

Domenici, Sandia announce joint US-Russian project to identify major risk factors for hepatitis C

Labs organized novel project on emerging disease already afflicting millions

By Chris Miller

Lab News staff

Sandia has organized a novel project to monitor a newly recognized, emerging disease known as hepatitis C in cooperation with the Russian Nuclear Center at Chelyabinsk-70, the New Mexico Department of Health, the University of New Mexico School of Medicine, and Los Alamos National Laboratory.

The project was announced May 28 by Sen. Pete Domenici, R-N.M., at a joint US-Russian news conference at Sandia's Cooperative Monitoring Center. Russian officials appeared at the news conference via a live telecommunications link between Sandia and Chelyabinsk-70.

Hepatitis is an inflammation of the liver characterized by jaundice, fatigue, abdominal pain, intermittent nausea, and vomiting. The Centers for Disease Control in Atlanta estimates 3.9 million Americans are chronically infected with the hepatitis C virus, which was first identified in 1989. New Mexico

(Continued on page 4)

"... most patients are unaware they are carrying the virus until symptoms of liver failure appear."



GLOBAL COOPERATION — Sen. Pete Domenici announces the joint US-Russian hepatitis C project at a news conference at Sandia's Cooperative Monitoring Center. He is flanked by Executive VP John Crawford and a KOB-TV cameraman. The news conference was videolinked to scientists at Russia's Chelyabinsk-70 facility.

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Product Realization Day '97 focuses on exploiting tools of the information age

By John German

Lab News staff

Putting the tools of the information age to work in a five-decades-old business — designing and maintaining nuclear weapons — is what several hundred Sandians showed up to discuss on Thursday, May 29, as part of the Labs' second Product Realization Day.

The all-day event included presentations at Sandia/New Mexico's Technology Transfer Center (videoconferenced to Sandia/California) and a host of interactive display booths (in the TTC and Bldg. 822) focusing on the Labs' Product Realization program.

"Product Realization" is a term used in industry to describe the complete life cycle of a product (in Sandia's case, nuclear weapon systems, subsystems, and components). By examining a product's entire life cycle — including its conception, research and development, design, prototype, test and evaluation, production, deployment, and ultimate disposal — designers, manufacturers, and suppliers, often working together, find ways to improve a product's quality.

(Continued on page 5)

Labs' water conservation effort seeks 30 percent reduction by 2004

Water audit on tap; big savings already realized

By Bill Murphy

Lab News staff

Recognizing "an idea whose time has come," Sandia has embarked on an ambitious effort to reduce its water consumption by 30 percent by the year 2004.

Ed Graham, Director of Operations and Engineering Center 7800, recently organized a water conservation program. Darell Rogers (7823) was appointed Sandia's Water Conservation Officer and is spearheading the effort to meet the 30 percent reduction goal.

"We live in a desert and water is a precious commodity here," says Darell. "We have an aquifer which is not being replenished by the Rio Grande as originally thought, and we must do something to avoid problems of an aquifer drawdown."

The problems with the Middle Rio Grande Aquifer were brought to light when the US Geological Survey (USGS) released new studies in 1993 that indicated water levels in the aquifer are dropping significantly (as much as 160 feet since 1960). The studies showed there is much less

groundwater than anticipated, that drilling deeper may provide lower quality water, and that the aquifer is not being replenished as quickly as had been assumed.

The USGS report, though still controversial in some quarters, has galvanized aquifer users, including the City of Albuquerque and Sandia, to institute serious conservation programs.

In recognition of water's irreplaceable value, Lynn Jones, VP of Laboratory Services Div. 7000, in 1996 entered into a memorandum of understanding with Kirtland Air Force Base (KAFB), DOE, the City of Albuquerque, and the State of New Mexico that committed the Labs to the 30 percent goal.

Although a number of significant, concrete conservation measures already have been imple-

(Continued on page 4)

"... we must do something to avoid problems of an aquifer drawdown."

More answers to your questions about the IJS

Last issue we published employee-submitted questions about the new Integrated Job Structure (IJS) and answers from Don Blanton, Ed Cassidy, Kirsten Randolph, and Shirley Emin of Human Resources Center 3500. Because of the number of questions submitted (almost 50), we weren't able to publish all the questions and answers in one issue.

On pages 6, 7, and 8 of this issue, we publish the rest of the Qs & As having to do with promotion, salary, the job categories and ladders themselves, IJS implementation for managers, and employee morale.

Harry Saxton named president of LM Nevada Technologies

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Sandia/CA women's committee honors 20 high school girls

3



This & That

Help Paul pick topics again - Start thinking about what you'd like President Paul Robinson to talk about at his next set of employee dialogue sessions in late July. The new format - Paul spending most of the time discussing topics and answering questions that Sandians submit ahead of time - worked so well in February that he's sticking with it. I'll tell you in the next issue how to submit your questions and suggested topics directly to Paul's office, or indirectly and anonymously through me if you prefer. We'll announce what Paul will discuss in the July 18 issue. The dialogue session schedule:

- Monday, July 28, 1:30-2:30 and 3-4 p.m., Sandia/New Mexico's Technology Transfer Center (Bldg. 825)
- Tuesday, July 29, 2-3 p.m., Sandia's Carlsbad, N.M., large conference room
- Wednesday, July 30, 1:30-2:30 p.m., Albuquerque BDM Bldg.
- Thursday, July 31, 8:30-9:30 and 10-11 a.m., Sandia/California's Bldg. 904 Auditorium

* * *

Integrated Job Structure: Round Two - Many employees are concerned about the Labs' new Integrated Job Structure (IJS) - whether the classification guidelines will be applied fairly across the Labs, how salaries will be affected, and much more. The concerns are obvious from the forty-some questions the *Lab News* received when we asked for your IJS-related questions early last month.

See part two of John German's IJS question-and-answer article beginning on page 6. Thanks to Don Blanton, Ed Cassidy, Kirsten Randolph, and Shirley Emin of Human Resources Center 3500 for answering the many frank questions submitted by Sandians. This is one example of how we're trying hard these days to make the *Lab News* more interactive. We want to write about what you want to read about. Your suggestions are always welcome; contact Editor Ken Frazier (kcfrazi@sandia.gov, 844-6210, MS 0165), senior editor John German (jdgerma@sandia.gov, 844-5199, MS 0165), or me (lgperri@sandia.gov, 845-8511, MS 0167).

* * *

One title I don't want - Speaking of the IJS, many of us will be in suspense for a few months until we hear for certain what our titles (classifications) will be as of Oct. 1. After very little thought, I determined one title I surely don't want: EMS - extinct member of staff.

* * *

Silver fox on a short leash - As former Sandia director Jim (JJ) Baremore was preparing to retire in April, he was honored at a Sandia Quality Leadership Council meeting for some past good works, and he told our lofty leaders he was looking forward to enjoying 40 additional hours every week *without adult supervision*. Clever talk, but my silver-haired sidekick was only dreaming, and I hear his plans aren't working out so well. His wife, Peg, who's still working in Dept. 7846, reportedly won't even let him leave their yard on weekdays without a permission slip and limits him to two a month, good for one hour each. Happy retirement, JJ!
- Larry Perrine (845-8511, MS 0167, lgperri@sandia.gov)

Fun & Games

Archery - The Manzano Archers are hosting a 3-D, life-size, model-animal shoot on Saturday, June 14. Registration is 8 a.m.-9 a.m. The event is open to the public. For information, contact club president Dewey Reed at 883-2818.

* * *

Windsurfing - Join the New Mexico Windsurfing Association and learn to windsurf June 21-

Sandia LabNews

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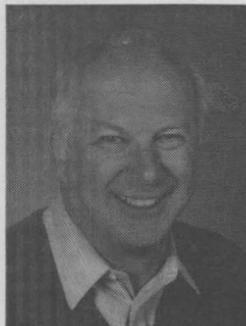
LOCKHEED MARTIN

22 or July 26-27. Everyone is welcome to join. You must be at least six years old (kids and youth are welcome) and know how to swim. For more information and reservations, call Barry Ritchey (1472) at 298-4311.

Recent Retirees



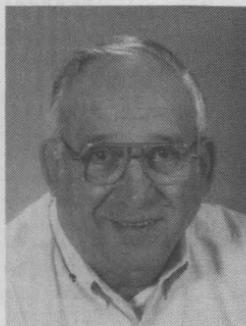
Dick Silva 33
8513



David Abrahams 37
8804



Henry Hanser 30
2205

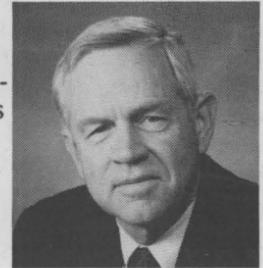


Ron Ludolph 20
8513

Harry Saxton named president of LM Nevada Technologies

Longtime Sandian Harry Saxton has been named president of Lockheed Martin Nevada Technologies (LMNT) and deputy general manager of defense programs within the Bechtel Nevada consortium. His last day at Sandia before beginning his new duties is June 13.

Headquartered in Las Vegas, the Bechtel Nevada consortium manages and operates the Nevada Test Site (NTS) and its related facilities and labs for DOE's Nevada Operations Office. LMNT is one of three companies in the consortium. Others are the Bechtel Nevada Corporation and Johnson Controls Nevada Inc.



HARRY SAXTON

Harry's job within the consortium will be deputy general manager of defense programs. LMNT manages the scientists and technicians at the NTS and remote facilities, performing complex scientific and engineering experiments. More than half of LMNT's 400-plus employees work in the Las Vegas area or at the NTS.

Succeeds Dennis Hayes

Currently Director of Materials and Process Sciences Center 1800 at Sandia, Harry will succeed Dennis Hayes, who retired from Lockheed Martin April 30. Dennis spent his entire career at Sandia - nearly 39 years - before moving to the Nevada Technologies leadership position in January 1996.

"I will miss the Sandians I have had the privilege of working with throughout my career at Sandia," says Harry. "It has been a wonderful place to work, always presenting technical challenges that are both fun and exciting."

Harry currently manages a 300-person staff of Sandia scientists, engineers, and technicians engaged in materials and processes R&D, a position he has held since October 1995. He also manages Sandia nuclear weapon programs related to developing new production capabilities, integrating advanced manufacturing and design technologies, and fostering more cost-effective engineering operations while reducing cycle time.

Harry has directed several R&D organizations at Sandia since 1983 and managed others before that. He has been at Sandia since 1971 when he joined the Labs as a technical staff member. He has PhD and MS degrees in materials science and engineering from Stanford University. He is author of more than 30 professional articles and reports and is a member of numerous professional groups and honor societies. He is an Alfred P. Sloan Fellow and is listed in American Men and Women in Science and Who's Who in Technology Today.

Part of Lockheed Martin E & E Sector

Lockheed Martin Nevada Technologies is part of the Lockheed Martin Corporation's Energy and Environment Sector, headquartered in Albuquerque and headed by former Sandia President Al Narath.

"I look forward to the challenges on my new assignment where the success of Bechtel Nevada and Lockheed Martin depends on making our customers at DOE and the three national labs [Sandia, Oak Ridge, and the Idaho National Engineering Laboratory] successful," says Harry.

Bob Eagan, VP of Electronics, Materials Research, and Components Div. 1000, will serve as acting director of Materials and Process Sciences Center 1800 until a new director is selected.



DENNIS HAYES

Sandia women's group recognizes 20 local female students

Women's committee honors girls' performance in math and science, hosts career discussions

By Nancy Garcia

California reporter

The Sandia women's committee has again recognized 20 high school girls for their achievements in math and science.

Area schools nominated students in two categories, "outstanding achievement" and "significant improvement." This is the sixth year of the recognition, in which girls in their junior year of high school are honored at a banquet.

To encourage mingling and discussion, this was the first time the girls began the evening with an ice-breaker. In another first, the girls were treated to a panel discussion in which six Sandia women in technical careers answered written questions about their choices of careers and colleges. This approach ensured the presentation would "address issues of specific interest to young women," said event chair Peg BonDurant (2211).

"Balancing what you really like and are good at is key," said panel member Susanna Gordon, who was trained in physics and works in systems analysis in Systems Research Dept. 8112. "You should take a broad range of classes, so you will happen upon the thing that you really love to do."

