

New 'reengineering' effort may lead to radical changes

Employees should expect fewer hassles, more efficient methods

By John German

Lab News Staff

Labs' top management is planning to do at Sandia what many US business leaders have been doing lately to make their companies stronger and more efficient in today's lean economy — "reengineer" from the top down.

Reengineering means taking a comprehensive look at the way the Labs does business, then implementing significant changes that make sense both to employees and to Sandia's customers. Successful reengineering allows many impractical or obsolete processes to be thrown out and replaced by radically different, more efficient processes.

"It's basically taking a systems approach to our work," says Larry Bertholf, Director of newly

Real cost savings can be realized without any cuts to salaries, benefits, or staffing levels.

established Operating Process Reengineering Center 12400. "We pride ourselves in being good systems engineers and systems analysts, but we really haven't taken a good systems view of the laboratory and how it should run."

Executive VP Jim Tegnalia is driving the effort, which is designed to decrease overhead costs, reduce bureaucratic hassles, minimize the time required to get routine tasks done, increase administrative flexibility, clarify lines of responsibility, eliminate redundancy, and get more people directly focused on customer output.

Larry expects a side benefit of reengineering to be that Sandians may enjoy their jobs more. "It frees up people to do what they're

hired to do," he says.

Real cost savings can be realized without any cuts to salaries, benefits, or staffing levels, says Jim, who wants changes implemented within two years.

Overhead costs are an issue

Examples of costly bureaucracy at Sandia are easy to find. One employee identified 52 "people steps" required to purchase something for Sandia. Another complained that it took 27 steps to change an approval signature on a form.

"We have a 45-year-old paper-based system," says Larry. "To get something done, you
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Counterproliferation program being forged to respond to regional nuclear threats

By Ken Frazier

Lab News Managing Editor

With the Cold War over, the threat of nuclear conflict is a thing of the past — right? Wrong.

Many people may wish to believe that, but while the global nuclear standoff of the superpowers has now receded as a threat, many analysts fear that something even worse may be taking its place — the growing availability of weapons of mass destruction to regionally powerful nations.

"Unfortunately, we now face an emerging threat that may in some ways be even more serious," Sandia VP for Systems Applications Gerry Yonas (9000) says in a new policy analysis he wrote on counterproliferation strategy. Many nations now can develop or buy ballistic missile technology, the principles of nuclear explosives are no longer arcane, and much excess nuclear material exists worldwide.

"The mere possession of weapons of mass destruction can embolden a regional military power," notes Gerry. "And actual use of such
(Continued on Page 6)

"Unfortunately, we now face an emerging threat that may in some ways be even more serious."

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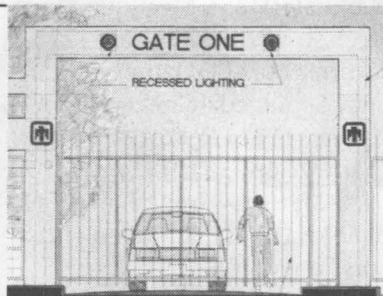
Sandia National Laboratories



CAPTAIN PLANET, also known as Energy and Environment VP Dan Hartley (6000), had a difficult time finding a phone booth near Hardin Field during Earth Day festivities last week, but he found that a Mardix booth worked nearly as well. Here, Planet (er . . . Hartley) shakes hands with a young admirer. Sandia, DOE, and Kirtland Air Force Base employees and their families took part in the celebration April 22, which featured various exhibits of Sandia environmental remediation, renewable energy, and waste minimization activities. See photos and text on page 10. ("Captain Planet" © Turner Broadcasting System, 1992. All rights reserved.) (Photo by Mark Poulsen)

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This & That

With friends like this... - "I don't know how you stay overweight with all the running and exercising you do," an alleged friend said to me the other day. "Oh, I really don't do all that much," I replied, but I should have known better. "Yes, you do," he said. "You're always running your mouth and exercising bad judgment." Ouch!

* * *

Insensitive acronym - I noticed an acronym the other day that seems particularly insensitive. As I worked on several stories in this issue about Sandia's retirement plans (see pages 4-5), I realized that our retirement plan for management employees is called the Retirement Income Plan, or RIP. You have to be very cautious when and how you mention RIP to retirees.

* * *

Ed a bad influence? - Although he never "fessed up" to painting the "screaming yellow" butt cans in front of Building 800 those other colors embellished with stripes and polka dots, I strongly suspect it was the work of sneaky Ed Graham (7800) and crew. Not long ago, I thought Ed had absolutely no artistic taste, but after I saw the paint job on the cans, I upgraded him slightly. I now think he has very little artistic taste. But some people apparently disagree. My friend Karen Smith (6500) saw the cans for the first time last week and thinks they're so cute that she's thinking about taking up smoking. Oh, my, what have you done, Ed?

* * *

Did anyone panic? - As a preface to our "What Do You Think?" question that we posed in the last issue (April 15) we said, "Because this is Secretaries' Week, we decided to ask secretaries and office administrative assistants specifically what you think about..." What we meant to say was that we planned to publish the responses to the question during Secretaries' Week, which is definitely this week (see responses on page 8). After I noticed our goof-up, I couldn't stifle a laugh when I thought about the panic that must have gone through the minds of at least a few managers who read "Because this is Secretaries' Week..." on a Friday that would have been the final working day of the special week.

* * *

Maybe it's an overbyte - Decisions, decisions! A lot of *Lab News* readers have a technical background, but others don't, and it's sometimes difficult to know how far to go in defining technical terms. A while back, we used the term a "petabyte of information" and defined petabyte as "one billion megabytes." We decided to let it go at that, even though we realize some folks don't know what a megabyte is. At one point one of our crack staff members said we might be as well off by defining that much info as "a humongous gob to the nth."

* * *

Efficiency expert? - Radio Sandia's Bruce Hawkinson (12662) offers a helpful hint about how to make the most of your time. He says you can get a lot more done if you make more snap judgments instead of studying issues first. As everyone knows, we're big on continuous improvement at Sandia, and Bruce's decision-making method certainly leaves room for lots of that. I think he may need some personal reengineering. - *Larry Perrine*

President's May 5-6 quarterly dialogue sessions postponed

Sandia President Al Narath's office has announced that last-minute conflicts have necessitated the postponement of the quarterly dialogue sessions that he had scheduled with Sandia employees May 5-6. Al had been scheduled to speak with Sandia/New Mexico employees May 5 and with Sandia/California employees May 6.

At *Lab News* press time, the sessions had not been rescheduled.

Feedback

Q: The Upward Feedback Program has provided a valuable mechanism for staff to provide feedback for line and center management, thus improving overall communication and business. However, I'm unaware of any mechanism whereby upward feedback is provided for program managers.

We have many excellent program managers, and these people deserve this feedback. Likewise, there are some program managers who could benefit by knowing areas in need of improvement, and they deserve this information as well.

If there's a mechanism in place to accomplish feedback to this category, what is it? If not, why not?

A: It's true that Upward Feedback was initially designed for line managers (team supervisors and up). The questionnaire has many questions on it that are inappropriate, only partially applicable, or not applicable to those without line management responsibility. For example, question 10 says: "Disciplines and criticizes constructively." While program managers may criticize employees' work, line managers are responsible for discipline.

Even so, as a result of numerous requests, beginning in 1993, program and project managers were invited to participate with the understanding that some of the questions would not apply, or would be inappropriate.

At the beginning of the process, the number of questionnaires to be sent to each line manager's organization is determined by checking the Human Resources data base for employees with identical organization numbers. Since many program and project managers have employees from several different organizations working for them, we cannot determine how many questionnaires they might need, so we send them memos asking that question. Some program and project managers do participate by requesting questionnaires for employees working with them.

Ralph Bonner (3500)

Crawford to speak May 4 at TTC

John Crawford, VP California Programs 8000, will be in Albuquerque Wednesday, May 4, to address employees about Sandia/California — its facilities, people, programs, and changes. John says rapidly changing operating environments increase the importance of cooperation and communication among the various Sandia locations if we are to operate effectively as a single institution. All employees are encouraged to attend this session from 9 to 10:30 a.m. in the Technology Transfer Center (Bldg. 825).



Sandia LabNews

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MARTIN MARIETTA

Card of thanks

Dick Brodie, Special Assistant for Weapons Dept. 25, died March 29 after a long illness.

The family of Dick Brodie wishes to express appreciation to those who sent cards and who were present for the funeral services. Your sympathy and concern have been a source of strength and peace.

Genelia Brodie

Welcome

Albuquerque — William Fagan (10600), Rose Gehrke (12111), Norma Goodwin (12111), Stephanie Hlad (12111), Susan Kitsch (12111), Anthony Laszlo (10325), Monique Maxey (7141), Angeline Madrid-Ritchey (12111), Analisa Martinez (12111), James Osman (12830), Lucy Sepulveda-Chavez (12111), Mary Katherine Shears (12111), Christine Vigil (12111), Diane Wieting (12111)

Other New Mexico — Irene Burand (12111), Greta Congable (12111), Kathleen Hurst (12111), Lois Lauer (10322)

Latest CAD technologies offer powerful design tools

Cornerstone of future design technologies at Sandia

Welcome to Sandia in the 21st century, where reality is virtual, weapon systems are grown, and welders receive information from their welding machines. Impossible? Hardly. It may not yet be 2001, but scientists and engineers at Sandia are busily "growing" advanced components and assemblies, redefining reality, and providing the methodology that will enable a process, like welding, to ensure that quality product is provided by utilizing real-time feedback and control.

In the not-too-distant future, these new capabilities may well be in the hands of all Sandia researchers and designers. Sandia/California is applying the latest computer-aided design (CAD) technologies and tools to improve design, development, and manufacturing processes. The result: powerful new tools that streamline training and facilitate rapid, cost-effective development of weapons and other products.

"The processes and techniques we are developing will be used in a wide range of projects," says Chuck Oien, Manager of Advanced Systems Engineering Dept. 5375. "We currently use CAD tools for the enduring stockpile activities, advanced systems, and unmanned aerospace vehicle (UAV) projects, as well as modeling processes like welding. Other projects range from virtual reality (VR) applications to automated thermal and mechanical stress analysis."

Reducing product cycle time

According to Chuck, the model-based design approach used in these projects will eventually pay major dividends for Sandia. Engineers can expect to reduce the product-realization cycle from about seven years to only a few years. This not only eliminates years of costs, but also frees designers and employees to work on other projects.

