

sun/rain canopy, folds flat, excellent

821-5330. '93 FORD TAURUS SHO, loaded, AM/FM cassette, AC, power everything, sunroof, 6-cyl., performance sedan,

computer ride, \$7,200. Magnuson,

- \$5,250 OBO. Morgan, 284-5896 '96 SATURN SL2, 4-dr., low miles, PW, PD, remote entry, extended warranty, great shape. \$7,477. Estes, 890-8317, ask for Bandy.
- '66 PLYMOUTH FURY III, 2-dr. convertible, 318, AT, AC, good condition, \$4,000. Woods, 281-0477 or 758-7686.
- '95 MERCURY SABLE GS, 3.8L, V6, AC, loaded, excellent condition, cruise, AM/FM cassette, only 28K miles, \$8,000. Payne, 343-9081
- '85 LINCOLN MK-VII COUPE, Bill Blass Edition, fully loaded w/all amenities, 135K miles, excellent condition, \$3.000. Langwell. 293-2728.
- '94 DODGE DAKOTA, extended cab, V6, AC, 5-spd., topper, 1 owner, perfect condition, \$7,950. Henfling, 869-4119.
- '87 FORD TEMPO, 4-dr. GL, good condition, great first vehicle for high school student, \$1,000 OBO. Garcia, 899-3064
- '89 PONTIAC BONNEVILLE, 4-dr., 6-cyl., AC, AM/FM radio, 49K miles, good condition, \$2,750 OBO Fromm-Lewis, 291-8181
- '88 TOYOTA MR2, clean body, bent rod in engine, only serious mechanics need inquire, \$1,500 OBO. Breckenridge, 797-4901
- '93 MERCURY VILLAGER GS, AC, PW, PD, good condition, 1 owner, 136K miles, \$3,800. Jones, 899-1187 '92 JEEP CHEROKEE LIMITED, 4x4, all
- power, leather, excellent condition, . 107,500 miles, \$8,100 OBO. Feng, 275-6639.
- '99 DODGE CARAVAN, light blue, 33K miles, new tires, excellent condition, \$16,000 OBO. Padilla, 821-1840.
- '94 F150 FORD, standard bench seat, real window; black leather jeancut pants 31" x 32", priced to sell. McDonald, 237-2589.
- '98 TOYOTA COROLLA LX, 4-dr., 41K miles, fully loaded, excellent condition, \$10,200. Emery, 856-6950.
- '96 DODGE 1500 SLT LARAMIE, 4x4, extra cab, 360-ton package, fully loaded, blue, 92K miles, \$13,800. Tole, 294-6010.
- '96 DODGE DAKOTA PICKUP; bids accepted through 12/22/00; right to refuse bids; sold as is. SLFCU, 237-7386, 7354, or 7384.
- '97 FORD TAURUS, V6, AT, AC, all power, cruise, alloy, 57K miles, white, real clean, \$7,900. Brown, 262-1998.
- '95 BURGANDY NISSAN PATHFINDER XE, V6, 4x4, 4-dr., PS, PB, PW, AC, AM/FM tape, PL, remote, new tires, 53K miles. Errett, 286-1597.
- '90 GMC SUBURBAN, 4x4, 350 fuel-injection, AT, dual AC, tow pkg.,130K miles, excellent condition, \$5,250. Pickering, 281-3145.
- '91 TOYOTA MR2 TURBO, red, black leather, fully loaded, low mileage, excellent condition, near- new tires, \$10,999. Sylwester, 844-8151.
- '88 TOYOTA 4RUNNER, 4-cyl., 4WD, 155K miles, AC, 2 studded snows excellent condition, \$5,500. Cooper, 281-0950.
- '90 FORD ESCORT, 4-dr., 5-spd., HB, red, loaded, engine overhaul '99, great condition, maintenance records, great commuter car, \$1,900 OBO Sherwin, 275-9134.
- '82 GMC SUBURBAN, 4WD, 3/4-ton, 6.2liter diesel, \$2,550. Rieger, 281-0757 '93 CHEVROLET S-10 BLAZER, loaded, 4WD, 4-dr., Tahoe LT, 4.3 Vortec V6,
- 864-9202. '90 CHEVROLET CORSICA, 4-dr., V6, AT, AC, PS, PB, stereo, 63K, good condi-

AT, leather, \$7,500. Jaramillo,

tion, \$2,500. House, 293-6016. '79 VOLVO 244 DL, yellow, 4-dr., sedan, 4-spd., good condition, very reliable, \$1,650. Baca, 350-1238 or 293-8997.

- '94 TOYOTA PICKUP, 1/2-ton, 71K miles, stereo AM/FM tape, AC, grill guard, good condition, \$13,000. Revels, 344-3033
- '81 VW VANAGON, white, good condition, great for camping, recent reconditioning, \$4,500. Dudley, 268-6963.