Diana Roe, who has a doctorate in pharmaceutical chemistry and works in scientific programming in Scientific Computing Dept. 8117, agreed. Through summer scientific work experiences as an undergraduate, she learned she preferred using computers to study chemical structure rather than working in a "wet chemistry" lab. Those experiences also were instrumental in getting into a graduate program, she said, despite

competition from other students with top grades.

In welcoming remarks, Pat Smith, Director of Facilities, Human Resources, and Logistics Center 8500, echoed the emphasis on a well-rounded experience with strong technical grounding. She advised the girls to balance their work in math and science by developing skills in communications, leadership, analysis, teamwork, and the arts.

Other panel members touched on their experiences juggling families and careers. Dee Dee Dicker (8418) said she spent seven years going part-time to junior college while working and raising a family. She'll complete her bachelor's degree in an accelerated program at the University of San Francisco, broadening her studies from her original focus on environmental technology. Altogether, she expects to take nine years to receive her baccalaureate.

Kristen Witthoef (8220) received her bachelor's degree in three years from a college program that operated year-round on a trimester system. Rather than continue straight on into graduate school, she said, she has devoted time to caring as a single parent for her toddler daughter.

About one-third of all Sandia employees are



MENTORS — Women's committee co-chair Jennifer Robles (8742), standing, introduces panelists who discussed their career experiences and higher education decisions at the awards banquet. From left, the panelists are Kristen Witthoef (8220), Carmen Pancerella (8920), Diana Roe (8117), Carole Le Gall (2254), Susanna Gordon (8112), and Dee Dee Dicker (8418).

Sandia California News

female. "Business is looking in many directions for women who have experience in math and science," Pat said in her welcoming comments. She acknowledged that parents, teachers, and friends have also contributed to the success of the honored girls by providing support, encouragement, and mentoring.

Carmen Pancerella (8920) said her college choice was set during high school when she won a math contest in her home state of Pennsylvania; the award was a complete four-year scholarship to a small, private Pennsylvania college. On the other hand, Carole Le Gall (2254) said she found her calling later in life. "I went through an entire degree program at UC Berkeley without knowing what I wanted to do," she said. Later she discovered an aptitude for math and science she hadn't seen before, and she continued on to earn undergraduate and graduate degrees in engineering.

Statistically, just 10 percent of doctorates in engineering are earned by women, and only about 15 percent of bachelor's and master's degrees in engineering go to female students, Pat said. She urged the girls to use their strengths in math and science as a foundation. "There's a lot of room for you in these [technical degree] statistics, and I'd like to see you there."

Girls were nominated by their teachers and principals. Several of the "outstanding achievement" winners were deemed, as one teacher commented, not simply the best female students, but the best all-around students in their grade or on their campus.

Winning students

"Outstanding achievement" winners were: Lily Swift and Caitlin Thompson, Amador Valley High School (Pleasanton); Jill Eschborn, Dublin H.S. (Dublin); Amber Schuknecht, East Union H.S. (Manteca); Michelle Lam, Foothill H.S. (Pleasanton); Jennifer Brabec, Granada H.S. (Livermore); Eva Holtz, Livermore H.S. (Livermore); LaLaine Pedron, Manteca H.S. (Manteca); Miranda Coykendall, Sierra H.S. (Manteca); Sarah Battistich, Tracy H.S. (Tracy); and Jaelyn Nelson, Merrill F. West H.S. (Tracy).

Significant improvement winners overcame such obstacles as learning in a second language or overcoming initial anxiety, and exhibited the determination to master difficult subjects and make good grades.

"Significant improvement" winners were: Monica Witham, Dublin High School (Dublin); Veronica Alexander, East Union H.S. (Manteca); Kate Bowen, Foothill H.S. (Pleasanton); Margaret Sharp, Granada H.S. (Livermore); Shannon Rodriques, Livermore H.S. (Livermore); Janet Sabel, Manteca H.S. (Manteca); Maria Vargas, Sierra H.S. (Manteca); Meghan Liggett, Tracy H.S. (Tracy); and Danielle Cobarrubias, Merrill F. West H.S. (Tracy).

Altogether, 39 Sandians volunteered to organize the evening or host the winners.

Hispanic Leadership Committee honors five East Bay high school student winners

Essays and community outreach projects honored during banquet

Five high school students from the East Bay were honored for their winning essays or community outreach projects by Sandia's Hispanic Leadership Committee during a recent banquet at the Pleasanton Hilton.

This year's student contest winners were Alex Gonzalez and Gary Francis from Foothill High School in Pleasanton; Gabriel Castillo from Newark Memorial High School in Newark; and Zeferino Jimenez and Reyna Nava from James Logan High School in Union City.

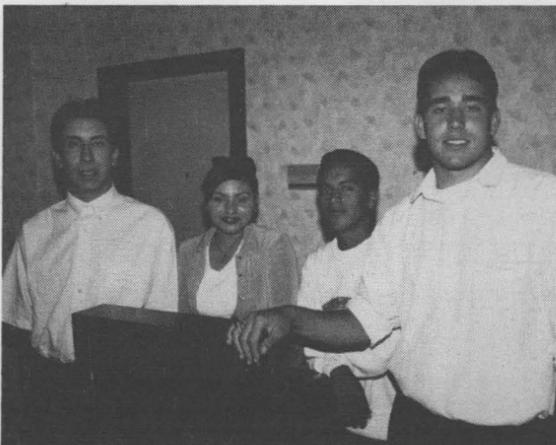
Keynote speaker for the evening was Juanita Sanchez of Community Relations Dept. 12650. She told the students about her struggles from childhood into adulthood and how she overcame hardships to make a career for herself at Sandia/New Mexico.

Foothill senior Alex Gonzalez was chosen for his project on volunteerism and leadership in completing his Eagle Scout project. He designed and built two large planters for the Project Heritage Adult Day Care Center in Pleasanton after working with an engineer and architect. He then carried out fundraising to finance the project, which involved 14 other Scouts. Alex has also recently been honored as a National Merit Scholar.

The other Foothill senior, Gary Francis, wrote about the influence of a mentor in his life — his art teacher. He described how the teacher not only taught him art and photography but also assisted him in designing the Senior Awards Program cover for Foothill and supporting his interest in the Academy of Art College in San Francisco, where he has now been accepted.

Gabriel Castillo from Newark wrote about his father as role model throughout his life. His father brought his wife to California from Mexico in 1969 and worked for 12 years in the fields seven days a week for \$1.75 an hour.

Then he went to work for a landscaping company and was able to spend more time with his son, teaching Gabriel "the ways I



ESSAY AND PROJECT CONTEST WINNERS, from left, are Gary Francis, Reyna Nava, Zeferino Jimenez, and Alex Gonzalez. Not present was Gabriel Castillo.

should act and the right way to live."

James Logan High junior Reyna Nava composed her essay on the importance of education and the influence of the Upward Bound program at Cal State Hayward. This program opened her eyes to the value of a college education and showed her how to better prepare for her future by getting into higher education.

The other James Logan junior, Zeferino Jimenez, wrote about his father, who had come to the US as a child and knew no English. His father had to hold down two jobs to support the family, yet always had time for his children.

He taught Zeferino two important lessons: "Nothing in life comes easy" and "treat people the way you want to be treated."

Laura Santos (8842) served as emcee for the awards dinner. Evelyn Baca (8800) chaired the awards program this year.

— Barry Schrader

Hepatitis C

(Continued from page 1)

state health officials estimate up to 2 percent of New Mexico's population is infected with the virus.

Those most at risk of contracting the disease include injecting drug users, blood transfusion recipients, and health care workers.

"The virus causes liver failure and cirrhosis over a period of 10 to 20 years, and most patients are unaware they are carrying the virus until symptoms of liver failure appear," says Dr. Alan Zelicoff of Nonproliferation Initiatives Dept. 5335, who is coordinating the project for Sandia.

The project is an outgrowth of previous cooperative work between Sandia and Chelyabinsk-70. Similarities in the prevalence of hepatitis C in New Mexico and the Chelyabinsk region in the southern Ural Mountains also provide a sound basis for the study.

"If this work is successful, it will be an enormous help to public health physicians around the world who seek to limit the spread of this disease," Domenici said. "Without a vaccine or effective treatment, prevention is the most important tool to limit damage caused by hepatitis C."

Samples from New Mexico and Russia

The project will begin this summer and last four to six months. It will consist of the taking of about 2,000 random blood samples in emergency rooms in New Mexico and another 2,000 samples from the Sanitary-Epidemiology Facility at Chelyabinsk-70. A questionnaire will be given to all subjects in an attempt to define previously unknown risk factors for the spread of the disease.

Sandia will provide all diagnostic equipment, and data will be shared and analyzed over an existing telecommunications network between Chelyabinsk-70 and Sandia's Cooperative Monitoring Center. The New Mexico Department of Health, under the direction of State Epidemiologist Dr. Mack Sewell, will take the blood samples

and administer the questionnaires in Silver City, Alamogordo, and Los Alamos, three New Mexico communities whose demographics resemble those of Chelyabinsk-70 in terms of ages, education, and numbers of military retirees.

Dr. David Mills of New Mexico's Public Health Reference Laboratory in Albuquerque will oversee testing of the samples.

The estimated cost of the study is \$350,000, which will be provided by Sandia through DOE's Initiatives for Proliferation Prevention program.

A recent study of the prevalence of hepatitis C in Albuquerque, conducted by Dr. Judith Brillman of the UNM School of Medicine, will provide critical baseline information for the current study. Gerald Myers of Los Alamos National Laboratory will study the samples to analyze how genetic differences affect the spread and progression of the disease.

Disease prevalent but little understood

"This is a disease for which we have very little knowledge, and yet it is extraordinarily prevalent," said Dr. Gary Simpson, medical director of the Infectious Disease Bureau for the New Mexico Department of Health. "When a person becomes infected, instead of the immune system kicking in to fight off the disease, hepatitis C has a remarkable ability to avoid the immune system."

Although high-risk factors include blood transfusions and the reusing of needles for injections, a third or more of hepatitis C cases have no discernible mode of transmission.

"It's very disconcerting when 30 to 40 percent of the cases have acquired the disease by means you really haven't sorted out yet," Simpson said.

For instance, Alan Zelicoff said fairly large numbers of Hispanics in northern New Mexico have hepatitis C and yet they do not fall into any of the high-risk groups.

The cooperative study will look at traditional risk factors as well as factors that previously have not been examined in an effort to better pinpoint the causes of hepatitis C. Data gathered in the study will be shared openly via a telecommunications network. Results of the study will be



Domenici confers with Alan Zelicoff during CMC tour.

reported in an internationally recognized epidemiology journal.

Alan said health organizations throughout the world, including the World Health Organization in Geneva, are interested in obtaining more information about hepatitis C in an effort to combat its spread.

Domenici said the project stems from efforts he initiated in the early 1990s to secure funding for US scientists to work with their Russian counterparts to deter the spread of weapons of mass destruction and their components.

"The surveillance of infectious diseases, because of their destructive potential, is an important national security concern," Domenici said. "I believe projects like this help to reaffirm the spirit of openness and trust that is so important between the United States and Russia in this post-Cold War era."

Domenici said there are now about 2,700 former weapons scientists from the former Soviet Union involved in more than 250 cooperative projects with the DOE national laboratories and US industry, which participate on a cost-shared basis.

Water project

(Continued from page 1)

mented, specifically at the Microelectronics Development Lab and the Steam Plant (more on those later), the first major task in the conservation effort will be to determine how much water Sandia actually uses. As it turns out, this is not a straightforward task.

Kirtland Air Force Base owns and operates the

wells that provide water to Sandia. This water is pumped from the same Middle Rio Grande Aquifer that supplies Albuquerque's water. The catch is, the water flowing from the KAFB wells to Sandia facilities is not metered. The Labs pays the Air Force approximately \$1.25 per 1,000 gallons based on estimated usage.

"No one knows," Darell says, "how much we actually use."

Environmental Monitoring and Reporting Dept. 7575 has been measuring sewer flows for several years. About 336 million gallons a year go

into Albuquerque's waste treatment system. By combining this data with data on cooling tower evaporation, steam plant condensate loss, and irrigation use we can estimate the Labs total water use.