More efficient designs may also be possible. For example, designers recently computer modeled a valve for a project and produced a hardware model of it via stereolithography. Working with the model prototype, engineers were able to quickly reduce the valve's weight by 60 percent in three design iterations. Using these tools, they also identified design and manufacturing improvements. The time to design and develop the product was cut approximately in half.

Engineers are also using CAD tools, including 3D models and animation, to integrate payload packages into UAVs for global warming studies applications. Instrument packages come in from all over the country and must be packaged with other instruments within a very small payload space. Engineers model that space on the computer screen and add models of the instrumentation. Using animation tools, the 3D models can be manipulated and arranged to assess the fit within the designated space. Tradeoffs and rearrangements can then be conducted without actually having to assemble the payload.

CAD is also used for more down-to-earth

projects. Most immediately, the process of welding is being used as a prototype project for development of process modeling tools that utilize emerging CAD technologies.

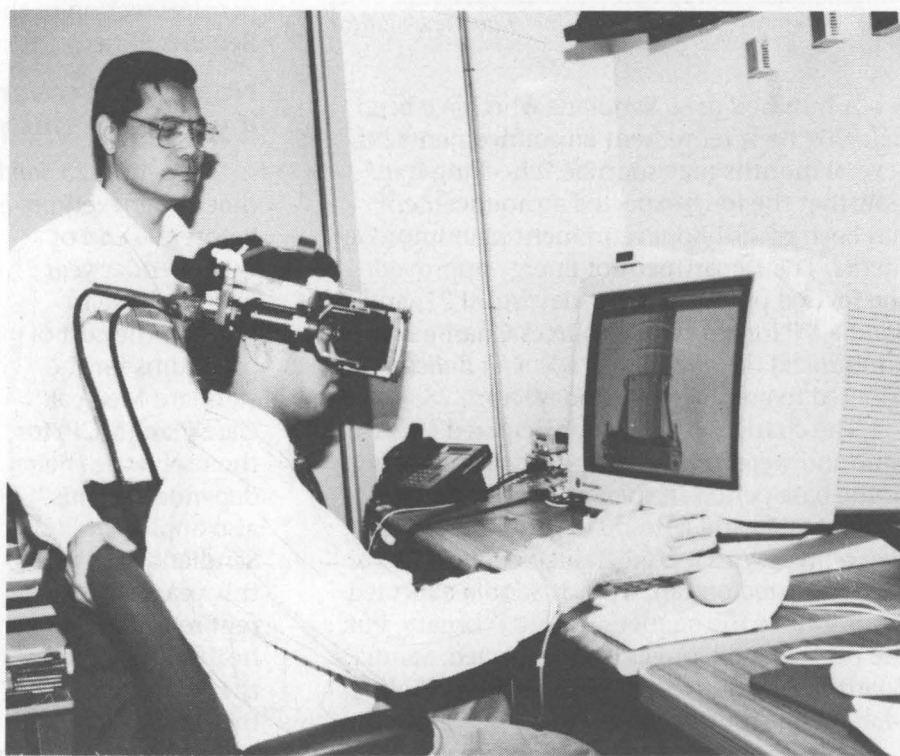
"For tritium and hydrogen storage vessels, the weld seams must be nearly perfect," says Chuck. "We are developing a process called SmartWeld that incorporates sensors to feed data back to the welder, controlling the process in real time, thereby ensuring a quality weld. We're considering similar applications for plating and cleaning processes."

Basic CAD technology is the foundation upon which the other computer-aided technologies — 3D modeling/animation, electrical design, stereolithography, and virtual reality— are built. When engineers create a solid model in CAD, they generate comprehensive numerical data sets that become accessible to others like the thermal and mechanical stress analysts, the animators, and the manufacturing engineers.

Stereolithography uses the solid model data to create a pattern for a laser to follow. By focusing the laser pattern into a vat of organic polymer, engineers literally "grow" parts dictated by the laser's pattern. This eliminates the expensive and time-consuming process of building metal prototype parts and assemblies. It also enables engineers to identify and correct design issues early, resulting in a more efficient design process.

Virtual reality applications immerse researchers in a realistic, computer-generated, virtual environment. Using instrumented gloves, visors, and stereo headphones, the researcher can manipulate and interact with the solid model and other objects in the environment. Abstract data may be represented in these virtual objects to help researchers interpret interactions and relationships in complex systems. Exploratory Systems Dept. 8111 is developing several VR-based projects, says David Andaleon, a member of the Department 8111 technical staff. David and his Sandia/California associates collaborate with their New Mexico counterparts, such as Sharon Stansfield (Intelligent System Principles Dept. 2121) and Creve Maples (Computer Architectures Dept. 1415).

One VR project has been used to train operators at Tonopah Test Range (TTR) to track bombs and missiles during flight tests. A computer-generated image simulates real flight tests, and tilt and rotation data are collected from the operating tracking mount. The image



VIRTUAL VIEW — Roy Lee (8117, standing) and David Andaleon (8111), wearing the virtual reality headgear and special glove, collaborate in their Virtual Reality Lab in Building 910.

is projected into the tracking mount's sighting scope that the operator looks through, creating a virtual reality environment. The operator interacts, in this instance, through a joystick.

In a Laboratory Directed Research and Development project, David and his associates are developing an instrumented glove that will simulate the sensation of touch when the wearer interacts with a virtual object. Current technology to support VR touch, also known as tactile, or haptic, feedback, is not advanced. Sandia/California developers are collaborating with their New Mexico counterparts to provide an instrumented glove that may provide the wearer with a virtual object's texture and material information.

Dual-use technologies

The VR research at Sandia may well reach beyond the laboratories. David notes the synergy between assistive technologies — technologies to improve the quality of life for people with disabilities — and virtual reality. "Much of the early research into simulating the sensation of touch came from Braille research," says David. Multisensory human computer interaction, which is a key element to virtual reality, should assist computer access for people with one or more sensory impairments. Sandia is just beginning to investigate VR for people with disabilities, but much more can be done.

"We're just beginning to realize the opportunities that virtual reality opens to us," says David. "As it exists now, it's a valuable training tool, particularly in situations where the real-world training environment is hazardous or difficult to physically mock up. As the technology develops, embraces, and refines interactions to our human senses, I think we'll see an explosion of virtual reality applications in areas that we never dreamed of."

Congratulations

To Patty (8116) and Dennis Loosli, a daughter, Laura Marie, March 25, 1994.

Sandia California News

Retirement plan improvements announced this week

DOE approves long-awaited changes

By Larry Perrine

Lab News Editor

A hundred or so Sandians who have been delaying their retirement announcements for several months may soon be "checking it in" now that the long-expected announcement has been made about retirement plan improvements. The Department of Energy approved the revised plans last Thursday, April 21, and Sandia VP for Human Resources Charlie Emery announced the changes in a *Sandia Bulletin* distributed to employees Monday, April 25.

The changes had been anticipated for some time and were made in response to the "aging" of the base period in the Retirement Income Plan formula and a desire to provide prospective retirees with a predictable benefit. The *Lab News* reported on Jan. 21 that Sandia expected to announce the changes by late February, but the process took longer than expected. Sandia's Board of Directors approved the changes at its March 9 meeting.

Most changes announced in the April 25 *Bulletin* apply to the Retirement Income Plan (RIP) for management, or professional, employees, but some changes also apply to the Pension Security Plan (PSP) for represented (union) employees and equivalent employee classifications. (An increase in basic payments for new retirees in the PSP was negotiated last fall between Sandia and all three unions representing Sandians.)

As the April 25 *Sandia Bulletin* explains, most pension plan improvements are being made retroactive to Oct. 1, 1993, meaning that participating employees who retired on or after that date will automatically qualify for the improved benefits.

Gimme a high five

The biggest improvement for Retirement Income Plan participants is the adoption of a constantly moving "window" that is used to calculate employee pensions. This feature will generally mean an increase in the pension amounts for RIP participants who retire after Oct. 1, 1993. Participants who qualify for a retirement pension after that date will have their pension calculated on their annualized average salary for the five years (60 consecutive full calendar months) of employment within the 10 years immediately preceding retirement that produce the highest result — termed the "high five" year period. The precise formula for determining an annual pension under the RIP is 1.5 percent times an employee's annual earnings during these five years times his or her years (including partial years) of credited pension service.

Previously, retirement payments were based on a similar formula involving a participant's average pay during a set period of time that was updated periodically by Sandia. Just before this change, that period was Jan. 1, 1987, to Dec. 31, 1989.

(Note: The precise pension formulas used previously, the qualifying criteria, and definitions are beyond the scope of this article. Employees who need more information about the basics of either retirement plan — the RIP

or PSP — can find detailed information in the pension section of their individual Employee Benefits folder.)

No medical coverage payments if you retire this year

The April 25 *Sandia Bulletin* also announced that current retirees and Sandians who retire before the end of this calendar year will not have to share in the cost of premiums for the standard Medical Care Plan (MCP) for themselves or their dependents. This also applies to Sandians who retire this year and current retirees enrolled in Sandia-sponsored health maintenance organizations (HMOs) if the costs for the HMO do not exceed those of the standard MCP.

As previously announced, active employees next year will begin paying \$17 a month for medical coverage if they have one dependent or \$28 a month if they have two or more dependents.

Other improvements announced

Other pension plan improvements announced in the April 25 *Sandia Bulletin* include a more-liberal service bridging policy (for purposes of building credited years toward retirement and other benefits) for employees in the RIP or PSP who terminate and are subse-

Most pension plan improvements are being made retroactive to Oct. 1, 1993.

quently rehired. Effective Oct. 1, 1993, subject to pension plan provisions, all rehired employees will bridge their prior service after 5 years, or earlier, after working 1,000 hours, if:

- the period of the break in service is less than the period of prior service, or
- the period of the break in service is less than 5 years, or
- the employee was vested before the break in service.

Another improvement involves reduced charges for post-retirement survivor annuity coverage for both service and disability pensions for employees who retire. Charges are being reduced from 10 percent to 7 percent for this coverage. Likewise, the cost of this coverage for deferred vested pensions is reduced from 12 percent to 10 percent. The reduced charges became effective April 21, 1994, and they apply to PSP and RIP participants who retire or terminate on or after that date.