RECREATIONAL

- '89 PROWLER 5TH-WHEEL TRAVEL TRAIL-ER, 21-ft., 2-way fridge, AC, heater, 4burner stove/oven, full bath, upgraded queen Sealy mattress, sleeps 6, exc. condition, \$5,500 OBO. Rohl, 833-3697.
- '93 HARLEY-DAVIDSON SPORTSTER, less than 5K miles, lots of extras, excellent condition, \$5,500; Hitachi 45-in. TV, needs work, \$100, Garcia, 344-3406
- '99 KAWASAKI KX60, like new, used less than 10 hrs., great Christmas gift, \$1,650 OBO. Brown, 869-0704.
- '79 KAWASAKI KZ650, 8,400 miles, perfect condition, classic, \$1,500. Spence, 286-1998.
- CANNONDALE V700 MOUNTAIN BIKE, front shock, & clipless pedals, equiv. 18-19" frame, \$1,100 new, asking \$400. Derzon, 299-0523.

REAL ESTATE

- 4-BDR. NE HEIGHTS HOME, 2,221+ sq. ft., large master suite, newly remodeled country kitchen, 2-car garage.
- Dytzel, 296-1900. 3-BDR. PRESLEY HOME, 1-3/4 bath, 2-car garage, 1,800 sq. ft., newer appliances, landscaping, patio, assumable
- VA, \$119,000. Anderson, 292-8432. 4-BDR, "FOUR HILLS BEAUTY," 2 baths, great room, Pergo, tile, gorgeous
- vard. Francis, 857-2213. LAND/HOME PACKAGE: 3-bdr 2-baths w/garage, .65-acres, located in Tome/Adelino area, owner financing available. Rance, 861-3242, ask for
- CUTE 2-BDR. MOBILE HOME, located at Four Hills Mobile Home Park, great condition, \$25,000. Lucero, 255-9649
- 2-BDR, COTTAGE, 1 bath, in Eagle Nest Lake, 17 miles from Red River & 10 miles from Angel Fire, fully furnished w/lots of antiques, \$75,000; unfurnished \$69,000. Martin, 296-8154.
- 3-BDR. HOME, near Copper/Tramway, FP, W/D, new stucco, carpet, paint, 1-3/4 bath, shed, garage, \$105,000. Mignardot, 254-9092. 4 BDR. HOME, 2-1/2 baths, 2,800 sq. ft.,
- brick ranch-style, new roof, new heater. & AC. Glenwood Hills neighborhood, market appraisal \$239,000 asking \$219,000 without realtor fees. Dwyer, 271-0741.
- 3-BDR. CUSTOM HOME, 2 baths, 2,270 sq. ft., LG, country kitchen, & more, unique, on golf course. Dahl, 864-4735.

WANTED

- FILING CABINET. 2-3-or 4-drawer, lock preferable, not mandatory, delivery after new year desirable. Underhill, 294-5774.
- FEMALE ROOMMATE, to share 3-bdr. house w/2 others, 5 min. from Sandia, \$275 + utilities. Gilliland, 294-3563/980-6294.
- FULL DRUM SET for band student. Feng, 275-6639.
- BOWFLEX EXERCISE MACHINE. Davidson, 821-0579 TIRED SANDIAN interested in doing
- handyman work, Hertz, 265-4729. FLUTE OR FRENCH HORN (key of F) for junior-high student, good condition, reasonably priced, new or used.
- Pacheco, 292-0490. SNOWBOARD, 125-cm or thereabouts. Ruby, 821-0982.

LOST & FOUND

- CELLPHONE, found in parking lot west of Medical & Gate 4, call & describe to
- claim. DePoy, 844-0891. GLASSES, found in 892/216, week of 12/4. Green, 845-8468.
- FAMILY RING, lost in Bldg. 831; very important to student, please call if found. Lacy, 856-1093.

Sandia, DOE, Navajo Nation sign MOU to work together





MOU SIGNING — Sandia, DOE, and the Navajo Nation signed an agreement Dec. 4 in Albuquerque to build working relationships between the entities (*Lab News*, Nov. 17). In the photo to the left, Navajo Nation President Kelsey Begaye, Energy Secretary Bill Richardson, and Sandia Executive VP Joan Woodard sign the memorandum of understanding (MOU). To the right stands moderator Laurence Brown (14171), Sandia tribal liaison. Above, Bill Richardson addresses the audience prior to the signing.

(Photos by Randy Montoya)

Sandians commit \$2M to their communities during the recent ECP/LEAP campaigns

By Janet Carpenter

Sandians kept their promise of raising "\$2M Again" during this year's recent Employee Contribution Plan (ECP) and Livermore Employees Assistance Plan (LEAP) campaigns. ECP raises money for United Way of Central New Mexico; LEAP, for local California agencies including three United Way groups and Combined Health Agencies in the Bay Area.