To get a handle on that number, Dept. 7823 is taking a two-pronged approach.

Beginning this month a team will launch a system-wide water audit, using some well-established procedures and formulas to determine how much industrial and domestic water is used at major buildings at the Sandia/New Mexico site. The formulas, indeed, get pretty specific, including values for how often the average male and average female flush a toilet during a typical work day, how often men and women wash their hands after using the restroom (50 percent

and 95 percent, respectively), and how much water is used for each hand washing.

"We'll be in every major building between June and September," Darell says.

The audit will look closely at industrial use patterns, and will make a hard count of the number of high-flow (vs. low-flow) plumbing fixtures in Labs facilities. A high-flow toilet, for example, may use up to six gallons per flush; a low-flow fixture uses 1.6 gallons. In a building of 300 people, changing to low-flow fixtures would result in annual water savings of 1 million gallons.

The water audit will establish a baseline for the Labs' overall water usage. As such, the audit is a good place to start, but to get a better picture of water consumption meters are needed. In fact, meters have been designed and will be installed in several main lines in 1998.

The audit will lead to a number of recommendations for water conservation efforts. However, the lack of precise usage figures is not getting in the way of making tangible conservation efforts now.

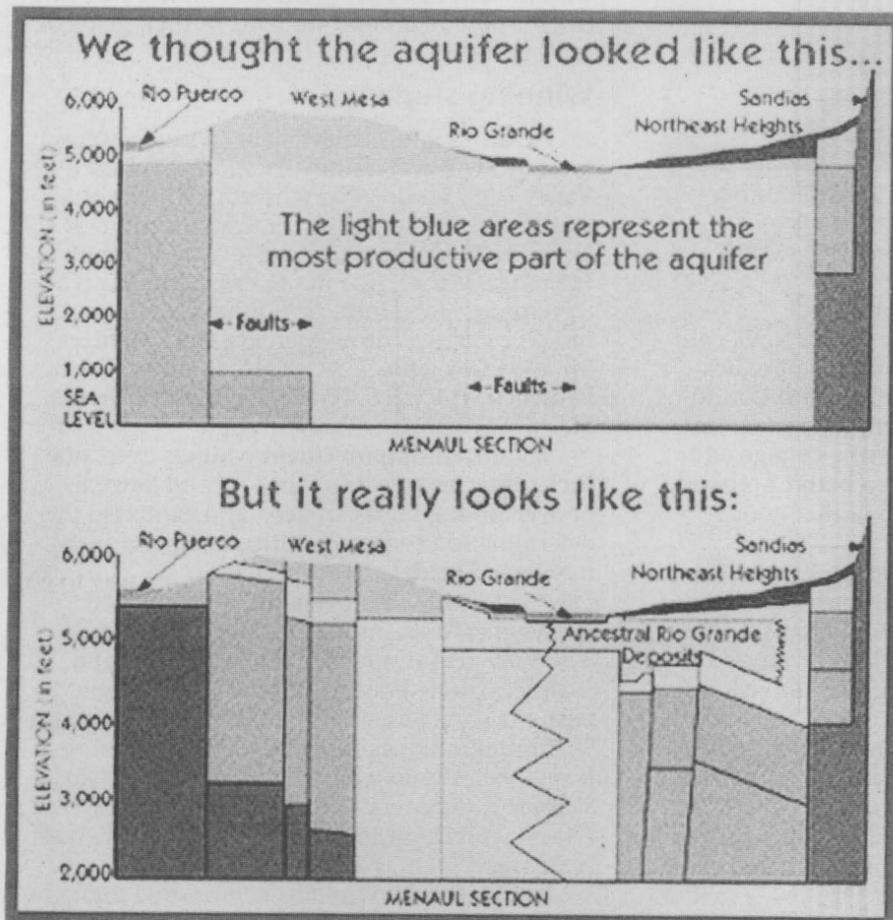
MDL takes the lead

Even without the results of an audit, it is clear the MDL is the Labs' biggest water user. Its microelectronics fabrication processes are heavy water users. In fact, the facility was using 128 million gallons a year. As water conservation consciousness was raised in the Albuquerque area, however, the MDL leadership realized steps could be taken to dramatically reduce its use.

An MDL facilities team — which won a 1997 Employee Recognition Award for its efforts — studied the issue and came up with a number of conservation measures that have resulted in a savings of 38 million gallons of water a year. The measures included improvements to the MDL's reverse osmosis filters and pumps. According to team leader John Jewell, the modifications cost \$107,113; annual savings in water costs and sewer discharge savings amount to \$100,000 a year.

And because the improved reverse osmosis system

(Continued on next page)



CITY of Albuquerque cutaway illustration showing the Middle Rio Grande Aquifer.

PR Day

(Continued from page 1)

speed its development and fabrication, or reduce its overall life cycle costs.

Pioneering PR approaches

Bob Eagan, VP for Electronics, Materials, and Components Engineering Div. 1000, launched the event by describing the broad goals of Product Realization (PR) at Sandia. He said he is impressed by how much work has been done since the first Product Realization Day last summer and praised the people involved in the seven pilot projects aimed at improving specific nuclear weapon processes and technologies.

"The new environment we are in requires a new way of doing business," he said, pointing out that the Defense Programs budget ("a depressing red line") is down about 50 percent from a decade ago.

"On the bright side," he added, today's information tools — including modeling and simulation capabilities, science-based manufacturing concepts, and collaborative software environments and networking technologies — are going to help Sandia accomplish its mission of keeping nuclear weapons safe and reliable in an environment of reduced budgets and increasing technological demands.

He said Sandia stands to be viewed as a major player in Product Realization as its principles are deployed complex-wide through DOE's ADAPT (Advanced Design and Production Technologies) program, and as its PR methods are called on to support the Stockpile Life Extension Program, which proposes to investigate the replacement of every component of every weapon in the stockpile to keep existing weapons reliable longer.

"Product Realization Day is an outstanding way for people to see how all this fits together," he said.

Exploiting today's technologies

Duane Lindner (1809), Sandia's Product Realization backbone manager, said, "There have been dramatic changes in the suite of technologies available to use. We are looking to exploit those technologies.

"This is a chance to acquaint as many people as possible with the tools and processes of Product Realization," he said.

He described how Sandians participating in individual PR projects across the Laboratories are developing and validating advanced tools for design and analysis of new systems and components in a virtual environment. These tools are

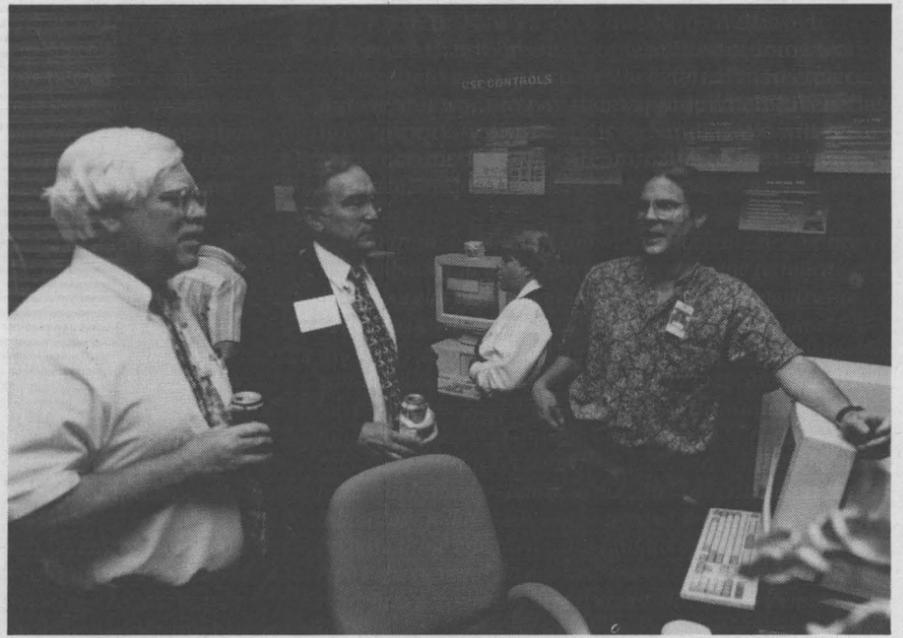
now being used to optimize product designs for manufacture and to eliminate potential flaws in the early stages of design without using expensive hardware prototypes.

One such project, involving Sandia's neutron generator work, employs a wide range of software tools and networking capabilities to troubleshoot and validate new component designs. Brainard's Brain, for instance, a computerized interactive design evaluation system, is an attempt to capture the knowledge of long-time Sandian John Brainard of Neutron Tube Development Dept. 1564. It guides engineers through the 30 steps required to design a neutron tube, referencing an extensive design database and a variety of software tools.

The neutron generator project also makes use of a variety of modeling and simulation tools that have allowed engineers to model stresses on materials and components, predict flaws in welded joints, model heat transfer in brazing furnaces, automatically inspect laser welds, and visualize pressure and electric field dynamics inside a neutron generator's ion source, among other capabilities. By using process modeling tools, the team also has reorganized and reduced the number of steps required to deploy new neutron tube components; the streamlined process now is faster and less costly and simplifies part qualification.

A collaborative weapons complex

Having a captive manufacturing process right here at Sandia — the neutron generator production facility that is part of Defense Programs Products and Services Div. 14000 — also has helped the team apply some of the fruits of Product Realization to a small-lot production process with minimal barriers, adds Leslie Interrante of Agile Manufacturing Dept. 1567. That experience should help smooth the transition as PR



INFO-AGE TOOLS — Ernest "Foss" Friedman-Hill (right) of Scientific Computing Dept. 8117 explains Sandia's Product Realization Environment collaborative client-server application to Bob Eagan (left), VP for Electronics, Materials, and Components Engineering Div. 1000, and an unnamed outside visitor.

(Photo by Walt Dickenman)

approaches are adopted throughout the complex, she says.

Duane also explained how Sandia plans to help "reengineer the nuclear weapons complex" using collaborative environment tools such as the Product Realization Environment (PRE). PRE is a client-server application developed at Sandia that allows engineering software developers to draw on a variety of applications catalogued in a software library and to interoperate among those applications, all from a single, integrated desktop environment.

Steve Montgomery (1567) says the eventual goal is to provide a virtual design environment complex-wide, from which programmers, designers, and manufacturers can share networked software and approaches.

"A lot of industry is trying to do just this very thing," he says.

The ultimate goal of Product Realization at Sandia, adds Duane, is to "drive defects as close to zero as possible" and provide for the rapid fabrication of nuclear weapons subsystems and components that have assured, predicted reliability.

"In a constrained environment, we simply cannot continue to do the job the way we have historically done it," he said. "Product Realization is going to fundamentally change the way things are done."

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is more efficient, it operates for fewer hours during the year, resulting in annual energy savings of \$22,000.

As Darell notes, "Reducing our water usage saves more than water, it saves energy. People don't realize how conserving water leads to other efficiencies."

While the MDL may have the most dramatic conservation program in place, the Steam Plant, also a big water user, has been aggressive in reducing its water consumption. The plant, in continuous operation since 1947, has implemented a number of conservation projects. Plant staff identified and repaired leaks in condensate return lines, increasing returned steam from 52 percent to 68 percent. The plant has also initiated much tighter controls on boiler cycling, installed a new, more efficient dealkylizer, and modified some of the plant's piping to recycle water used for cooling bearings; that water is now going into the boilers instead of straight into the sewer system.

The plant's modifications and repairs have reduced annual water use by 23 million gallons, significantly reduced annual fuel use, and eliminated 11.5 million gallons a year of discharge into the sewer system. Cost savings approach \$100,000 a year.

Cooling towers

The Labs' 23 cooling tower systems provide an efficient way to cool facilities and instruments. These evaporative systems, do use a lot of water — a combined total of about 110 mil-

lion gallons a year. The water in a cooling tower is utilized until the total solids in the water exceed a safe level to prevent scaling. While you can't do much about evaporation loss — that's the whole point of the process — there are ways to get more use of the water in the system by increasing the cycle time. The approach, to be implemented this year, maximizes the performance of the system by changing the chemical treatment program and providing instrumentation to control cycle time. Approximately 20 million gallons of water a year will be saved, and chemical use will be reduced.