No changes now for current retirees

No changes have been made for current retirees, and none are being considered at this time, according to Charlie Emery's announcement. Sandia's Board of Directors has discussed the issue of ad-hoc increases for current retirees, but no action has been taken. According to a question and answer section of the April 25 *Bulletin*, "An important factor behind that decision was the low rates of inflation since the last increase. Another factor was the general absence of increases granted by private sector companies to their retirees in the same period . . . Sandia will continue to monitor changes in inflation and industry patterns."

HR administrators discuss pension changes

The Lab News talked with Charles Mika and Ralph Bonner of the Human Resources Division about the pension plan changes and how Sandia's retirement package compares with other packages in industry and at other DOE labs. Charles is Manager of Pension Fund/Benefit Program Management Dept. 3542, and Ralph is Director of Human Resources Center 3500.

Here are some questions we asked them and their responses:

LN: Employees, especially those who are nearing retirement, will surely welcome the improvements, but some folks believe our retirement plans — Retirement Income Plan and Pension Security Plan — don't compare favorably with some others. Is that true?

Charles: Employees should evaluate our benefit program in its entirety. When you look at our pension plans, the savings plan, health-care benefits, and life insurance plans, Sandia has a very solid, above-average benefit package for the retiree. You certainly should consider the savings plan and pension plan together as retirement pay programs.

LN: Some employees compare our pension plans to those at Los Alamos and Lawrence Livermore national labs, and say that ours don't measure up to theirs.

Ralph: The plan at the University of California [which operates LANL and LLNL] is an exceptional retirement plan by any standards, and our colleagues at Los Alamos and Lawrence Livermore enjoy nice benefits. But, we have a very good retirement

plan by industry standards.

LN: Just considering the pension plans?

Ralph: Yes, just considering the pension plans. And when you throw in our early retirement benefits, what you find is the earlier you retire from Sandia, the better the benefits [compared with early retirement benefits of other groups]. We have very good early retirement benefits. [Note: Sandians who meet minimum age and service requirements can retire from the RIP without any reduction for early retirement as early as age 55. The University of California plans begin reducing for early retirement at age 60.]

Charles: Also, when comparing our pension benefits to those of the University of California, everyone should keep in mind that theirs is a contributory plan. Sandians have not had to contribute any money at all to our plan since 1975.

Ralph: In short, our pension plans compare favorably with industry and with the rest of the DOE complex. And, when taken in conjunction with the rest of the benefit package that we have for retirees, ours is a very good package by anyone's standards.

LN: Any projections for how many folks may retire this year?

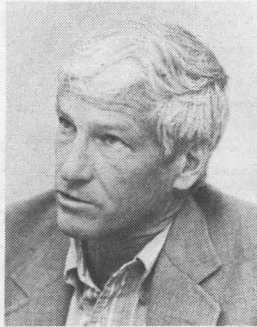
Ralph: We have somewhere around 130 people who were waiting on the announcement of these improvements before retiring. My projection is that between now and the end of the year we will have somewhere around 300 people retire. Normal retirement is about 160-200 folks per year.

Labs challenges report about 'excess' pension assets

Leaders say recommendation does not represent anyone's best interest

A recommendation made public last week that "excess assets" from Sandia's pension plans be turned over to the federal government to help offset the deficit has drawn sharp criticism from Sandia management.

Human Resources Center Director Ralph Bonner (3500) told the *Lab News* late last week that Sandia management does not think the recommendation is in the best interest of Sandia, DOE, or the government, and that Sandia is making its position clear to the Department of Energy's Albuquerque Operations Office (DOE/AL). That office has the responsibility for proposing a DOE position by May 27.



RALPH BONNER

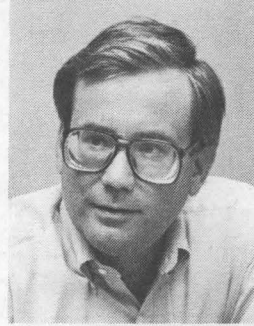
The recommendation that several hundred million dollars in what it terms excess assets be returned to the government was made by the Department of Energy's Office of Inspector General (IG) in Washington, D.C., in a special report that was sent to DOE/AL on April 13. Sandia received copies shortly thereafter.

To ensure that Sandians got balanced information about the IG report, a special *Lab News* report was prepared and distributed to all employees on April 18 and to all retirees shortly thereafter.

Assets not excessive, says Mika

Basically, the IG report — based on an audit it did last year of Sandia's two pension plans' status at the end of 1990 when the plans' assets totaled \$1.29 billion — calculated that the plans contained \$588.9 million in excess assets on a current value basis, and recommends that DOE initiate action to return those assets to the government. (The amount of assets in the plans has changed since then, and the amount characterized as "excess" will tend to be lowered by recently announced changes to the plans — see story on previous page.)

Charles Mika, Manager of Pension Fund/Benefit Program Management Dept. 3542, said in the special *Lab News* report that the Sandia plans' well-funded status is largely due to the exceptional investment gains in the capital markets for the past 10 years. "It would not be prudent," he said, "to assume that similar returns will occur regularly in the future. Given the maturity of the plans and uncertain future financial markets, Sandia does not believe the current level of assets in the pension trust is inappropriate or excessive."



CHARLES MIKA

(Because all Sandia employees and retirees should have received a copy of the special *Lab News* report by now, we are not repeating the basic information in it, but several points are worth repeating: The IG report noted that the issue is complex, that DOE/AL officials had earlier expressed opposition to the IG's basic recommendation, and that it would be very difficult for the government to go through any process to take any funds from Sandia's pension plans. For the government to take any excess funds, Sandia's Board of Directors would actually have to adopt a resolution to terminate the plans, and Sandia is *not* considering any such actions.)

Since the special *Lab News* report was issued to employees, several have called Charles' office to express concern and ask what they can do, and a group met at Sandia/California for similar purposes.

"There is some question about the resolve of Sandia management to oppose the IG's recommendation," says Ralph. "The Labs vigorously opposes the IG recommendation and really does view it as something that does not represent anyone's best interest. There are some points at which you have to stand up and be counted, and this is one of those points. We do care, and we think

carrying out the IG recommendation would be a bad decision."

Ralph also points out that the very term "excess assets" is subject to debate and that assets can change quickly: "We have more assets today than we had in 1990, but we also have less assets today than we had 15 days ago. The Dow [Dow Jones stock average] is down about 300 points in the past three weeks, and that is an approximate 8 or 9 percent reduction. Also, our pension plan improvements will increase our long-term pension plan liabilities.

"In short, we don't know what the stock market will do, what the rate of inflation will be, or what further improvements we may need to make in our pension plans. 'Excess assets' is a term that's open to much debate, and the numbers can change quickly."

Employees who want to examine a copy of the IG's report can check with the information desk at the main library at Sandia/New Mexico or Sandia/California. Additional questions can be directed to Charles Mika on 844-9271 or Mark Biggs on 844-1511. — Larry Perrine

"...we think carrying out the IG recommendation would be a bad decision."

Annual retiree picnic scheduled for May 26

The 31st annual get-together and 24th picnic for Sandia retirees will be held Thursday, May 26, 4-7 p.m. at the Coronado Club. Members of Large Staff will join retirees and their spouses, and the Bob Weiler Band will provide musical entertainment.

Parking spaces are available at the Coronado Club, the Base Chapel, Que Pasa Recreation Center, and the Sandia Base School east of the Club. Handicapped parking will be available in front of the Club's main entrance. Handicapped individuals may use the front entrance, but everyone else must enter at the swimming pool and patio entrance. A shuttle bus will operate from the parking lots on B Street to and from the patio entrance. Security guards will direct traffic to the parking areas. It is important to observe the "no parking" signs along the residential area streets and any reserved spaces for delivery vehicles in all lots. Parking will not be allowed in the three rows closest to the building in the Que Pasa lot. This is an adult picnic. Children will not be admitted.

Alicia Leyva transplant fund established

Family and friends have set up a fund to raise money for a heart/lung transplant for 22-year-old Alicia Leyva, who was diagnosed recently with primary pulmonary hypertension. Alicia's father, David Leyva, works in Facilities Operations and Maintenance Dept. III 7818; her stepmother, Mary Leyva, works in Medical Administration Dept. 3332; and her stepfather, John Brockmann, works in Energetic Materials and Fluid Mechanics Dept. 1512. Contributions can be made to the Alicia Leyva Transplant Fund at any Sunwest Bank. Donations to this fund are not tax-exempt.



MORE THAN A TENT — Patty Baca of Property and Materials Services Dept. 7617-1 maneuvers a load of computer equipment toward an empty spot on the paved floor of one of the three new shelters erected to protect equipment sent to Property Reapplication. The shelters — made of metal ribbing covered with a vinyl material — resemble quonset huts, the corrugated metal buildings produced during World War II. They are located in the Reapplication yard near Bldg. 996, on the west side of Ordnance Street between Tech Areas 1 and 4. (Photograph by Randy Montoya)

Counterproliferation

(Continued from Page 1)

weapons cannot be discounted."

To counter this threat, a national program of counterproliferation is now being forged by agencies of the Department of Defense (DoD) in collaboration with industry and the DOE national labs, and Sandia is playing a vital role.

In a recent DoD meeting in Colorado Springs at which several Sandians presented papers, four DoD working groups were formed, and they are expected soon to make recommendations for a DoD acquisition strategy.

Within Sandia, the activity is a Labs-wide effort coordinated by Carolyn Hart, Director, Exploratory Systems Development Center 9100. It draws on and complements many Work for Others projects and the Labs' large and long-existing program in nonproliferation, implementing concepts and technologies from a broad cross section of the Labs.

"We have a unique opportunity to focus critical capabilities of the DOE laboratories to provide real, integrated solutions to the scientific and technological challenges posed by the weapons-of-mass-destruction threat," says Carolyn Hart.



CAROLYNE HART

"Through our collaborations with various DoD technology, planning and policy, and user organizations, and by forming effective precompetitive teams with industry and other government laboratories, we can play a major role in this national program for maintaining stability and peace into the future."

Nonproliferation is the use of diplomacy, economic incentives, and export restrictions to discourage countries from developing weapons of mass destruction. (Such weapons include chemical and biological as well as nuclear.) It is, of course, an urgent foreign policy matter for the US.

But what happens if these tools fail to prevent what Gerry terms a "fractious regime" from acquiring such weapons and making threats? That's when another option may have

'A very substantial, very talented team'

"We are well positioned to provide leadership in developing critical technologies for many of the subelements of the emerging national counterproliferation program," says Carolyn Hart, Director, Exploratory Systems Development Center 9100 and coordinator of Sandia's counterproliferation activities.