Total contributions are at \$2,127,010, which includes \$108,000 raised for last spring's Cerro Grande fire relief, LEAP contributions of \$214,404, and \$10,645 from remote sites.

Mike McClafferty (14404), 2000 ECP Chairman, came up with this year's ECP slogan, \$2M Again. "I would like to thank every Sandian — current, temporary, and retired — for their gifts

Thank-you note from Lenny Martinez

Each year, I'm impressed with the creativity of the teams and the Division representatives for achieving our ECP/United Way goals. This year, Sandia asked you for support of the Los Alamos community as a result of the difficulties they faced after the Cerro Grande fire. You responded. This year's goal was in jeopardy but we felt awkward about pressing because you had been so generous. We finally decided to include the gift but felt empty about claiming victory, until now. Not only did we help out in Los Alamos, but we also exceeded our goal of \$2M, not counting the Los Alamos donation. All total, many of us have much to be thankful for, but one of the things I am most thankful for is working with all of you, because a portion of our labors is translated into this generosity that is so helpful to our communities. Al Romig and I, as Campaign Co-Champions this year, wish to express our gratitude on behalf of our colleagues. Paul Yourick and his team will need your help again next year as he looks forward to higher participation rates, continued successful work with the represented folks and all our employees, and continued leverage of Sandia's values and contributions into being great neighbors.

— Lenny Martinez, VP 14000

of money, time, and talent, resulting in the second year we have exceeded \$2 million," he says. "It is a pleasure to work for a company that understands and supports the needs of the less fortunate in the community we live in and support.

"I have enjoyed being the 'chief beggar' for the corporation," he says, "and would like to thank the core team, with special thanks to Juanita Sanchez and her 80 to 100 representatives for a successful campaign."

Participation is at 71.5 percent, with the average gift at \$363 - \$23 more per participant than last year; 1,737 give at the Leadership Giving level (\$500 or more).

Involvement in ECP/LEAP campaigns is top to bottom, crossing all organizations and employee categories. Lockheed Martin Corporation's corporate gift is \$40,000. Temporary, non-regular employees contributed \$13,568 and retirees contributed \$22,105.

Although Advanced Concepts Group Div. 16000 achieved 100 percent participation, Legal Div. 11000 wins the traveling Rick Orzel Award — for divisions with the greatest increase in participation — with an increase of 30 percent over last year. The Union Leadership Award went to Office and Professional Employees International Union for its 9.6 percent increase in participants.

"I am constantly impressed at the generosity of the people who work here," says ECP project coordinator Juanita Sanchez (12660). "We at Sandia really care about the people in our community, which expands beyond the New Mexico borders. I see the difference we make in the community, and that makes me proud to know that we touch the lives of so many, including some of us employed at Sandia who have benefited from the generosity of others. On behalf of the clients of those hard-working agencies, and on behalf of my family I thank you who have contributed either in time, skills, or money to make our world a little brighter."

Next year's campaign will be led by Paul Yourick, Manager of Integrated Safety and Security Dept. 7102, with the assistance of Fred Sexton, Manager of Reliability Physics Dept. 1762. "I look forward to leading next year's campaign and working with all of the wonderful Sandians who devote their time to making the campaign successful," says Paul. "The generosity of Sandians and retirees continues to impress me. Let's do it again in 2001."

Coronado Club

Dec. 15 — Dining, 6-9 p.m.; Dancing with Midnight Magic, 7-11 p.m.

Dec. 21 — Adult bingo. Early bird, 6 p.m.; regular 6:15 p.m.

Dec. 22 — Dinner, 6-9 p.m.; dancing, 7-11 p.m. Music by Midnight Magic.

Dec. 31 — Celebrate the New Year at the Coronado Club. Cocktails, 6-7 p.m.; dinner, 7-9 p.m.; dancing, 9-1 a.m.; breakfast, 12-1 a.m. Entertainment by Java "5." Price: member, \$22.50 per person; nonmember/guest, \$25.

Dec. 23-30 — Coronado Club closed. The Coronado Club will be available for catered events during the winter shutdown for parties of 50 or more only.

Sandia News Briefs

Fred Dickey elected Optical Society of America Fellow

Fred Dickey (2612) has been elected a Fellow of the Optical Society of America. He is being recognized for "seminal contributions to a variety of areas within optical sciences and engineering, including pattern recognition, radar, metrology, and beam shaping." Fred is also a Fellow of the International Society for Optical Engineering (SPIE).

Send potential Sandia News Briefs to Janet Carpenter, jacarpe@sandia.gov, Dept. 12640, MS 0165, fax 844-0645.

Take Note

Sandia employees are invited to join the Friendship Force of New Mexico members in hosting the Friendship Force group from St. Petersburg, Russia, in April. Do you speak Russian (helpful but not necessary)? Would you enjoy having a guest or guests in your home? Are you available to show local points of interest? For more information and to volunteer, contact Homer Dale at 848-1883 or Peggy Birmingham at 293-4162.