Facilities and the MDL are working together to get some extra use from the MDL's process waste water. The plan is to pump that process waste water to the cooling tower adjacent to the lab. The resulting water savings, says Darell, will

be approximately 12 million gallons a year for an estimated annual cost savings of \$25,000.

While the Labs' conservation efforts have already made significant strides toward the 30 percent reduction goal, there is a long way to go, Darell says.

And the big dramatic improvements — as important as they are — are relatively easy to achieve, Darell says. "Initially you can achieve big water savings with just a little investment. It gets harder as you go along."

"We are confident that the Labs can attain the 30 percent reduction by the year 2004.

"When we have finished the audit, we will develop an overall water conservation plan which will rank order water saving projects based on a cost/benefit analysis. It will be a good plan," he says.

Golf course plan could save millions of gallons

The Tijeras Arroyo golf course located at KAFB uses approximately 176 million gallons of water a year for irrigation, making it the single biggest water user on base. (Overall KAFB water use, including Sandia, DOE, and military customers is 1.6 billion gallons a year, all pumped straight out of the Middle Rio Grande Aquifer.)

Darell Rogers, Sandia's Water Conservation Officer, says a proposal is now making the rounds that would save KAFB as much as 70 million gallons of water a year and reduce the amount of water Sandia dumps into the sewer

system by a like amount. How? By using wastewater from blowdown from the cooling towers, process water from MDL, and reverse osmosis reject water for golf course irrigation. The plan, if it flies, would represent cost savings of \$121,000 to \$170,000 per year, Darell says.

The golf course and the Air Force are working with Facilities Center 7800 on a proposal to design and install a system that would allow the capture of wastewater from the cooling towers and process wastewater from MDL for reuse as irrigation water for the golf course.

More answers to your questions about the IJS

Topics: Promotions, salary, the job ladders and categories, IJS for managers, and employee morale

Last issue we published employees' questions about the new Integrated Job Structure (IJS) and impromptu answers from Human Resources Director Don Blanton (3500), Compensation and Job Evaluation Manager Ed Cassidy (3545), and Kirsten Randolph (3545) obtained during interviews by Lab News senior editor John German.

Because of the number of questions you submitted, we couldn't publish all the questions and answers in the last issue. Here is the second installment of IJS Qs & As, which address promotion, salary, the job ladders and categories themselves, IJS implementation for managers, and employee morale. Shirley Emin (3545) joined Don, Ed, and Kirsten in responding to these questions.

Some of your submissions contained a variety of concerns; we tried to extract different questions and ask them separately while preserving the essential elements and tone of each submission. In all cases, we have preserved questioners' anonymities.

Promotion

Q: Water-cooler talk has it that many managers are using the IJS not so much to discuss and describe a job as to conduct a performance management review for the person in that job. The concern is that some persons could be promoted or demoted on the spot this way, without going through the usual multistep process outlined in the Performance Management guidelines. What is being done to prevent managers from circumventing the promotion and demotion system?

Don Blanton: With the IJS there will be no compensation changes, where as with promotion or demotion there would be money given or money taken away. In this case, we're only talking about properly classifying people. Under our current system we do have people in positions that aren't commensurate with their levels of responsibility, and in reality they should have been reclassified under the old system. This is just an opportunity to create a level playing field for everyone in the organization. It shouldn't be considered a promotion or demotion, just a reclassification to better describe employees' work and the value of their work.

Q: We were told that we had to meet all criteria in a level to be placed or advanced to that level. Well, our jobs do not require us to perform all the duties in some levels, even though we work just as hard if not harder. How will we ever advance if our jobs don't require us to perform those duties?

Ed Cassidy: You won't. Advancement to the next level requires meeting all the criteria for that next level, and not all jobs have equal potential. If in your current job your levels of responsibility can't be expanded so that you meet all the criteria for the next level, there may be some career decisions to be made. Employees who aspire to move up may have to change jobs or broaden their knowledge, skills, and abilities. It's that simple.

Shirley Emin: The criteria should also help employees focus on how they might want to expand their jobs and work with their managers to see if they can't make their jobs broader. The IJS affords you some concrete factors to look at when you're handling your career development.

Kirsten Randolph: The only other thing I would add is that this system mirrors what we see in the marketplace. Take a job like strategic planning. Typically we see more senior employees in the strategic planning roles, and intuitively that makes sense. You probably wouldn't have college new hires setting the strategic direction for your company. Strategic planning by nature requires a lot of organizational knowledge and experience. So not all jobs are created equal.

As far as working hard goes, keep in mind that this isn't a performance system. An individual can work extremely hard and be highly rated compared to others in their job ladder. But that's a performance issue, not a placement issue. Placement in the IJS has to do with the type of work you do for

the Laboratories.

Q: What happens to [lower-level Technical Associates] who are in line for a promotion but because of the new system and the restriction on the number of PTNGs, they will not get the promotion or the money that comes with it, even though they are paid lower than their counterparts in the outside world? Isn't the IJS designed to address this?

Ed: There are always going to be a few people on the verge of a promotion. Last September, when we sent out the annual promotion increase schedule for fiscal '97, we were very clear that it was only good until the middle of May when we were to change over to the IJS. We announced we were ceasing the schedule at that time.

In terms of pay increases, when we restructured the classification system, we also changed the philosophy and eliminated the "automatic" movement that is part of the current system. So the changes in compensation associated with the former classification system are no longer applicable. In the new system, managers have the freedom to provide salary adjustments or review funds based on value of contribution. If management deems that an individual's value of contribution is such that the person needs a salary increase, they have the power to do that.

Kirsten: One [false] assumption here is that the IJS should immediately align pay with the outside market. That's a goal, but just flipping the switch from System A to System B does not involve market adjustments. Over time, the decisions managers make about how salary funds are distributed are going to accomplish that.

Lab News: So it may take some time to get an individual's salary to where it needs to be under the IJS?

Ed: Yes.

Q: It seems like the new IJS makes it very difficult for a technical person that changes jobs fairly often (4-5 years) to be promoted above SMTS (PMTS states that the person must be a recognized expert in their field — it very often takes much longer than 5 years to become an expert in a field). Was this done on purpose? Is the only ladder available to this type of person the management ladder, as it appears to be?

Ed: The underlying assumption this person makes is that by changing jobs, their occupational endeavor changes to the extent that a completely different set of skills and job knowledge is required. Realistically, I think most people build their knowledge, skills, and abilities in a reasonably well-connected grouping of occupations. So the ability to make a name for yourself does exist. I'm not sure this is going to be an issue.

Shirley: At the PMTS and DMTS levels, some of the criteria actually describe breadth of knowledge. If a person is changing jobs, there most likely would be some continuity between the jobs, and by changing jobs the person would actually be enhancing their value to Sandia.

Ed: On the other hand, there's nothing wrong with being a valuable contributor at the same level your entire career. The broad IJS salary bands are designed so your pay can increase during your career

virtually independently of where you are on your job ladder.

Q: Is there a minimum of Sandia service years implied by the job level criteria for promotion from SMTS to PMTS?

Ed: No there isn't.

Kirsten: I think we addressed that [in the May 23 Lab News, on page 9]. For promotion, you have to demonstrate competence and a sustained ability to meet the criteria at the next level, and that doesn't happen overnight. But there is no set amount of time you have to spend at a level before you can be promoted to the next level.

Q: When will the ASA structure be linked to the IJS structure? How easy will it be for ASAs to move into IJS jobs if they meet all of the criteria on the IJS placement forms? Will the transition be of the same ease as for persons holding IJS jobs, or will the ASA still be required to have the current prerequisites which are not related to the new IJS (a relevant bachelor's or master's degree or a minimum of five years in a classification and PR, HP, Good, or better performance indicators in their current classification)? How will non-IJS, non-union jobs be reclassified once the IJS is implemented?

Kirsten: The ASA structure is going to be looked at by an existing committee, called the MLS/ASA Advisory Committee, which has been tasked by Charlie Emery [VP of Human Resources Div. 3000] to look at the feasibility of moving it into the fold of the IJS. Their work will begin this summer, and we hope to have some answers by the end of summer or early fall. So when will it be linked? That depends on this feasibility study and whether or not management decides that's the right thing to do after looking at all the issues. ASA, MA, and Staff Secretary jobs will be included in this study.

Ed: It's possible the ASA structure will be linked as its own ladder in the IJS.

Shirley: It's also possible that the way people move through the ASA structure might be modified as a result of this study. However, until that's done, the current requirements apply, such as the five years in a classification.

Ed: In terms of bidding on a posted IJS job [after the "quiet time" through January], anyone can bid if they meet the criteria for that job. If they are selected, they are on an IJS ladder and will be classified as such.

Kirsten: As to the question about whether a person will have to meet the current prerequisites, again that's a pending question that will be looked at by the MLS/ASA Advisory Committee. We can speak to the philosophy that we are trying to "unbundle" a lot of the bureaucracy that goes along with movement and job classification, and the overriding principle of agility needs to apply to the ASA structure as well as all others. So I wouldn't be surprised if there's some streamlining, but the work hasn't been done yet.

Salary

Q: Having seen the salary bands, there is quite an overlap between the various job levels. It is conceivable that a "Level 1" can earn more than a DMTS (DMLS or DTNG). On the surface this doesn't make sense. Is it to be expected that certain "job titles" within the same general field will be valued more than others based on the external market? In other words, could an aerospace engineer who happens to be an outstanding DMTS earn less than a computer science engineer who's a [first-level Technologist] because the external market dictates it?

Ed: What someone gets paid is not a simplistic equation. It depends on lots of things, most importantly the person's value of contribution to his or her organization, as well as the person's occupation, how that person got into the classification (whether they were a new hire or promoted from within), and the person's whole work history, if you will.

Although it's possible for some folks at the lowest salary band in a ladder to be paid more than some in the highest salary band of the ladder, it would be

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The IJS staff ladders

Integrated Job Structure titles

Technical Staff Ladder:

DMTS (Distinguished Member of Technical Staff)
PMTS (Principal Member of Technical Staff)
SMTS (Senior Member of Technical Staff)
MTS (Member of Technical Staff)

Laboratory Staff Ladder:

DMLS (Distinguished Member of Laboratory Staff)
PMLS (Principal Member of Laboratory Staff)
SMLS (Senior Member of Laboratory Staff)
MLS (Member of Laboratory Staff)

Technologist Ladder:

DTNG (Distinguished Technologist)
PTNG (Principal Technologist)
STNG (Senior Technologist)
TNG (Technologist)

"It's possible the ASA structure will be linked as its own ladder in the IJS."

"Employees who aspire to move up may have to change jobs or broaden their knowledge, skills, and abilities. It's that simple."



KIDS AND SPACE — John Chavez (left photo), 10, son of Josephine Chavez of Protective Force Dept. 7435, enjoys Sandia's RATLER (Robotic All-Terrain Lunar Exploration Rover) on display at the National Atomic Museum May 22 as part of Sandia's celebration of the first Space Day. In the right photo, Brenda Dever of BD systems Inc. shows a model of the Lockheed Martin X-33 space plane to Lisa



Manzanara and her daughter Casey, 7, and sons Dylan, 9, and Trevor, 9 (Braves T-shirt). The event's national sponsors, including Lockheed Martin, intend for Space Day to be an annual event aimed at attracting the interest of children ages 7 to 14 in math and science. More than 100 children participated in the various hands-on displays and activities at the museum. (Photos by Randy Montoya)

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an unusual circumstance. But it's possible. It has to do with how the value of contribution of the person in the lowest salary band is perceived as contributing to the organization, how the person's area of expertise compares to the external market, and the fact that the person doesn't yet meet the criteria to be moved to a higher level. It has to be a combination of those factors.

Kirsten: Our intent is for value of contribution to be the primary determinate of pay. However, we cannot disregard the fact that the external market does drive basic differences in salaries. For example, the start rate, or what we pay people coming in right out of college, is much greater for computer scientists than for civil engineers by a significant factor. That salary differential will likely carry throughout people's careers.

So value of contribution is the main internal mechanism for how we pay people, but a person's pay in relation to a salary band is always going to be influenced to some extent by what a person is doing and what discipline he or she is in.