Sandia groups involved include, for sensor systems, her center, Systems Research Center 5900 under Bill Childers, and Ron Andreas' Electronic Subsystems Center 2300; for information systems, Center 9100, Tom Sellers' Monitoring Systems & Technology Center 9200, and Data Systems Engineering Center 9400; for precision navigation and precision conventional munitions, Center 9100; for ballistic and kinetic-energy penetrating weapons, Don Rigali's Aerospace Systems Development Center 9800; and for systems analyses and model-



SIMULATION TECHNOLOGY — Dan Rondeau (Modeling and Simulation Dept. 9903, standing) works with Air Force Lt. Col. Denny Lester at a simulator in the Theater Air Command and Control Simulation Facility on Kirtland AFB. Lester is Deputy Commander of the facility. Dan is a member of a DoD working group on command, control, communications, and intelligence, one of four teams planning a new counterproliferation effort to which Sandia is contributing concepts and technologies.

to be considered — counterproliferation. Gerry defines this as "a military action against the capability for producing, storing, or delivering weapons of mass destruction, or against the weapons themselves."

'Exquisite situation awareness'

"Counterproliferation draws upon many of the same information technologies used in nonproliferation," says Gerry, "but adds exquisite situation-awareness and rapid precision strike capabilities."

Microelectronics, advanced sensors and target recognition, satellite communications, high-performance computing, and cost-effective product realization all would play an increasingly important role.

"What we have in mind is a revolutionary advance in information-driven warfare coupled with fast-response, precision-strike weapons. To a degree never before possible, information tech-

ing and simulation, Glen Otey's Strategic Studies Center 4100 and Mim John's Exploratory Systems and Program Development Center 8100.

"It's quite a group that we have," says Carolyn Hart. "We have a very substantial, very talented team that is capable of making major contributions to this vital national program."

"In addition," says VP Gerry Yonas, "we envision working with a national effort in advanced concept demonstrations with the Defense Nuclear Agency and the services, where we would be a team member." It is possible these demonstrations could involve the Nevada Test Site (NTS), which has been identified as ideal in many respects for such tests. If that occurs, Sandians in Jim Powell's Applied Physics, Engineering, & Testing Center 9300 and Ruth David's Development Testing Center 2700 would become involved.

nology would replace costly logistics and soldiers whose lives now must be placed in jeopardy."

"Clearly this is a DoD initiative of increasing importance," says Gerry of the emerging counterproliferation program. "We are playing a role as a member of the team in showing how the resources we have in the DOE labs (including Los Alamos and Lawrence Livermore) can provide a useful contribution — with the other team members, including the services — in pursuing this national objective."

The four DoD working groups recently formed are organized into four topics — "the four pillars of counterproliferation," as DoD's Bill Schuler calls them: Counterforce (precision strike), C³I (Command, Control, Communications, and Intelligence), Active Defense, and Passive Defense. Dan Rondeau of Modeling and Simulation Dept. 9903 is a member of the C³I group, which is linking sensors and information technology to provide the foundation for the other activities.

According to Gerry, Sandia is making strong input into the counterproliferation community through the Defense Nuclear Agency, the Office of the Secretary of Defense, the Advanced Research Projects Agency, and the armed services. "We have service/team relationships already under way and they are providing their inputs into these working groups."

At least five specific Sandia technologies are involved: synthetic aperture radar (SAR), automatic target recognition, unattended ground sensors, precision attack systems, and modeling and simulation. "We are widely recognized in this community for our work in these areas," says Gerry.

"One of the most exciting developments, in terms of Sandia, is the linking together of

(Continued on next page)

"... a revolutionary advance in information-driven warfare coupled with fast-response, precision-strike weapons."

Reengineering

(Continued from Page 1)

typically fill out a form, get the right signature, and put the form in somebody's in-box, where it sits until that person picks it up and does one little task."

The result, he says, is that "a lot of time elapses but little actual work gets done, and nobody's really responsible for getting things moving."

Part of reengineering is to eliminate the paper trail and make individuals responsible and able to do tasks on their own. To do that, employees need ready access to Labs information. Most forms and manuals will be put into electronic form and available on-line at employees' personal computers, says Larry.

A worthy example of a reengineered process is Sandia's new travel procedures, says Mike Ebben, Director of Treasury and Corporate Finance Center 10600.

"Before when we had to travel, we filled out a form with an authority approval, went to the cashiers, got cash, picked up tickets from a different window, traveled, filled out another form and attached our receipts, and sent it to a cashier or to a processor," he says. "Then it was evaluated and reviewed, an authority for payment was issued, and a check was written or our credit card reimbursed."

Now, he says, a company-issued credit card gives employees virtually one-stop shopping for travel.

"We've done away with the paper required for approving, we've done away with the cash processing, we've totally changed how we address travel, and we've made it more of a personal responsibility of the employee rather than a company responsibility."

That, he says, makes travel simpler for employees, reduces processing time, and saves Sandia money. "We've changed our whole outlook toward business travel," he says.

A leap in quality

Another indirect but important benefit of redefining and formalizing Sandia's work processes, says Executive Staff Director Virgil Dugan (12000), is that Conduct of Operations will become more directly applicable to people's work, and, thus, more apparent to our main customer, DOE. (Conduct of Operations are the formal processes Sandia establishes to ensure Labs operations are safe, environmentally benign, and cost-effective).

"That may seem a little abstract to most employees," says Virgil, "but tying our formal processes to real, everyday work is an important plus when DOE evaluates us."

Reengineering also supports DOE's broader objective of contract reform and cost effectiveness, major items on Energy Secretary Hazel O'Leary's agenda and issues that the Secretary's Task Force on Alternative Futures for the National Labs will certainly be taking a hard look at during the coming months. "We must prove to DOE that we can improve our responsiveness and cost effectiveness," says Jim.

Although pleasing the customer is the cornerstone of quality, reengineering works in tandem with quality in other ways, adds Mike. While the quality initiative focuses on making many small improvements to individual work processes — continuous improvement —

reengineering focuses on making sudden, radical changes to certain processes from a Labs-wide perspective.

"One side effect of our quality initiative has been improved processes within individual organizations at the cost of commonality," says Larry. "Until now, nobody's looked at the big picture."

A major concern during reengineering will be integrating changes so they make sense for everybody at the Labs, he says.

Details still sketchy, but . . .

As a first step in reengineering, Mike Eaton (formerly director of Data Systems Engineering Center 9400) was recently named Chief Information Officer (13100), reporting directly to the President's office. Part of his job will be to put into place a coordinated information infrastructure that can handle the future information needs of the laboratory. (Details of the new Chief Information Officer position will be covered in a future issue of the *Lab News*.)

In addition, six business areas have been identified that need immediate attention, each with a vice president or director assigned to it: finance (Paul Stanford, 10000), information management (Mike Eaton, 13100), human resources (Charlie Emery, 3000), facilities (Lynn Jones, 7000), program and project management (John Crawford, 8000), and compliance and external relations (Lynn Jones).

As Labs top management begins to look toward improving other business areas in the reengineering effort, more teams will be established — as many as 16 or 20 by next year. "Eventually, everybody at the laboratory is going to be a part of the overall reengineering effort," says Mike Ebben.

Mike Ebben and Larry Bertholf will facilitate the reengineering effort, making sure all changes are made in an integrated fashion. Larry will focus on "operating processes" (those that have to do with delivering products to Sandia's customers, such as research, engineering, development, and testing). Mike will focus on "management and support processes" (those that support the operating processes and allow them to be efficient, such as finance, human resources, facilities, etc.).

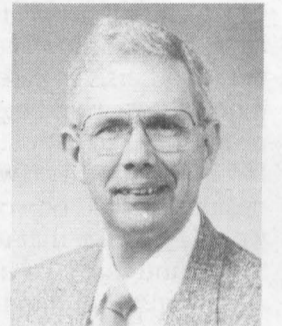
Jim notes that the need for reengineered work processes was formally identified by the recently completed "Information Enterprise"



MIKE EATON



MIKE EBHEN



LARRY BERTHOLF

study led by Paul Robinson, VP for Laboratory Development Div. 4000, and Arlyn Blackwell (12200), former Director of Engineering Integration Center 2800.

The study recommended that before a coordinated information infrastructure could be developed and managed at Sandia, top management must first commit itself to improving work processes on a Labs-wide scale. Part of that commitment was to appoint a Chief Information Officer with the responsibility for managing such an infrastructure.

More work, not fewer people

Larry admits that reengineering has been used in recent years by many US companies to accomplish downsizing — to get the same amount of work done with fewer people.

But, he says, Sandia takes a broader view of reengineering — to do more work with the same number of people. "The more time people have to do the work they were hired to do, the happier they and the customer are going to be," he says. "The happier the customer, the more work Sandia can expect to receive in the future, which leads to a bigger impact on the nation."

In fact, he says, overbooking is a significant problem at Sandia right now, with so many requests for technical help that Sandia cannot realistically handle them all. A reengineered laboratory will be better able to handle the excess workload and give Sandians greater freedom to pursue new work, which increases Sandia's value to the nation.

"As resources become more and more scarce," adds Mike, "the lab that can produce the most R&D at the least cost is the lab that's going to get the nod from Congress."

In addition, Sandians may be leaving in increasing numbers during the next several months with the changes in the retirement plan just announced (see "Retirement plan improvements announced this week" on page 4).

"We may have a difficult time hiring the kind of new talent we need to do our work," says Larry. "We'll have to make better use of the talent we have, and a more efficient laboratory will free up the valuable time of our technical staff."

"There's lots of potential for improvement in the way we do business," he adds. "I see something very bright in Sandia's future."

(Watch future *Lab News* issues for more about reengineering.)

Counterproliferation

(Continued from preceding page)

our work in nonproliferation in the Defense Programs Sector funded by DOE and our work in counterproliferation in our Work for Others Sector funded by the DoD," says Gerry. "This requires a team laboratory effort."

Defense Programs VP Roger Hagengruber (5000) and Gerry have been working together to present an integrated nonproliferation/counterproliferation view, often with Sandia President Al Narath adding some of the top-level Labs perspective, says Gerry.

"What is emerging at the national level," says Gerry, "is systems-level planning to link sensors, information systems, and weapons systems into integrated architectures for exquisite situation awareness and very fast lethal but low-collateral-damage response."

The core is information technology. "What we're really talking about is a concept for warfighting the foundation of which is fundamentally information technology — real-time information collection and in-depth situation understanding together with real-time response with weapon platforms far from the battle area."