Q: Salary isn't supposed to be a driver for placement within the IJS, but it is a criteria being used. If a person was a nuclear engineer making 100K per year and is now a drafting designer, should that person still be paid and classified at the 100K level or at the 30-40K level that other designers are paid?

Don: A person's salary isn't going to go down as a result of being reclassified. If a person isn't doing the work of the occupation they are in, and if they are in fact performing at a lower level of work, you wouldn't expect them to continue to receive salary increases — particularly base salary increases comparable to their previous increases. So again, the questions are going to be "What work is the person really performing?" and "What's their value of contribution to the organization?" A combination of that plus how they are performing relative to their peers will determine how they're compensated in the future. There won't be anyone who suffers an immediate loss of pay as a result of this reclassification.

Q: If you've been here 25 years, shouldn't you be making more than a person who only has 10 years of experience even if the person with 25 years of experience is not doing the same or equivalent level of work?

Ed: It depends, again, on the value of contribution to the organization and how your manager perceives you as contributing to the mission and goals. Time alone is not the driver for pay. Time may be an influence, but it's not the driver.

Shirley: A recent analysis of maturity-to-pay curves from private industry tells us that other companies on average weight performance at least three times as heavily as experience. It's hard to determine what this person means by the "same or equivalent level of work." But no, a person who has been here 25 years shouldn't automatically be making more than a 10-year employee.

LN: Shouldn't your salary increase the longer you work somewhere, and therefore shouldn't it be unusual for a younger, less experienced person in a similar job category to be making the same as a long-time employee?

Ed: Not at all.

Only if you're in the civil service system or a system that is purely based on years of service. Sandia's system is not based on years of service. It's a merit system based on value of contribution.

Shirley: You only have to look at the salary scatter chart to see that for any given salary, you have quite a range of experience years. For example, at the salary of \$50,000 we have a range of experience years from about three to 35.

Q: In the current system, it seemed as if managers attempted to give raises (when indicated by performance) with the goal of getting an employee to the mid point of their salary range. Will the new IJS process focus on mid point of the salary band for a particular level, or will the top of the salary band be the goal the employee should strive towards? Is there any instruction to managers about what they should be doing in regards to this?

Ed: There is no particular point in a salary band that is the focus of what people ought to be paid. It varies. The whole range is the appropriate pay. The salary range encompasses the variation that can exist in salaries at a given level, again based on value of contribution. Not everyone is going to have the highest value of contribution.

Shirley: This company has for years been internally focused, and people are happy or unhappy based on their position relative to that "mid-e" point, and somehow that has become the "normal" temperature. In a sense, we're starting to look outside with this new system. We will be providing data about salary averages that we find in the market according to occupation descriptions, by level. Our hope is that managers will consider that information in making their judgments about the size of raises given to people based on their value of contribution. We keep going back to value of contribution, but we really want managers to focus on what people are doing for the company.

Ed: Essentially, we are competing with the outside world in what we pay people. If we pay people what they're worth, they'll likely stay. If they can do significantly better, they'll go. If a person's value to an organization or to Sandia is high, that person's salary ought to be enough to retain them.

Q: There is a sizable MLS population at the laboratory that will be adversely affected by the IJS. Since the IJS does not allow for salary increments, an MLS 2 who is ready for two advancement opportunities to MLS 4 will not realize a salary increase totalling \$5,100 (in today's

"Time alone is not the driver for pay. Time may be an influence, but it's not the driver."

salary structure). The philosophy behind these step increases was to make a newly promoted staff member "whole" after a given period of time. The net effect will be similar to the TSA population in that adjustment funds and merit increases are never enough to make the individual "whole." It was brought up in the training sessions and the response was the current MLS 2/3s will fall into the new "broad" salary bands. That still does not address the fact that those presently in the MLS 2/3 position will be losing out on \$5,100 per year for the rest of their careers and towards their retirements. Is this being addressed by anyone?

Ed: The introduction of the IJS does represent a pretty dramatic break with the past. This is probably even more true for MLS employees than for technical staff. Technical staff have long received nonbase when they have moved to SMTS or DMTS. Nonbase promotion amounts will now be associated with upward movement within all staff ladders, and base salary adjustments can be made using mid-cycle funds if warranted. We are really trying to change the focus from solely an internally driven metric, such as mid-e or median salary, to one that recognizes external market values.

Job ladders/categories

Q: I and many others have felt that what the MTS structure needed was a parallel promotion/career ladder that didn't require technical staff to go into management. Wasn't one of the goals of the new IJS system to address this? Also, where do you go after DMTS, DMLS, etc. without going into management? There is a very large gap from DMTS (manager level) to Fellow (VP level).

Ed: There is another appointed level in the IJS. It's called "Senior Engineer/Scientist," or "Senior Administrator." So for technical staff there are two positions above the DMTS level: Senior Scientist/Engineer and Sandia Fellow. These are, of course, reserved for rare cases when someone has become a strategic asset to Sandia. And yes, providing a nonmanagement ladder for technical staff was a goal of the IJS.

Q: Why was an additional level added to the MTS ladder?

Q: I would like to understand how the IJS as implemented is responsive to the employee survey indicating the need for a career path for technical staff. Ideally, such a path would provide a career ladder, with a series of steps commensurate with education and experience. We might expect something like Staff Scientist I, Staff Scientist II, Senior Scientist, etc. Is this a ladder, or another rating system that has demoralized the majority of the technical staff?

Kirsten: One of the overwhelming concerns technical employees expressed in the employee survey [conducted in 1995 in preparation for development of the IJS] was that they wanted another level, and many felt that DMTS was not attainable. Now, in essence, we have another level, PMTS. From that standpoint, we were responsive to the survey in that there are three levels [below DMTS]. And we've also added the Senior Scientist/Engineer position. So a nonmanagement

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career ladder for technical staff is in place.

I'm not sure, but perhaps this person is suggesting something like a civil service (GS) series, where there are automatic steps or progression based on the number of years someone has worked here. That was something the design team looked at [in developing the IJS]. But one of our external customer requirements from DOE was that we *not* have a time-based system.

Ed: The design team also didn't want to fractionate the scientists from the engineers from the health physicists, etc., with a series of ladders built in for each discipline. The IJS provides one career ladder for all technical staff, which promotes versatility and mobility of movement and treats all folks in the technical ladder the same. So we have a broad classification ladder, and the occupation descriptions make the distinctions.

Kirsten: And occupations can be easily changed. Agility was something Sandians told us they really valued. A system where people were put in a Scientist ladder, or an R&D ladder, or a Facilities ladder might be more restrictive.

Q: A fair amount of Sandia's business now is in the after-market product support business. When the IJS was first developed, there was a category for Product Support Engineer. Why did the final list include multiple break-outs for lawyers and administrative functions, but not a Product Support Engineer category?

Shirley: It's partly a result of getting some negative response to it during the IJS pilot and making changes based on those comments. [The pilot was conducted in July 1996, during which managers in 13 New Mexico centers and 20 California departments used the IJS process to place their employees.]

Ed: Based on pilot feedback, we tried to cut down on the number of occupations, and the design team felt that the activities were covered by some other occupation well enough that it was folded in.

The process for adding occupations is defined by the SHRP [Strategic Human Resources Planning] committee, which is responsible for adding or deleting occupations as we go. Individuals who feel that an occupation, such as Product Support Engineer, should be added need to write up their suggestions and send them to Karen Armstrong, mail stop 0187.

Q: All of the job descriptions are too narrow for those of us involved in weapons work. You have to become a jack-of-all-trades to get the work completed. I put down 0707, Technical Program/Project Management & Planning, but that only covers a very small portion of what I do now. What job category covers my current "fields" of "expertise"? [Questioner submitted a list of nine occupations that applied to his job.] And this is only my current job. I could come up with a list three times as long for what I've done in the past. What are you supposed to do when there is no job description to adequately define what we are doing?

Ed: I think we answered that in the previous question. Basically, come up with what best describes what you are doing. If you had to identify yourself occupationally, what set of words would you use? I suspect nearly everyone has a range of nouns that describe what they do. The occupations are intended to be broadly interpreted, not narrowly interpreted. And they are intended to be linked to the external market.

Kirsten: Again, if we missed a major area, I would encourage people to bring it to our attention so that SHRP can look at all the occupations we might need to add or modify.

LN: You said a new occupation should be linkable to the external marketplace. How can an occupation like weaponeering be linked?

June 17 Diversity panel to be moderated by TV anchor Monica Armenta

KOB-TV Channel 4 anchor Monica Armenta will be the moderator for a Sandia Diversity Leadership Quarterly Diversity Event discussion panel, "Visible and Indivisible Differences," at Sandia on June 17 in the Coronado Club Ballroom. The discussion is from 10 to 11:30 a.m., with lunch served at 11:30. RSVP to Renee Montoya via cc:Mail or phone at 844-4235 by June 12 if you plan to attend.

Kirsten: That's a good question. We have to recognize that there are people at Sandia doing work where there is no match in the external marketplace. But we still want to pay them appropriately given how important this work is to Sandia. We will have some occupations that are unmatched in the marketplace, and that's okay.

Q [from a technical communicator]: Because of my unique background, I seem to fit between the technical and laboratory [staff] ladders but I am not recognized as valuable by either one . . . The work I do for Sandia is typically very technical and complex, and my technical background allows me to do a much better and cost-effective job for the company than a nontechnically trained communicator; however, my job duties do not "fit" the technical ladder criteria because those criteria reward traditional technical behavior. I also do not "fit" the criteria on the laboratory ladder to be considered at a high level (PMLS) because those criteria reward traditional management-type behavior and do not take these technical contributions into account. Where do cross-disciplinary employees fit?

Ed: They fit in the occupation that best describes the knowledge, skills, and abilities required to do their job. Again, if there's a broad occupation description that can be defined, let us see it.

Kirsten: We have some functions that are important but aren't at the core of our business. For example, Medical is a very important part of Sandia, but we are not a medical organization. So the words in the level charts may not have the flavor that they would if you were developing a level chart say in a hospital or an HMO.

Ed: A technical communicator may be in a kind of support staff role at a national technical laboratory. And many of our support staff people have technical backgrounds they use in their jobs. So the Laboratory Staff ladder may indeed be where this person fits.

As far as the level criteria applying to an occupation all the way to the top, they may not. That's why the salary bands are so broad. PMLS may not apply to a technical communicator's job. One doesn't have to move to a higher level such as PMLS to be paid as good as or better than someone in the higher level.

Q: Why are MLSS again second-class citizens? DMTSS were "grandfathered in," but MLS 5/6 is not considered the highest nonmanagerial grade anymore — as a [PMLS] carryover? Rumor has it that [PMLS] is reserved for disenfranchised managers (who stepped down from managing people).

Ed: In reality what we are seeing in the data is that there are no apparent mapping trends from the old system into the new system [transferring of people in former levels categorically into particular IJS levels].

Shirley: Also, there were no DMLSS named initially because we want potential DMLSS to go through the same peer selection process that existing DMTSS have gone through for their appointments. The DMTSS already have withstood the scrutiny required for their appointments, but such a system never existed for Laboratory Staff employees.

Kirsten: We want the "Distinguished" level to really mean something, so [by not naming DMLSS right away] we are not treating Laboratory Staff employees like second-class citizens. We are making sure that we have a careful process and that all Distinguished-level appointments have credibility.

Ed: Becky Statler [3535] is putting together the "Distinguished" selection processes, so hopefully this fall we'll have a process, and by next calendar year we'll be able to appoint employees to all Distinguished levels.

IJS for managers

Q [from a manager]: The chart used to illustrate the new IJS system shows only one chain of managers. Yet briefings from the IJS team admit there still will be two salary ladders for managers, one for administrative and one for technical. Thus, there will in effect be two managerial ladders. Why doesn't HR seem willing to admit that, or, more importantly, address the concerns regarding managers who once had technical jobs but now do only administrative work?

Ed: Within the next few weeks managers will be classified into the IJS under the management staff ladder. They will be assigned occupations, and as with technical and laboratory staff employees there are occupational differences in terms of market value. There are some managerial occupations that are clearly administrative, like human resources and purchasing. And there are some that are purely technical, like basic research and engineering. While we have one management ladder, we have technical and administrative salary bands to reflect these occupational differences.

LN: This person also seems to be asking about technically trained managers who are now doing only administrative work.

Ed: The purpose of the IJS is to reflect what you are currently doing. If you are now doing administrative work you will be placed in an administrative occupation.

Q: When is the managerial IJS going to take effect, and are managers who are not managing people going to be considered for Laboratory Staff placement when this happens?

Ed: The manager ladder placements will be complete by the end of July. As part of the IJS, there is an opportunity for an individual who is a manager, and whose role or contribution is considered essential for the well-being and sound operation of the Laboratories, to be at a managerial level performing an activity even though they may not be supervising employees.

Kirsten: This is called a "special assignment." We have defined a set of occupations for managers who don't have staffs but who are critical to the long-term viability of the Labs. Special assignments in the manager ladder are typically for a defined period of time, say, less than two years. They may be bringing in money, they may be assigned to Washington, or they may be doing program management activities.

Ed: Some special assignments are more "permanent" in nature and are going to be described, like Ombuds or CSMs [human resources customer services managers].

LN: Will some managers who are not managing people be reclassified as Laboratory Staff or Technical Staff employees?

Ed: Yes, it's possible. The opportunity is there. If they aren't functional managers or they aren't on special assignment as defined by the IJS, then they should be classified as Laboratory Staff or Technical Staff.

Employee morale

Q: I would like to know what HR principles for morale building and motivation were invoked in the development of the IJS?

Shirley: We've now got clearly stated criteria so people can understand how they need to expand their skills so that they have greater control over their own career development. Some people would view that as highly motivational. The system is less of a black box; it's more open for people to understand.

Ed: By setting up specific criteria, we also have the opportunity to classify people uniformly throughout the Labs, and that should provide a sense of fairness.

Shirley: In the survey, MLSS said they resented that they had to bid on their own jobs to be promoted, and we've taken away that process.

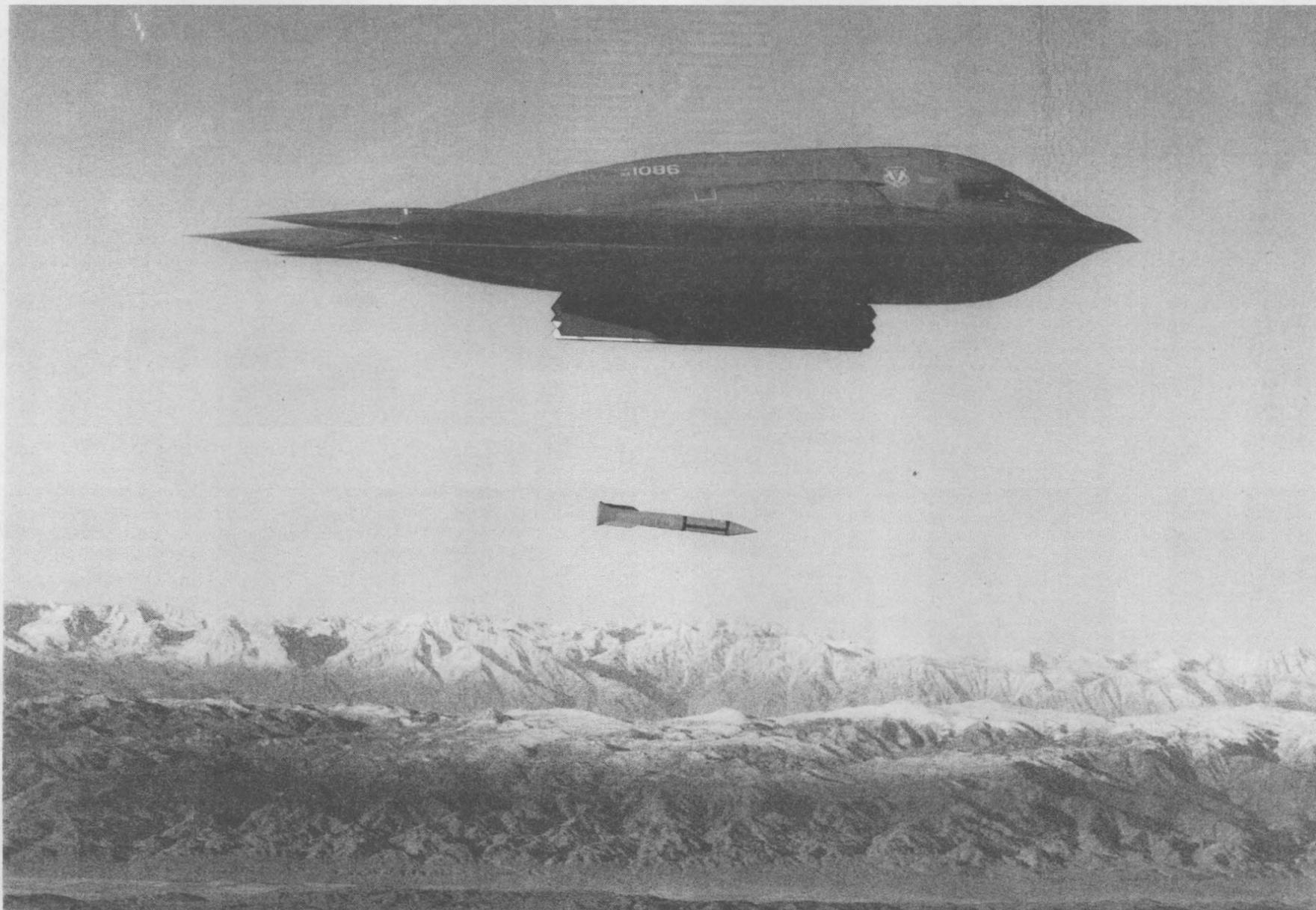
Ed: Also significant I think is that the IJS is a way to make salary delivery more effective. You have to be responsive to the hot job functions in the marketplace. And you have to be flexible enough to respond to changes in the market.

And let's not forget that most of the changes that have become part of the IJS are based on what employees told us in the survey.

In every company where these types of changes are occurring, there is a great deal of anxiety. Just like any big change, the IJS is going to take some getting used to. It's going to take people seeing that hey, we're still OK; hey, we're able to be competitive; and hey, the folks that really are the best rated in terms of value of contribution essentially over time get the best pay. Our hope is that people will feel more comfortable with the system as they begin to use it.

"Just like any big change, the IJS is going to take some getting used to."

B-2 drop tests confirm viability of B-61 Modification 11



A FALCON'S VIEW — In this photo taken from an F-16 Falcon chase plane at the Tonopah Test Range, a B-2A stealth bomber delivers a B61-11 certification unit right on target. During the test, conducted late last year, all electrical and mechanical interfaces of the B61-11 certification units performed as expected, including integration with the bomber software. Weapon release through final earth penetration occurred as predicted. Overall, the tests indicated the ballistics for the

Modification 11 (Mod 11) of the B61 are understood well enough for the weapon to function as required. The B61-11 is intended to replace the venerable B53. Observing the TTR tests were representatives from Sandia, Los Alamos National Laboratory, DOE, DoD, several Air Force units, and the Field Command Defense Special Weapons Agency. Sandia's B61-11 Development Program Team won a 1997 Employee Recognition Award for technical excellence. (US Air Force photo)

Here's an update on the Prescription Drug Program formulary

There have been some changes in the drugs available to Sandians through the Prescription Drug Program. The program is available to participants covered under the Triple Option Plan (TOP2/TOP3) and is currently administered by Caremark.

A formulary is a list of preferred brand name drugs that can meet a patient's clinical needs at a lower cost than other brand name drugs. Formulary medications are selected according to safety, efficacy (whether the drug works for the indicated purpose), therapeutic merit (how appropriate the drug is for the treatment of a particular condition), current standard of practice, and cost. The formulary applies to both retail network and mail-order purchases. The copayments for a nonformulary brand-name drug and formulary brand-name drug, at a retail network pharmacy, are \$15 and \$12, respectively, for up to a 34-day supply. The copayments for a non-formulary and formulary brand-name drug, purchased through the mail-order program, are \$20 and \$16, respectively, for up to a 90-day supply. (Refer to the TOP2/TOP3 Summary Plan Description for further information.)

Twice a year Caremark's Pharmacy & Therapeutics Committee updates the drugs listed on its formulary. The most recent review resulted in the deletion of 33 drugs and the addition of 30 drugs to the formulary, as listed above. Effective July 1, if you select a drug that has been removed from the formulary, you will pay

Products deleted from formulary		Products added to formulary	
Acthar	Motrin tablet	Accolate	Estring
Ansaid	Muco-Fen-DM	Adderall	Fertinex
Auralgan	Muco-Fen-LA	Aricept	Hyzaar
Biohist-LA	Nasalcrom*	Astelin	Isopto Atropine
Bleph-10	Ocufen	Benzashave	Isopto Homatropine
Brontex	Orasone	Carbex	Klaron
Cetamide Ointment	Peridex	Claritin Reditab	Muse
Cetapred Ointment	Pilopine HS	Cozaar	Nilandron
Cyotec	Pred Mild	Deconamine	Ocupress
FML	Pred-G	Deconamine CX	Oxyir
FML-S	Profen II	Demadex	Patanol
Gris-Peg	Profen-LA	Dextrostat	Tarka
Halcion	Tenoretic	Diovan	Volmax
Klonopin	Tenormin	Dostinex	Zagam
Liquid Pred	Tyzine	Dynacin	Zyflo
Lopid	Vagistat*		
Macrochantin			

* No longer covered as it is now over-the-counter

the higher copayment. Conversely, if you select a drug that is on the formulary, you will pay the lower copayment.

Caremark has already mailed information to the home addresses of participants who within the past 18 months have obtained any of the medications that have been removed from the formulary. This mailing will not be sent to all participants in the TOP2/TOP3 Plan, only those identified as being impacted by having their current drugs withdrawn from the formulary. The mailing included a drug profile identifying any drugs that a participant is taking that have been removed from the formulary and offering information on alternatives.

You may continue to take the medication that has been removed from the formulary but you will pay a higher copayment. If you select another medication to replace the one that was

removed, you must have your physician write a new prescription for purchases either through a retail network pharmacy or the mail-order program. If you are taking a drug that has been added to the formulary, you will notice a lower copayment upon obtaining your next refill. You do not need a new prescription unless you are out of refills.

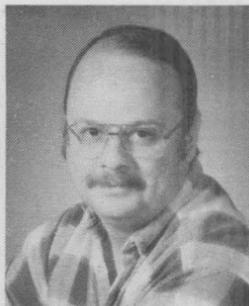
If you have any questions about the formulary or about the Prescription Drug Program, call Caremark at 1-800-833-4914. For an updated formulary pamphlet, call 505-845-BENE (2363).

Prescription drug program mail-order tip

For participants enrolled in the Triple Option Plan, when purchasing a maintenance medication from Caremark's mail-order service, check your prescription before leaving the doctor's office. Verify that the prescription specifies the daily dosage, strength, quantity, up to a 90-day supply, and number of refills. If you want 90-day supplies, have the doctor write it for 90 days plus three refills. If you want a 90-day supply but the doctor has written the prescription for a 30-day supply with 12 refills, Caremark will only fill it for 30 days each time. To get a 90-day supply, you would need a new original prescription from the doctor indicating the 90-day supply and you would have to pay another copayment. If you have any questions, call Caremark at 1-800-833-4914.