All of this can be used in this new vision of reconnaissance, surveillance, target acquisition, killing targets, and assessing the damage that Gerry has labeled RSTAKA (pronounced risk-talk-a). "We're trying to understand how the concept can best be implemented, how all the components fit together, and how we can help make it into a reality in several years," says Gerry.

"It's an important national program that's emerging," he says. "We have tremendous laboratory capabilities, and we're making a terrific laboratory effort. We're going to play a vital role."

Give your secretary a real gift for Secretaries' Week

Listen to these candid concerns

"What Do You Think?" features employee responses to questions posed by the Lab News. The idea is to give Sandians an opportunity to voice their opinions and thoughts about various issues — some serious and some not so serious. Some responses have been lightly edited and condensed to meet our maximum word limit.

In honor of National Secretaries' Week, the Lab News asked Sandia secretaries and Office Administrative Assistants (OAAs) what their wishes for a better workplace would be.

The current question: "If you could change or improve one thing in your department, center, or division, what would it be, and why?"

As an OAA, I would like to be considered a full team member, such as: I would like to attend all meetings in my area — not just those considered to "involve me." Most meetings have something come up where they say, "Have the OAA do that." I tried to be on a Future Planning committee for my department and I was asked why I felt that was appropriate because, I guess, I was not going to be a part of the future. It would be very nice if people in my department would have some common courtesy, not just for me, but for others. A please and thank you attitude, if not words, would be wonderful. Some of the people have actually stomped their feet and said I work just for them, when I actually work for 30 people. It would be wonderful if my co-workers would recognize that it took a lot to get into Sandia and that I am much more than just a receptionist (not that there is anything wrong with receptionist work). I did not count on coming to Sandia and losing hard-to-acquire skills just because they are not being utilized. I'm tired of union co-workers tattling on me because I choose to do a little extra, to try and learn new things, and to try to improve and further myself. Above all, I feel people at Sandia are in desperate need of people skills and team-building classes. The attitude of "that is not in my job description" needs to stop.

Name withheld by request

There are only two main changes I would make if possible. (1) I wish my boss would take lunch away from his office more than once every six months. (2) I wish he would share his schedule of meetings and appointments with me on a regular basis.

Name withheld by request

If I could change or improve one thing in my department, center, or division, I would stress the need for everyone to respect the OAA's work space. My primary area of concern is the general noise level. Oftentimes, the OAA's work area becomes a gathering place for the staff and it can become very noisy. While we enjoy the staff members' company and want to participate in the conversations, we frequently need some quiet time to concentrate on a special project, learn new software, or something as simple as being able to hear our telephone conversations. I have attempted to close the door to my office during such times only to be asked by each and every person who comes in, "Why is your door closed?" Answering these inquiries only adds to the distraction. Would that staff member ask the same question of his or her supervisor?

Jeanette Denaple (2654)

I have always been impressed with the "teaming" efforts throughout our Livermore community. What I would like to see, from a clerical point of view, is a bigger effort made in connecting with our counterparts in Albu-

What do you think?

Here's your chance to let your boss know what you think, good or bad. Of course, anyone answering this question has the option of remaining anonymous. **What do you like most about your manager, director, or VP; what do you dislike the most?**

We'll be calling some Sandians and asking you personally to respond to the question. If you agree, we'll fax you a one-page answer sheet (with guidelines) that you can complete and fax back to us. Other employees are also welcome to respond — not just the folks we call. If you'd like to respond, please call us for a form on 844-7841 or 844-7522.

querque — our work and success as a working unit is so dependent on one another. I feel that it would be very beneficial for us to have the opportunity to travel to Sandia/New Mexico and meet with the people "on the other end of the phone." It is important to have a better understanding of what happens to our work when it leaves here and how we can help each other become more efficient.

Carol Olmstead (5362)

At the present time, when the secretary for the director is absent (for whatever reason), an OAA is required to sit in for him or her while he or she is away, thus leaving their own desk unattended. This hardly seems efficient. Good policy? I don't think so. Suggestion: a floater be made available for this coverage.

Name withheld by request

Sandia's system for collection of time card data needs to be computerized. Computerization of time card data would eliminate a duplication of effort by the employee, the secretary, and the data entry clerk. Furthermore, modernization would save not only money but frustration as well.

Linda Moore (2335/2337)

I haven't been an OAA here at Sandia very long (two months). Consequently, I can't say with any surety that there is anything that needs to be changed with my department, center, or division. So far, working at Sandia has been a very positive experience. The only improvement I can think of to suggest is perhaps to encourage people to take better advantage of improvements in computer technology for office communications (i.e., e-mail, VAX, etc.). My department "feels" like it is slightly behind the times in computerization compared to private industries. This might be the result of

Open Houses

The Labs is holding open houses in honor of the following retirees: **Vi Jockle** (7811/13) in the Area 1 Cafeteria (Bldg. 861), Wednesday, May 4, 2 to 4 p.m.; **Arlyn Blackwell** (12200) in the Area 1 Cafeteria (Bldg. 861), Thursday, May 5, 2 to 4 p.m. Refreshments will be served. Friends and acquaintances are invited.

Sympathy

To Richard Beckmann (9291) on the death of his father, Harold, in Orlando, Fla., April 14.

the paranoia of security precautions, but it does seem strange to me that people who are supposed to be on the cutting edge of science have to be dragged kicking and screaming to a personal computer.

Name withheld by request

I am concerned about the long-term "secretarial quality" at Sandia Labs and strongly believe the quality of the Sandia secretary is on the decline. The testing standards previously eliminated the shorthand requirement and now, with the new Department of Labor Basic Occupational Literacy Test (BOLT), secretaries will no longer be tested in grammar skills. Further, slots are being filled by non-Sandians. We, on the line, are required to train these individuals in the Sandia way, whether or not they possess the inherent credentials to be a Sandia secretary. The testing requirements for non-Sandians are frequently not as stringent as for the Sandia secretaries. I'm proud to be a Sandia secretary. The secretaries at the Labs are as high a caliber as you will find anywhere. However, as non-Sandians are hired who are not trained in our procedures, the tendency could very well be toward a drop in quality.

Mo Locher (7909)

this month in the past...



40 years ago...The Coronado Club staff was busy preparing for the "highlight of the spring social season" the following month — a dance featuring the famous Les Brown and His Band of Renown. Tickets went for two bucks a person, which probably shot the entertainment budget for the whole month for some couples in 1954. Sandian Felipe Silva was featured in the *Lab News* as the employee who made a deposit that put the Sandia Lab Federal Credit Union over the \$500,000 mark in deposits. (Today the Credit Union has deposits of more than \$285 million.)

30 years ago...A group of Sandians was preparing to participate in "Project Dribble," a series of underground nuclear tests scheduled to begin later that summer in the Tatum Salt Dome in Mississippi. The purpose was to "improve techniques to detect and identify underground nuclear detonations." Only two tests were conducted in this "series." In 1964, the *Lab News* apologized in advance for mistakes. The paper ran a list of Sandians running for office in Bernalillo and Sandoval counties, then added, "The *Lab News* . . . regrets any inadvertent omissions."

20 years ago...Among a group of VIP visitors to Sandia was one Norman Augustine, Assistant Secretary of the Army. That name will ring a bell with Sandians, but for any unknowing outside readers, he's now the Chairman and Chief Executive Officer of the Martin Marietta Corp., Sandia's management and operating contractor.



SOFTER BUT STURDIER — A major renovation project that will soften the look and increase the sturdiness of Gate 1 south of Bldg. 800 is scheduled to begin May 1. Chain link fencing and barbed wire will be replaced with 10-foot-long, one-inch vertical steel tubes on five-inch centers, with the tops angled outward toward the unsecured area. The overall effect is more decorative, similar to a gate at Sandia/California, but planners in Facilities Development Center 7900 say the new fence will be structurally sounder and more difficult to penetrate. Pictured above,

in an architect's rendering, the new gate area is designed to more appropriately reflect the new DOE and Sandia culture of technology transfer and partnering with industry. While construction is under way, pedestrians will be directed by signs through either the existing gate or through a temporary gate 100 feet north of the existing gate. Only incoming vehicle traffic will be allowed through Gate 1 during the construction period; vehicles will have to exit the secured area through Gate 8 or Gate 10. The project is scheduled for completion by July 24.

Sandians treated for substance abuse can still work

New program to be described at Washington EAP conference

By Howard Kercheval

Lab News Staff

One of several Sandians attending a DOE/Employee Assistance Program (EAP) conference in Washington next month will describe a new plan that keeps security-cleared employees at work while they are being treated for substance abuse problems.

Linda Duffy, Manager of Preventive Medicine/Employee Assistance Dept. 3335, will make a 20-minute presentation on the Employee Assistance Program Referral Option (EAPRO), then participate in a panel discussion of it and similar plans at the May 9-12 conference.

Dave Fredrickson, Director of DOE's Albuquerque Operations Office (DOE/AL) Personnel Security Division, which initiated EAPRO several months ago, says Sandians running EAP provided significant input and assistance to his organization as it was developing EAPRO for the AL complex.

Harriet Morgan of Occupational Medicine Center 3300, former manager of Dept. 3335, says that a year ago, clearances were still being suspended for Sandians who had entered treatment for substance abuse and were doing reasonably well, but not well enough to satisfy DOE concerns.

Option offers EAPRO treatment

"But out of discussions between DOE and Sandia," she says, "grew this option that allows DOE — when they have identified someone who has had a clearance suspended, or who in the five-year reinvestigation process would be a candidate for suspension because of substance abuse — to offer that person treatment through EAPRO."

EAPRO allows the person to go to EAP and get into an appropriate treatment program or follow-up treatment program, she says. It requires regular visits with an EAP counselor and repeated random drug testing.

"As long as the person is participating in the program, DOE will reinstate the clearance

or not suspend the clearance in the first place," says Harriet. "It is a major step forward in encouraging people to seek treatment and assistance through EAP without fear of losing their clearances."

She says an important point for potential EAP clients to know is that the only reporting to DOE by EAP is on people in EAPRO, who have signed an agreement and understand that one of the program requirements is a report on drug and alcohol screening.

Since the program was initiated, she says, four Sandians have had their clearances reinstated, and three who earlier probably would have had clearances suspended now won't, because all seven are being treated through EAPRO. Fredrickson says Sandia's seven are among approximately 30 people enrolled in EAPRO throughout the AL complex.

EAP designs treatment plans

She says DOE is leaving individual treatment plans to be designed and carried out by EAP, which has to report to DOE on a monthly basis the results of EAPRO drug and alcohol screening tests.

Lynn Smoles, a contract counselor in Org. 3335, says participants are required to have counseling through EAP and 12 consecutive monthly random drug and alcohol tests during the first phase, which lasts one year. The second phase, also a year long, must include counseling or follow-up sessions, and quarterly drug and alcohol screening.

At the end of the second phase, she says, DOE performs a limited reinvestigation of the person being treated.

Lynn says she already was working with

three Sandians who are now enrolled in the program, and they likely would have had their clearances suspended when they came up for reinvestigation if EAPRO had not been approved.

"These people were already in the process of meeting the requirements before they got involved in EAPRO," says Lynn, "so when they were referred to us as part of EAPRO, all I needed to do was document what they had already accomplished."

Change defines abuse, rehabilitation

She says part of the reason for DOE's approving EAPRO may lie in the changing environment in the US today about what constitutes substance abuse and how rehabilitation is defined.

"One of the things I noticed when we first started meeting with DOE was that they wanted to know more about the issue," she says. "The evolution of EAPRO just reflects the thinking in today's society that substance abuse is an illness and that people can recover from it."

Linda agrees. "I think there is a greater emphasis today on the health and well being of employees, and I believe DOE is demonstrating at many of our meetings that they want to make the program work," she says. "I think they want to give employees an opportunity to seek help if they need it, and to create an environment that supports health and well being."

DOE is leaving individual treatment plans to be designed and carried out by EAP.

"It is a major step forward in encouraging people to seek treatment."

Take Note

The American Association for the Advancement of Science Project on Science, Technology, and Disability invites scientists and engineers with disabilities to be included in the third edition of the Resource Directory of Scientists and Engineers with Disabilities. Deadline for inclusion is May 31. Candidates for the directory must hold, or be working toward, a degree in scientific, engineering, or medical disciplines, or currently employed in a scientific field. The directory is funded by the National Science

Foundation and helps connect persons with disabilities and their families with professors, teachers, and counselors who can serve as role models and mentors. To be included in the directory, or for more information, please contact Lauren Summers or Patricia Thompson, AAAS Project on Science, Technology, and Disability, AAAS, 1333 H Street NW, Washington, D.C. 20005; or call 202-326-6645 (V/TDD). Information can also be sent via fax to 202-371-9849.

Sandia Spotlight



Hundreds wander among Earth Day booths and displays.



Captain Planet (Dan Hartley, VP of Energy and Environment Div. 6000) compares wingspans with a Swainson's Hawk held by Wendy Aeschliman of Talking Talons. ("Captain Planet" © 1992 Turner Broadcasting System.) (Photography by Mark Poulsen)



Olive the Baboon cleans up graffiti as trainer Jan Naud of Talking Talons watches.

Earth Day Festival 1994

Several thousand people — young and old alike — took part in the Earth Day Festival last Friday at Hardin Field. "It was very, very successful," says Fran Stohl (6212), a member of the planning group. It was a beautiful day, and there were animals (including a graffiti-erasing baboon), food, bluegrass music, and 35 educational displays about protecting and improving the environment. Electrical power for the live music and public address system came from the

sun — via a photovoltaics trailer supplied by Photovoltaic System Applications Dept. 6218. Those who arrived early got an extra bonus — a chance to take home one of 800 tree saplings given out, most of them elm and oak. The event was cosponsored by Sandia, DOE, and the Air Force, but other local, state, and federal agencies also took part. Sandia's participation was sponsored by Energy and Environment Division 6000 and Laboratories Services Division 7000.



Auntie Waste (Maria Walsh of Environmental Protection Dept. 7574) tells kids about her "Treasures from Trash" collection.



Brad Boultinghouse (left) and Joe Castillo, both of Motor Pool Services Dept. 7614, show kids how they clean up spills in the Motor Pool.

Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads

MISCELLANEOUS

MAILBOX, large, \$10; camper shell, for long bed, \$100; electric dryer, Kenmore, \$50. Estill, 883-1531.

PATIO COVER, 10' x 20', aluminum, w/wrought-iron supports, gutters, ready to install, excellent condition, \$450. Epperson, 271-9880.

DP EXERCISE BIKE, \$35; Easy Glider exercise machine, \$35/ea. or both for \$60; Epson Apex 80 printer, \$50. Reed, 268-7484.

DOUBLE STROLLER, washable pads, excellent condition, \$100; waterbed, queen-size, w/drawers in pedestal, \$100; stuffed rocking chair, \$25. Vogel, 275-0774.

GOLF CLUBS: Graphite SuperDriver, like new, \$60; Burke Tommy Armour irons, 2-SW, \$60; Haig Ultra woods, 1-4, \$30. Philbin, 828-2414.

SPINET PIANO, Baldwin Acuson, in beautiful walnut finish, 6 years old, excellent condition, \$1,500. Hernandez, 299-5749.

CAMPER SHELL, for small pickup. Clark, 897-4948.

CHEST FREEZER, 18 cu. ft., Kenmore, \$150; woman's golf clubs, 5 irons, 1 wood; radial tire chains, 12-14-in. rims. Tatro, 281-9285.

TENTS, Eureka two-person dome, \$50; Gerry two-person A-frame, \$25; Koflach plastic mountaineering boots, size 11, \$25. Pletta, 281-4277.

HOME GYM, w/stairstepper and benches, \$145, exercise bike, \$25; Yamaha amplifier, \$50; band equalizer, \$35; VGA card, \$25; high chair, \$15. Werner, 292-5520.

EXERCISE STEPPER, nearly new, new price \$150, sell for \$75. Kallio, 856-1350.

BATTERY CHARGER, gasoline-powered, portable, will charge 6, 12, or 20 four-volt batteries, \$75. Babcock, 892-7199.

CERAMIC LAMPS, two, seafoam green \$25/pair; manual miter saw, Craftsman, hardly used, \$40; Bundy trumpet, case, stand, \$75. Langwell, 293-2728.

CHILD CARRIER, backpack type, Tough Traveler, adjustable, exceptional comfort and control for parent, used for one child, \$60. Koch, 856-1362.

TABLE, dark wood, w/four chairs, \$350; Sears console TV, 25-in., \$250; workbench, 30" x 48", w/drawers, \$30. Bouchard, 262-0007.

BEDROOM SET, 8-piece, French provincial, soft yellow w/white laminated top, excellent condition, a bargain at \$1,200 OBO. Elliott, 296-9005.

EXCHANGE TANK, for Culligan HCL water softener system, no salt needed, paid \$300, asking \$100 OBO; exercise bike, \$35. Mackoy, 281-8606.

GARAGE SALE, April 30, 9 a.m.-4 p.m., 4512 9th St NW, off Griegos, art deco dining chairs, antiques, more. Frames, 344-6451.

MICROWAVE, Toshiba, 1.6 cu. ft., three-stage power level, jet defrost, rotary arm, almost new, paid \$240, sell for \$120. Dwyer, 271-1328.

MINI BLINDS, Levelor, antique white, five, 22-1/2" x 47", \$50; traverse rod, extends to 13-ft. wide, \$30. Gerwig, 822-1620.

EXERCISE BIKE, Schwinn, 40-lb. wheel, excellent condition, new \$300, asking \$99. Montoya, 296-4268 before 9 p.m.

CUSTOM-MADE DRAPES, 9'L x 100"W, includes liner, sheers, rods. Sedillo, 255-0669.

BED, king-size, mattress, box spring, roller frame, and oak headboard, excellent condition, \$275. Murphy, 881-1520.

PUSH MOWER, good condition; firewood, free, you haul. Torres, 822-8598.

POP-UP CAMPER, for full-size short bed truck, sleeps four, furnace, stove, all aluminum frame, low profile, \$3,000. Cochran, 842-1528.

STONEWARE DISHES, 10 place settings, \$15. Campanozzi, 823-1610.

DAYBED, w/mattress, \$125. Stevenson, 294-1197, evenings or leave message.

YOUTH HELMETS, two, good condition, \$15/ea.; Nintendo system, w/nine games and carrying case, excellent condition, \$70. Anderson, 897-2772.

TRAILER, light utility, converted to haul camping supplies, includes five-man tent and Coleman stove, \$250. Mowry, 299-2526.

BOARD GAME, Music Maestro, by Aristoplay, preschool to adult, complete w/tape, hardly used, \$10; redwood furniture w/pads. Wagner, 823-9323.

SOD, free, you dig. Fuller, 821-3518.

WHEELBARROW, \$13; high-back swivel bar stool, black vinyl, \$19; movie camera, 8mm, zoom lens, \$23. Horton, 883-7504.

PROCESSOR, 386DX-40, w/motherboard, \$100; wood table, \$100; scuba gear: tank, \$200; AT-PAK auto inflate BC, \$200; regulators, \$200. Lanes, 856-7738.

SIMMONS CRIB, w/mattress, natural maple finish, beautiful, includes many accessories, new condition, \$180. Bauer, 299-0640.

SILVER PRO PANEL, 28-gauge, rugged, rib galvanized, 2,400 sq. ft., 20-, 16-, 14-, 12-, 10-, and 8-ft. lengths, \$30 per 100 sq. ft. Snyder, 237-1065.

AIR CONDITIONER, window mount, 12,000 Btu, Sears Kenmore, used one season, \$175. Evans, 281-0288.

GARAGE SALE, Sat. April 30, 636 Dakota SE, all-wood bunk bed w/mattresses, household, more. Mattson, 266-0336.

DOGHOUSE, Pet Porter, medium size, used 1-1/2 months, great condition, new \$37, asking \$25. Waters, 822-0989.

WHEELCHAIR, Quickie Breezy, lightweight, wide seat, used a few times, excellent price. Gonzales, 892-0987 or 296-9055.

GOLF SHOES, men's size 11C, Etonic, white, leather uppers and soles, brand new, never been used, \$50. Kelly, 821-1252.

SKI/BIKE RACK, Yakima, 48-in., locks, fits Grand Am and other cars, \$150. Lorence, 275-3586.

SEWING MACHINE, Singer Featherweight, w/buttonholer, and case, \$325. Aragon, 888-3473.

LA-Z-BOY, tan, \$50; upholstered chair, \$10; two sewing machines, \$80 & \$130; carousel slide projector w/trays, \$35. Montano, 892-0987.