Mileposts

June 1997



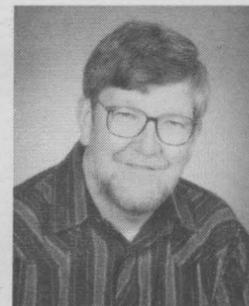
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Winalee Carter
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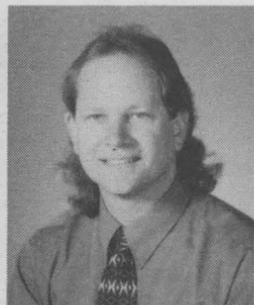
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Allen Salmi
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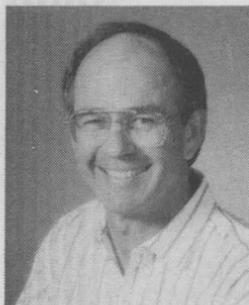
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Ken Buck
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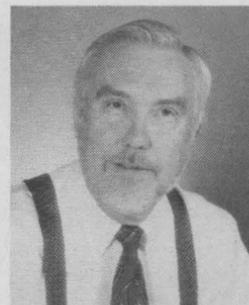
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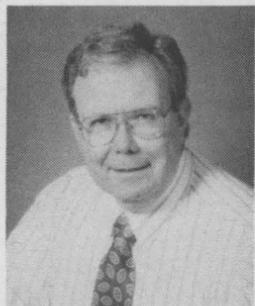
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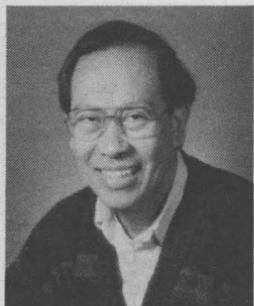
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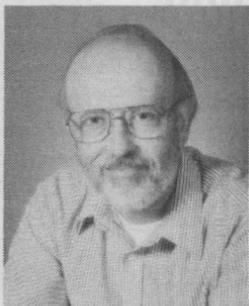
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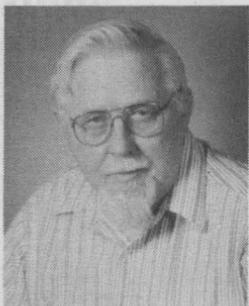
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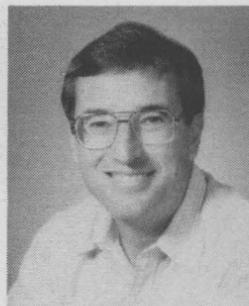
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Terry Bersie
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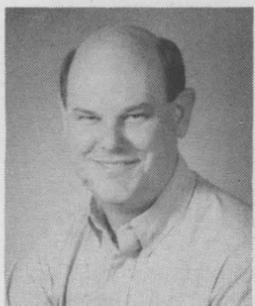
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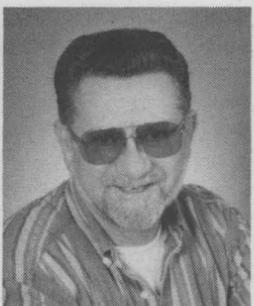
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Janice Seibel
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Dan Hardin
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Tim Roudebush
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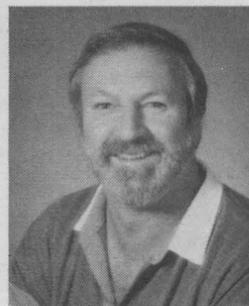
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Jim Muir
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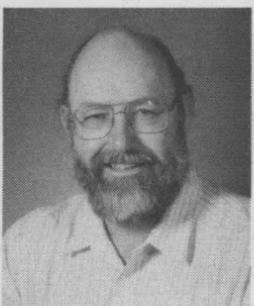
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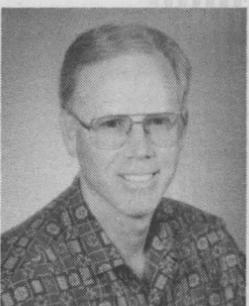
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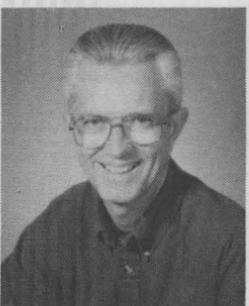
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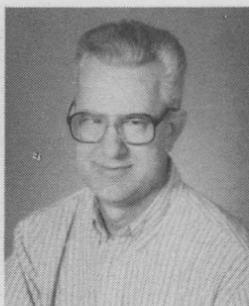
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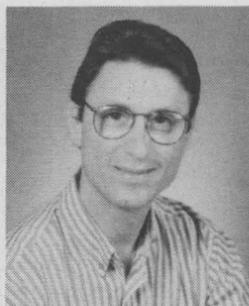
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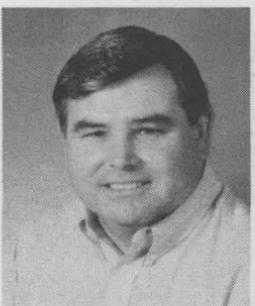
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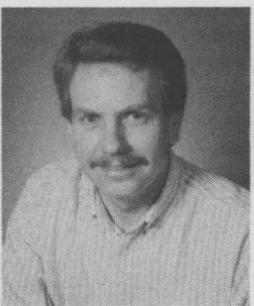
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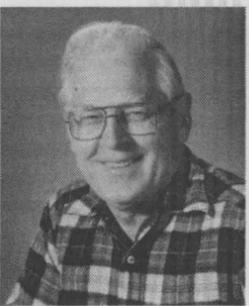
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Pete Royval
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Roger Watson
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Vern Barr
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Louie Tallerico
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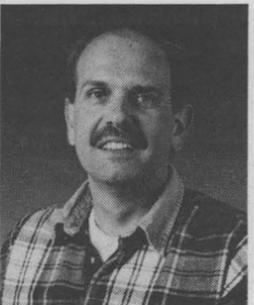
Fred Anderson
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Robert Rieden
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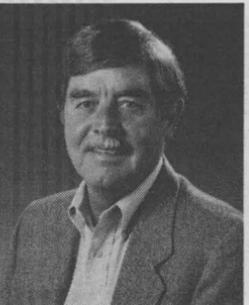
Karen Sine Pound
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Victor Romanelli
15 14307



William Hendrick
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Dennis Mangan
35 5314



Robert Reed
40 2121



Janice Montoya
15 5318

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

MISCELLANEOUS

- COPIER, Mita DC 4085, letter, legal, ledger paper, auto feed, document sorter, stapler, stand, \$600 OBO. Kellogg, 299-3737.
- STATISTICS FOR BUSINESS AND ECONOMICS, 6th edition, Anderson, Sweeney, Williams, \$69.40 new, asking \$30. Baker, 888-4220.
- KENMORE ELECTRIC DRYER, 220V, almond, Model 68801, wrinkle guard, fabric care, heat control, \$175 OBO. Witek, 296-5198.
- CARDIO-GLIDE, similar to Health Rider, excellent condition, \$160. Forrest, 275-3797.
- PUSH LAWN MOWER, heavy-duty, \$40; truck utility tool box, \$50. Rodriguez, 883-9396.
- ENTERTAINMENT CENTER, up to 32-in. TV, w/VCR shelf, VHS/CD storage, washed pine look, fully assembled, \$250 OBO. Hedge, 896-7991.
- WEDDING GOWN, white sequin/pearl, size 7-8, sequin/pearl veil, petticoat, storage boxes, \$450 OBO. Moya, 866-4142.
- NORDICTRACK, Sequoia model, like new, \$300 OBO, wet suit, men's large, \$75. Blankenship, 281-2257.
- WATER SOFTENER, Econominder 5600, used 2 years, w/manual & 5 bags salt, \$1,200 new, asking \$100. Hall, 298-6856.
- QUEEN-SIZE WATERBED, oak frame, headboard, heater, 2-way vinyl padded rails, excellent condition, \$150. Padilla, 821-1064.
- WATCH, Breitling automatic, stainless steel, 1-1/2 yrs. old, excellent condition, \$500 OBO. Petersen, 275-7467.
- OSCILLOSCOPE, HP 170, 2-channel, 50-MHz w/delayed timebase, \$150; 16MB memory for Macintosh Performa/PowerMac, \$50. Hietala, 867-9577.
- CAT, male, long hair, white/tabby, about 1-1/2 yrs., shots & neutered, free to good home. Bell, 268-2744.
- DOGHOUSE, for small or medium dog, 30" x 36", insulated plywood, extremely overbuilt, free, Luna, 881-6808.
- HEALTH RIDER EXERCISER, like new, \$350. Gentry, 254-9545, no calls after 8:30 p.m. please.
- COMPUTER, DECstation 3100, 1024x864, 19-in., 8-plane color, 24MB RAM, 666MB HD, Unix O/S, tape, 32-bit hardware, FPU, \$500. Key, 856-1588.
- DELUXE MOBILITY CART, excellent condition, \$1,500; Little Tykes kitchen, \$40; girl's Schwinn, 16-in., \$50; exercycle, \$35. Siegrist, 293-4148.
- '74 VW 412, 4-door parts car, \$75, no engine but many good parts. Roberts, 866-5422, call after 7 p.m.
- WASHER/DRYER, Frigidaire, \$175 for pair; refrigerator, Frigidaire, \$120; stove, Whirlpool, \$120. Scott, 256-2553.
- DESK, single pedestal, colonial-style, white, w/gold trim, hutch, chair & glass top, \$200. Seavey, 884-8215.
- KING-SIZE BED, \$220; entertainment center, \$95; papasan chair (double), \$90; excellent condition. Grothe, 332-9543.
- RIVER GRAVEL, 2-3-in., approx. 6 cu. yds., free, you haul. Hickox, 299-0772.
- SUPER-TWIN WATERBED, accessories, \$50; 2 Schwinn bikes, \$100; queen sofa bed, \$75; oak entertainment center, \$25; all excellent. Williams, 344-7596.
- DRESSER/CHANGING TABLE, 4 drawer, white, wicker, excellent condition, \$65. Hill, 821-4795.
- TOWING MIRRORS, for Ford or Toyota sport utility or pickup, slips on over existing mirrors, \$50. Robbins, 823-2492.
- LABRADOR RETRIEVER PUPPIES, 6 wks., 1st shots, dew claws, excellent pedigree, top English & US bloodlines, chocolate & black, \$250 & up. Schaub, 865-8807.
- CERAMICS KILNS, Paragon, \$300; Alpine Industrial, \$700; antique kitchen wood stove, \$400. Sanchez, 343-8522.
- SOCCER SUPPLIES: 18-in. cones; scrimmage vests; referee shirt; goalie jerseys, gloves, pants; substitute chairs; tournament sunshade; more. Kerschen, 821-2848.
- BASSETT BEDROOM SET, 5-pc., salmon-colored, lovely, ideal for teenage girl, excellent condition, \$250. Mead, 869-6124.
- TWIN BED, new Sealy Backsaver Deluxe Plush mattress & box spring, headboard & frame, \$175; baby high chair & wheelbarrow, new condition, \$25 ea. Garrison, 299-6220, leave message.
- VALLEY HITCH, Class 2, \$50; Reese 6-in. drop, fits all Class 3 hitches, \$40. Archibeque, 898-2955.
- FRIGIDAIRE WASHER/DRYER, \$200 ea.; Little Tykes Wave Climber, \$70; Merry Go Round, \$40; turtle pool/sandbox, \$20. Soutar, 296-1738.
- HIDE-A-BED SOFA, 7-ft., \$100; kitchen table, 36" x 47", \$30; Sierra Fitness Masterski machine, \$100. Furnish, 344-6074.
- FLUKE 87, retail \$335; Wavetek 27XT, retail \$125; hand held dmms, both brand new, benefits go to help Junior Olympic volleyball team attend national championships, accepting offers. Walker, 828-1054.
- TWENTY TOMATO CAGES, 18-in. diameter, 6-ft. high, free. Van Domelen, 299-3674.
- WESLO ACCUSMART TREADMILL, \$250; Sears DualTrac-20, weight machine, upper-lower body, butterfly attachment, \$250; both \$450. Kyle, 828-1074.
- SOUTHWESTERN PRINTS, black & white, assorted, must see, \$1.50 ea. or 4/\$5. Maestas, 883-7617.
- THULE BIKE RACK, roof mounted, w/ski rack, locks, \$125. Miller, 281-3936.
- DINING TABLE, whitewash, w/4 chairs, \$200; queen waterbed, waveless mattress, \$150; 2 desks, black, w/drawers, \$75 ea. Gonzales, 294-2425.
- SEALED COUNTERTOP ELECTRIC RANGE; motorcycle helmets, one like-new, one used; newborn car seat, will deal. Schrader, 298-4154.
- COLLECTIBLES, glassware, airline memorabilia, other memorabilia, Playboy magazines. Kaufmann, 292-9249.
- KIRBY GENERATION 3 VACUUM CLEANER, w/attachments, \$650. Smith, 299-6873.
- FREEZER, Sears, 13 cu. ft., (Frigidaire), like new, \$150. Hayes, 299-1200.
- COMPLETE TWIN BED, used 2 months, see to appreciate, paid \$400, asking \$200. Abeyta, 298-4276.
- R. C. GORMAN, '77 framed original, approx. 36" x 32". Baca, 265-2881.
- FIGARO ID BRACELET, 8-in., 14K Italian gold, 33 grams total weight, \$450. Cotinola, 833-3944.
- BALDWIN ACROSONIC PIANO, \$700; formal dining room table & chairs, cherry wood, \$600. Haid, 292-0159.
- SHOPSMITH MARK V: lathe, table saw, drill press, & sanding wheel, \$495 OBO. Bottomly, 505-835-2190.
- HP DESKJET 500 PRINTER, w/print cartridge, excellent condition, \$150; 2 table lamps, wood base, \$25 ea. Purcell, 281-1761.
- GARAGE SALE, Fri.-Sat., June 6-7, 9 a.m.-4 p.m., sofa sleeper, baby/kid's clothes, more, 9215 Meriwether NE (NE of San Francisco/Ventura). Williams, 797-8912.
- RUMMAGE SALE, Sat., June 21, 10 a.m.-3 p.m. several households, 3400 Aztec NE (near Carlisle/Candelaria). Babb, 865-6843.
- GOLDEN COCKER SPANIEL needs lots of attention, my name is Honey, loving with very good manners. Piatt, 293-1204.
- COUCH, beige, excellent condition, \$150 OBO; coffee table, \$50 OBO; dining table, w/2 matching chairs, \$200 OBO. Riley, 831-0351.
- LASERJET PRINTER, Epson EPL7000, w/65-in-one font cartridge, \$125; Fujitsu car stereo amplifier, new, \$25. Goering, 897-9505.
- AQUARIUM, 30-gallon, complete w/fish, stand, \$100. Hess, 898-5113, ask for Barbara.