BED, twin-size, w/electric head & foot adjustment control, excellent condition, \$250; Sears' freezer, 6 cu. ft., \$100. Royer, 293-2350.

CONSOLE PIANO, Baldwin Acrosonic, \$400; double-pedestal metal desk, \$10; Broyhill living room set, plaid, \$40. West, 292-6091.

CHAIN LINK FENCING, about 80-100-ft., posts, gate, \$40; large wrought-iron gate, \$25; exercise bike, \$20. Brooks, 255-7551.

MAGAZINES, Data Based Advisor, 6-92 through 2-94, free. Ganter, 265-5007.

TREADLE SEWING MACHINE, oak cabinet, unique, \$200; modern sewing machine, \$175; waveless waterbed, \$200. Patterson, 299-1062.

EL VADO LAKE RV MEMBERSHIP, affiliated with coast-to-coast, \$200. Gregory, 344-1436.

HOSPITAL BED, including mattress, perfect condition, \$875. Laffoon, 298-7282.

TILLER/CULTIVATOR, Sears 3-hp., excellent condition, \$110. Reynolds, 897-4287.

JVC VCR, 4-head, w/remote, excellent condition, \$250 OBO; rear bumper, for Mitsubishi Mighty Max truck, \$50. Eisold, 898-4284.

STAR WARS ITEMS, figures, watches, books, etc; other collectible toys, trucks, trains, cars, die cast, etc. Torres, 294-7273.

COUCH, navy blue, w/camelback, and two throw pillows, \$100. Dobranich, 298-4547.

HORSE, 3/4 Arab, 15.2H, 17 years old, English, vivacious, intermediate or advanced rider only, must sell, \$1,100 OBO. Kupferman, 265-7224 after 6 p.m.

BABY RABBITS, \$5-\$15; La-Z-Boy rocker, \$20; green chair, \$15; strollers, \$10-\$25; hamster cage, smoker, bar stools, bowling balls. Parr, 837-1719.

TIRE CHAINS, for 14-in. tires, include tightening bands, excellent condition, \$25. Marrs, 281-9889.

ROUND TABLE, 58-in., white Formica w/four white fiberglass chairs, w/new removeable blue cushions, nice looking, \$135. Bliss, 296-3752.

Deadline: Friday noon before week of publication unless changed by holiday. Mail to Dept. 12660, MS 0413, or fax to 844-0645.

Ad Rules

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

WATERBED, queen-size, restricted motion, custom oak sides, bookcase headboard. Hanson, 298-2120.

MOTHERBOARD, 386-25 PC, w/1MB RAM, \$70; SVGA card, \$15; IDE controller card w/ports, \$15; trackball, \$10. Burnstein, 275-3370.

PRINTER, Panasonic, 24-pin, dot matrix, new in box, never opened, \$170. Adams, 296-6017.

LEATHER SOFA, brown, \$350 OBO; matching chair, w/torn arm, free with sofa. Kraynik, 856-1683.

SOFA & LOVESEAT, w/four matching dining room chairs, very good condition, \$300 OBO. Kemm, 880-0629.

INDOOR FOUNTAIN, Austin, three maidens, w/pump and basin, good condition, cost more than \$300, sell for \$150 OBO. Lloyd, 822-8567.

TABLES, brass & glass, console and cocktail, barely used, half of new price, \$175/ea. Reed, 881-0454.

CHROME BUMPER GUARD, Toyota, heavy-duty, \$150 OBO; four chrome rims w/tires, P235/75R15, fit 15-in. Toyota/Nissan pickup, \$150. Padilla, 294-3127.

STEREO SPEAKERS, walnut cabinet, JBL L100T, \$650; gun, Beretta .380, model 84, w/spare mags, \$450. Michell, 291-1064.

BEDROOM DECOR GROUP, twin-size comforter, pillows, shams, dust ruffle, table cover, valance, lamp, white w/violets, \$99. Schkade, 299-7439.

TV/VCR UNIT, Quasar, remote control, 24-in., one year old, \$300. Martinez, 268-8952.

'89 ALUMALITE XL FIFTH WHEEL, 29-ft., one owner, non-smoker, AC, microwave, AM/FM cassette, awning, power lifts, \$12,000. Danelovic, 897-7964.

GOLF CLUBS, Hogan Radial irons 3-PW, \$150; Maxfli metal woods, 1, 3 & 5, \$50. Barber, 884-4969.

TRANSPORTATION

'77 PONTIAC TRANS AM, classic, T-tops, less than 15 miles on engine and drive train, lots of extras, \$3,000. Estill, 883-1531.

'92 SATURN SL, 4-dr., 5-spd., AC, metallic blue, AM/FM cassette, excellent condition, guide book \$8,200, asking \$7,500. Laguna, 298-1732.

'86 NISSAN MAXIMA SX, 5-spd., sunroof, adjustable suspension, great AM/FM cassette system, one owner, well maintained, \$4,900. Jones, 867-2022.

'86 4WINNS BOAT, I/O 170 Horizon Openbow, 170 Mercruiser, extras include fish finder, mooring cover, \$6,000. Meikle, 299-4640.

GITANE ROAD BIKE, 10-spd., gold, \$100. Dobranich, 298-4547.

'73 KAWASAKI G4TR-C, trials bike, 100-cc, plus parts bike, \$750 OBO. Ahlen, 877-3193.

BOY'S BICYCLE, Murray, 20", \$15; racing bike, Mongoose Californian, 20", w/Araya rims, \$40. Lucero, 899-0521.

'90 HONDA ACCORD EX, 4-dr., silver, sunroof, AC, 33K miles, mint condition, \$11,300 firm. Sellers, 344-5583.

'79 CHEV. MALIBU, 40K miles, \$3,000; '83 Ford LTD wagon, \$1,750; '86 Honda Civic, \$2,250. Devejian, 884-3801.

'84 HONDA ACCORD LX, 4-dr., AT, AC, PW, PL, below blue book, \$2,700. Fletcher, 822-1528.

GIRL'S BICYCLE, 10-spd., yellow, older but in very good condition, \$15. Filuk, 281-0078.

BICYCLES: boy's 10-spd., Performer, \$25; girl's 10-spd., Ross, \$75. Both need new tires. Campanozzi, 823-1610.

'78 MONTE CARLO, one family owner. Clark, 897-4948.

10-SPD. BIKES, two, adult, \$50/ea. Anderson, 897-2772.

'85 MAZDA RX7 GS, 53K miles, 5-spd., red w/gray interior, AC, cruise, perfect condition, excellent maintenance, garaged, \$4,750. Richards, 296-2272.

'93 HONDA XR600R MOTORCYCLE, trails/enduro, under 100 miles, showroom condition, paid \$4,200 in Aug. '93, sell for \$3,700. Lane, 856-7738.

BICYCLE, Gitane Tour de France, for sew-up tires. Fienning, 298-0743.

'81 CHEV. BLAZER, 305 V8, AT, Silverado package, \$4,995; '90 Acura Integra GS, 2-dr. 5-spd., loaded, 30K miles, \$12,250. Washburn, 275-3751.

'91 HONDA ST 1100, sport touring motorcycle, silver, many extras, factory warranty, 13K miles, excellent condition, \$7,150. Curtis, 281-8364.

'73 CHEV. BLAZER, 4WD, AC, 350; '76 Chev. Suburban, AC, 454. Both run well. Geene, 345-1034 after 6 p.m.

'76 VW BUG, tinted windows, tape deck, excellent running condition, moving, must sell ASAP, \$1,800. Ward, 265-8377.

'93 SUZUKI 750 KATANA MOTORCYCLE, custom paint, D&D pipe, lowered gears, ignition advance, low miles. Chadwick, 298-4524 evenings.

'84 CHEV. TRUCK, AT, V8, runs well, needs paint, 80K miles, \$2,000 OBO; '65 classic boat, 18-ft., w/'89 trailer, good condition, \$1,800 OBO. Ramos, 869-7329.

'86 MAZDA B2000 TRUCK, original owner, \$1,750. Chirigos, 298-3837 after 7 p.m.

'77 CHEV. CAPRICE CLASSIC, runs great, good body and interior, \$1,200. Winowich, 255-2611.

'39 CHRYSLER LIMOUSINE, \$500 OBO. Brooks, 255-7551.

'58 NASH RAMBLER, 6-cyl., AT, 2-dr., new upholstery, new tires, original paint, very reliable. Newman, 266-6928.

'86 NISSAN 200SX TURBO, 5-spd., maroon w/gray & black interior, moonroof, AM/FM cassette, AC, cruise, excellent condition, \$4,000 OBO. Miller, 828-2708.

'90 FORD F150 XLT LARIAT, 4x4, 4.9L multi-port EFI, AT, cruise, rear anti-locks, AC, tint, PW, PL, 36K miles, excellent condition, \$11,900. Farmer, 255-2580.

'86 ACURA INTEGRA RS COUPE, 75K miles, 5-spd., AC, good condition, \$4,000. Wood, 823-1965.

'90 DODGE PICKUP, 3/4-ton, AT, AC, overdrive, five new Firestone tires, excellent condition inside and out, \$10,500 OBO. Torres, 294-7273.

'90 TOYOTA 4RUNNER, 4x4, red, 2-dr., V6, SR5, 5-spd., loaded, sunroof, 27K miles, excellent condition, \$16,500. Chavez, 881-6454.

'87 TOYOTA TERCEL WAGON, 4WD, AC, AM/FM stereo cassette, 80K miles. Copus, 281-4483.

'87 FORD VAN, Bivoac camper package, captain's chairs, sofa bed, AC, cruise, stereo, custom cabinets, luggage carrier, \$7,000 OBO. Vaughn, 867-4625.

'86 MAZDA 626, navy, 4-dr., 4-cyl., 83K miles, one owner, AC, AT, cruise, garaged, above average condition, \$3,000. Kirkel, 899-2770.

'87 DODGE B150 VAN, 1/2-ton, V8, deluxe conversion package, AC, PS, PB, AT, low mileage, excellent condition, \$6,500. Swier, 298-8435.

'93 NISSAN, 3K miles, 5-spd., AM/FM cassette, AC, excellent condition, \$9,500 OBO. Garcia, 344-6121 a.m. or 344-9609 p.m.

'55 STUDEBAKER COMMANDER, 4-dr., \$1,500. Lowe, 299-7725.

'86 BUICK CENTURY, AT, bucket seats, one owner, newly painted, good condition, \$2,500. Widenhoefer, 298-2510.

'86 TOYOTA 4x4, 42K miles, camper shell included, 4-cyl., 2.2L engine, excellent condition, \$5,400. Zimmerman, 296-7181.

'88 MUSTANG GT, loaded, new paint, tires and tint; '88 F-15 Jimmy, 4x4, rebuilt engine, good condition. Martinez, 255-5515.

REAL ESTATE

3-BDR. HOME, SE Heights, 1-3/4 baths, 1,400 sq. ft., vaulted great room, double garage, covered patio, excellent condition, \$99,500. Smith, 298-9588.

3-BDR. TOWNHOUSE, in Las Cruces, 6 years old, quiet neighborhood, ideal for family or students, \$56,900. Cropp, 296-1877.

'91 OAKCREEK MOBILE HOME, 16 x 80, 3-bdr., 2 baths, deck, patio, in family park, near Wyoming gate, excellent condition, \$28,000. Burkinshaw, 293-7563.

3-BDR. HOME, 1-3/4 baths, 1,340 sq. ft., new roof, recent updates, Lomas & Chelwood area, \$98,000 negotiable. Romero, 291-9461.

WANTED

VAN or SMALL RV, to rent for 3 weeks, June 14-July 3, good working order, for 3-passenger trip to World Cup (Detroit), references. German, 883-7002.

MALE LABRADOR, AKC-registered, black, to stud for pick of litter. Wilt, 296-4919.

IRONING, done at your home, man's shirts, and quality ladies' wear, will pay generously. Wagner, 823-9323.

BASKETBALL HOOP & POLE. Kallio, 856-1350.

HOUSE-SITTING POSITION, sublease, apartment or house, graduate couple, May 16-Aug. 15. Hatcher, (602) 327-4259 leave message, e-mail jim@hwr.arizona.edu or mpw@hwr.arizona.edu.

FILE CABINET, 2- or 4-drawer; white chest of drawers. Gamboa, 764-8212.

YARD MAINTENANCE PERSON, summer and fall, prompt, conscientious, we have equipment, an hour or two a week, \$8/hr. Meloche, 821-1358.

GUN, HK-P7 or Glock 19. Ginn, 883-0004.

SPANISH TUTOR, to help practice conversation, understand grammar, SNL job-related, meet 1-2 hours/week during work day. Menicucci, 842-6330.

GOOD HOME, for lovable dog, German shepherd/collie, 3-4 years, neutered, shots, outdoor/indoor, likes and needs love. Roberts, 265-3281.

ROLL-UP AWNING, 8-10 ft. wide, for mounting on camper. Horton, 883-7504.

SCIENCE ADVISOR, for '94-'95 school year, La Mesa elementary. I will help you get started. Sobolik, 848-0777.

EDUCATIONAL SOFTWARE, for home-schooled and pre-school elementary students. Parr, 837-1719.

HOUSEMATE, large home, Lomas & Tramway area, non-smoker, \$400/mo. + 1/2 utilities. Werner, 292-5520.

LOST & FOUND

FOUND: Wristwatch, black/gold, April 8, south of Bldg. 823. Ward, 4-6038.

LOST: Large gold hoop pierced earring, Area 1, north of the cafeteria or Bldg. 860 area, reward. Holovka, 281-5518.

LOST: Men's gold wedding band at KAFB east gym. Mendez, 293-8649.

Celebrate Cinco de Mayo next Friday with buffet and dancing

Coronado Club Activities

KIDS' BINGO night is tonight, Friday, April 29. There'll be a free (yes free) hot dog and Coke for kids playing bingo. There'll also be free popcorn. A slice of pizza and a Coke will be only 99 cents, pizza and salad only \$1.50. Hamburgers and corn dogs will also be available for nominal prices. The buffet opens at 5 p.m., the bingo at 7 p.m. There'll be cartoons and movies, too.

CELEBRATE Cinco de Mayo Friday, May 6, beginning with the all-you-can-eat Mexican buffet served from 6-9 p.m. for \$7.95. At 7 p.m. the "Together Band" will begin playing a variety of dance music. They'll break at 8 p.m. for "Miguel Caro and his Mexican Dance Company," an outstanding professional Mexican folk dance troupe. Call early for reservations.

GIVE YOUR MOM extra-special treatment on Mother's Day, Sunday, May 8, with a special brunch served from 10 a.m.-3 p.m. Reservations are being taken for 10 a.m., 11:30 a.m., and 1:30 p.m. only. The cost is \$8.95 for adults, \$4.95 for children 4-12 years old. Children 3 and under eat free. The menu includes baked ham, turkey, baron of beef, salads, desserts, breakfast items, and vegetables. Make your reservations early for this, too.

THURSDAYS, May 5 and May 12, are bingo nights at the club. Card sales and the buffet start at 5:30 p.m. Early Birds start bingo at 6:45 p.m., and regular bingo begins shortly after. These will be the only bingo nights this month, so don't miss 'em.

Fun & Games

Windsurfing — A Windsurfing Swap, hosted by the New Mexico Windsurfing Association, will be held Friday and Saturday, May 6 and 7. Equipment check-in and sale on Friday is 5-9 p.m.; sale continues Saturday, 9-11:30 a.m. Equipment pickup is on Saturday, 11 a.m.-12:30 p.m. Call 298-4311 or 256-0561 for location and more information.

Tennis — The Coronado Club Tennis Association Memorial Day Tennis Tournament will be held at the Coronado Club tennis courts May 28-30. Events include men's and women's singles and doubles and mixed doubles. Gift certificates will be presented to winners and runners-up. Drinks will be provided to all participants. SERP and Coronado Club members and military personnel are invited to participate. Participants' guests may play doubles. Entry deadline is May 23. For more information and entry forms, contact the SERP office on 844-8486.

Sandia News Briefs

Environmentally friendly soldering wins Sandia a DOE Commercial Successes award

Sandia has won a Commercial Successes award from DOE's Industrial Waste Program for work with the Motorola Government Electronics Group on a soldering process that eliminates ozone-depleting solvents from electronics manufacturing. The award was given at an April 13 reception in Washington hosted by the Solar Energy Industries Association. Solvent-based cleaning of electronic equipment accounts for at least one-fifth of the worldwide consumption of chlorofluorocarbons. The no-clean, low-residue solder process, which was tested under the first Sandia cooperative research and development agreement (CRADA) with industry, uses adipic acid, an ingredient used by the food industry, rather than rosin flux as an electronic board preparation fluid. Actual soldering is performed in a sealed chamber that contains nitrogen gas and formic acid, a substance found in ants and plants that breaks down into carbon dioxide and water.

Sam Martin elected to Texas Tech Academy of Mechanical Engineers

Sam Martin, Manager of Electromechanical Components Dept. 2641, has been elected to lifetime membership in the Academy of Mechanical Engineers at Texas Tech University. The Academy honors Texas Tech alumni and friends who have earned distinction through professional, civic, or humanitarian accomplishments. The Academy provides enrichment and support of mechanical engineering education through the involvement of experienced professionals in the educational process. Sam received a BS in mechanical engineering from Texas Tech in 1961.

Bob Easterling receives statistical research fellowship

Bob Easterling, Manager of Statistics and Human Factors Dept. 12323, has received an American Statistical Association/National Science Foundation/National Institute of Standards and Technology (NIST) Research Fellowship. With matching support from Sandia and DOE, Bob will go to NIST in Gaithersburg, Md., in May, to spend approximately eight months in collaborative research on the statistical aspects of agile manufacturing.

Al Narath addresses Fairborn High School students

Sandia President Al Narath has gone back to high school to address students at his alma mater, Fairborn (Ohio) High School, during the fourth Hall of Distinguished Alumni Address today, Friday, April 29. He will speak to approximately 100 math, Air Force Junior Reserve Officer Training Corps members, and science students. Al is in Fairborn to be inducted into the Fairborn City Schools' Hall of Honor, which "recognizes and honors those persons who through their performance and achievements reflect credit on the Fairborn Schools so that present-day students may find identity with the past and establish goals for the future."

Send potential Sandia News Briefs to Lab News, Dept. 12660, MS 0413, fax 4-0645.

Take Note

The Youth at Risk Program, a part of the Breakthrough Foundation, has existed since 1981 in 30 cities around the US. In Albuquerque, for the first time, the Foundation is providing four days of intensive training May 19-22 for low- to medium-risk kids ages 12-14. "Committed Partners" are needed for these kids. The Committed Partner acts as a mentor to a selected youth for one year. Dates are from May 22, 1994, to May 22, 1995. The Breakthrough Foundation is sending a trainer for the Committed Partners on May 6-8 (training is required). For specific requirements and dates, contact Redd Eakin (12640) on 844-4124.

Retiring and not shown in *Lab News* photos: Jerry Campos (2411), Joe Costales (7616), Ray Cooper (2482), Vi Jockle (7811/7813), and Peter Kaestner (9321).

Congratulations

To Theresa (9100) and Arnold Romero, a son, Miguel Cristobal, Jan. 26.
To Karen and Frank (7733) Antonich, a son, Drew Benjamin, March 30.
To Shanna Lindeman (12120) and Al Narath (1), married in Carmel, Calif., April 12.
To Debbie and Randy (5166) Harrison, a son, Tyler Randolph, April 14.

Take Note

Attention, Albuquerque High graduates. The Albuquerque High School Alumni Association will hold a spring social at the Ramada Classic Hotel on Saturday, May 7, 7-10 p.m. The Alumni Association is planning a lot of activities, so join the fun and get information about the association's upcoming events. For more information, contact Julie Archibeque (6200) on 256-1356.



GOING NATURAL — Patrick Long (Equipment Maintenance Team II, 7614-2) dispenses natural gas into a vehicle to dedicate the Fast-fill Compressed Natural Gas Dispensing Station at the Sandia Motor Pool Complex on April 21. The dispensing station is a milestone in Sandia's efforts to assist DOE's nationwide program to protect the environment, says Shawkeet Hindi, Manager, Motor Pool Services Dept. 7614. In 1992 DOE, in cooperation with the General Services Administration, developed a five-year plan with a goal of having 50 percent of new federal vehicles operating on alternative fuels by the fifth year. Sandia has 12 dedicated compressed natural gas vehicles and by 1996, 25 percent of its GSA fleet is required to use an alternative fuel. Refueling was a problem for Sandia since the only refueling station was located 15 miles away. To alleviate this problem, the Gas Company of New Mexico and Sandia entered into a contract to provide this compressed natural gas dispensing station.