TRANSPORTATION

- '95 FORD EXPLORER, 2 dr., fully loaded, excellent condition, 13K miles, \$21,500, sale or trade. Raglin, 296-2018.
- '94 TOYOTA CAMRY XLE, 4-dr sedan, loaded, moonroof, 6-speaker sound, electric everything, 27K miles, forest green, excellent condition. \$16,900. Borders, 823-9528.
- '93 TAURUS LX, 3.8, 47K miles, loaded, less leather & CD, excellent throughout, teal green, new rubber. Underhill, 294-5774, after 6 p.m.

DEADLINE: Friday noon before week of publication unless changed by holiday. MAIL to Dept. 12640, MS 0165, FAX to 844-0645, or bring to Bldg. 811 lobby. You may also send ads by e-mail to Nancy Campanozzi (nrcampa@sandia.gov). Call Nancy at 844-7522 with questions. Because of space constraints, ads will be printed on a first-come basis.

Ad Rules

1. Limit 18 words, including last name and home phone (We will edit longer ads).
2. Include organization and full name with the ad submission.
3. No phone-ins.
4. Use 8 1/2" by 11-inch paper.
5. Type or print ad; use accepted abbreviations.
6. One ad per issue.
7. We will not run the same ad more than twice.
8. No "for rent" ads except for employees on temporary assignment.
9. No commercial ads.
10. For active and retired Sandians and DOE employees.
11. Housing listed for sale is available without regard to race, creed, color, or national origin.
12. "Work Wanted" ads limited to student-aged children of employees.

- '85 DODGE TRUCK, 360-engine, AT, runs well, \$3,500. Sanchez, 877-9385, leave message.
- '72 BLAZER 350, Holly carb., PSPB Positrac, soft top, hard top, 33.5/12.5 tires, \$4,500. Mulligan, 237-8005, after 5:00 p.m.
- '94 BUICK PARK AVENUE, 26K miles, excellent condition, theft deterrent, white w/tan interior, tinted windows, PS, loaded, \$17,500. Benham, 856-2739.
- '76 CADILLAC COUPE DEVILLE, \$4,000 invested, runs great, \$3,000 OBO. Babcock, 299-3121.
- '70 KARMANN GHIA, '93 engine, AM/FM cassette, runs well, fair condition. \$2,000 OBO. Dickens, 299-9573.
- '83 MERCURY CAPRI RS, 5.0L (302) V8, 5-sp., PB, PS, PW, tilt, cruise, stereo, \$1,500. Carlton, 275-5945.
- '89 JEEP CHEROKEE, 4-dr., 4L, AT, 4WD, 60K miles, single owner, great condition, \$10,500. Bushmire, 281-9552.
- '89 CHEV. BERETTA, 2-dr., 5-sp., 113K miles, blue, needs paint, runs great, \$2,800 OBO. Holland, 294-2488.
- '94 COUGAR XR7, 34K miles, \$10,500. Bean, 298-0459.
- '87 MERCURY SABLE SL, 4-dr., white w/gray interior, 127K miles, good shape, just detailed, \$2,500 OBO. Hardison, 271-2838.
- '89 NISSAN 240SX FASTBACK, 85K miles, cherry red, 1 owner, new tires, brakes, electric pkg., \$5,250. Stanton, 323-0811.
- '85 BRONCO II, 4WD, PS, PB, AC, 5-sp., new paint, clean, dependable, V6, 24-mpg, AM/FM cassette, 2nd owner, \$3,750 OBO. Muirhead, 281-2925.
- '84 FORD F250 SUPERCAB, 58K orig. miles, 6-cyl., 4-sp., LWB, AM/FM, PS, AC, rec. hitch, \$5,500, good condition. Schlavin, 299-6592.
- '94 PLYMOUTH GRAND VOYAGER LE, fully loaded, towing pkg., 63K miles, \$17,500, below Kelly blue book. Briscoe, 899-0617.
- '93 FORD EXPLORER XLT, 52K miles, tint, cruise, AC, JBL Sound, remote PL, \$15,000 OBO. Petersen, 275-7467.
- '85 BUICK PARK AVENUE, body in great condition, needs engine repair, willing to negotiate. Elder, 828-2608.
- '85 GMC PICKUP, Model S, 4-cyl., mileage approx. 68,445, may be seen at SLFCU, 237-7382, ask for Lisa.
- '93 DODGE GRAND CARAVAN SE, silver/red, damaged but working sliding door, 85K miles, runs great, new shocks/struts/brakes, \$9,800. Barnette, 861-2451.
- '90 CHEV. EXPLORER CONVERSION VAN, 1 owner, garaged, 56K miles, has everything, like new, \$12,000. Trump, 299-5162.
- '90 FORD F150, 4x4, 4-sp., 4.9L EFI, dual tanks, trailer hook-ups, solid on/off road, \$7,500 OBO. Sauer, 865-7680.

- '89 MAZDA 626, 4-dr. sedan, AT, AC, excellent condition, 69K miles, \$5,700. Clevenger, 821-0046.
- '82 DATSUN 200SX, 169K miles, runs well, 1 owner, \$950. Gillings, 293-7815.
- '89 LINCOLN CONTINENTAL, Signature Series, white, gray leather interior, loaded, 80K miles, \$6,995. Luikens, 271-0019.
- '88 FORD MUSTANG, 4-cyl., 5-sp., new paint, new tires, maintained by fanatic, garage kept, \$3,200. Kickenman, 892-9561.
- '71 BUICK SKYLARK, custom, collector, all-original, records, 38,780 original miles, 2-dr., HT, 350 V8, AT, AC, \$5,500 OBO. German, 294-4540.
- '94 VW JETTA GL, 4-dr., 5-sp., sunroof, 35K miles, excellent condition, \$11,200. Williams, 344-9276.
- '91 SUBURBAN, 4x4, loaded, \$14,900; '93 Astro-EXT, loaded, \$12,800; '92 Autowagon trailer, 22 ft.; all excellent condition. Habbit, 856-1117.
- '86 CHEV. NOVA, 123K miles, 5-sp., new clutch, timing belt, V-belts, battery, \$800. Williams, 299-3261.
- '87 SUBURBAN, 4x4, Silverado pkg., black & silver, new tires, \$7,500 OBO. Sanchez, 293-7246.
- '90 SUBARU LEGACY, 4-dr. sedan, AWD, 5-sp., PW, PL, sunroof, \$6,500; '91 Ford Aerostar XLT 4WD, AC, AT, 84K miles, \$9,500 OBO. Loucks, 255-9444.
- '75 INTERNATIONAL TRAVELALL, 4x4, AT, PS, tilt, cruise, AC, 107K original miles, all records, \$3,250 OBO. Kureczko, 281-8206.
- '95 NISSAN ALTIMA, 4-cyl., 39,597 miles, may be seen at SLFCU, 237-7382, ask for Lisa.
- '92 OLDS TORONADO, 4-cyl., 74,531 miles, may be seen at SLFCU, 237-7382, ask for Lisa.
- '84 CHEV. CAVALIER CL, \$1,000 OBO. Ferguson, 281-0135.
- '88 GMC, supercab, 4x4, AC, PS, ABS, AT, \$7,000; '76 Nomad travel trailer, F.S.C., \$2,000. Gabaldon, 865-4326.

RECREATIONAL

- TWO '95 KAWASAKI KX-80 DIRT BIKES, hardly used, must sell, asking \$2,000 each or take both for \$3,500. Bravo, 873-5629.
- '85 ELBKO DAY CRUISER, 22-ft., 140 in-board Mercury, located at Elephant Butte Lake, \$5,000. Martin, 1-505-894-0785.
- '90 DOLPHIN, 31-ft., rear island bed, dual-air-microwave, 4,000-watt oven generator, 18K miles, 454 Chev. motor, couch converts to bed, \$30,000 firm. Montoya, 877-1779.
- '73 SUPERIOR BRAND MOTORHOME, Dodge 440, 22-ft. class A, sleeps 5, good condition, \$6,000. Souder, 281-3121.
- CABIN, sleeps 6, loft, fully equipped, near Angel Fire golf course, 1 week, July 20-27, \$325. Lagasse, 298-0977.
- MISTRAL MAUI SAILBOARD, good for beginner/intermediate sailor, \$200 OBO. Sjaardema, 299-8042.
- MIELE ROAD BIKE, 19-in., Shimano clipless pedals, Titanium Flite saddle, Galli wheels, \$300. Mora, 332-0139.
- ALBUQUERQUE BEACH WATERPARK TICKETS, day passes good through August 17, 1997, try the new slides, regular \$12.50, selling for \$8. Jones, 292-9750.
- '91 NOMAD TRAVEL TRAILER, 26-ft., excellent condition, w/extras. Chavez, 867-2213.
- CAMPER, "trailer for two," fiberglass body, awning, stove, icebox, sink, AC/DC electrical, immaculate, \$5,500. Roeske, 255-6188.
- '90 PALOMINO POP-UP TRAILER, sleeps 6, catalytic heater, electric water pump, stove, 10-in. wheels, \$3,000. Swanson, 281-2735.
- TICKETS, Fiesta Flamenca, Saturday, June 14, 2 p.m., 2 tickets (\$10 ea.), half-off. Lorence, 275-3586.
- '96 HARLEY DAVIDSON, Fat Boy, black, 5.3K miles, Ness forward controls, many extras, loaded w/chrome, \$18,200. Rohwer, 831-9426.
- '90 MOTORHOME, Southwind, 32-ft., Class A, loaded, excellent condition, estate sale, book \$32,000, asking \$28,500 OBO. Avila, 275-9572.
- NISHIKI ADULT BICYCLES, 10-sp. his & hers, new condition, new \$175 ea., asking \$75 ea. Thorp, 292-0169.

- '83 JAYCO TRAVEL TRAILER, sleeps 6, good condition, \$1,200; cab-over camper, 8-ft., icebox, stove/oven, \$300. Toya, 898-0491.
- CANVAS CABIN TENT, 10 x 10, in original box; 36-quart Coleman cooler; make offer. Schreiner, 266-6020.
- WALL TENT, 10 x 16, w/stove, good condition, \$350. Knight, 856-6648.
- '78 SUPERIOR MOTORHOME, 29-ft., automatic Dodge 440 engine, dual air, dual furnaces, dual gas tanks. McCormick, 869-2879.
- '92 DODGE 250LE, Cummins 19K miles, w/'91 Road Ranger 26SF 5th wheel extras. Wintersberger, 294-1289.
- '74 SEA RAY TRI-HULL, 85-hp Johnson OB, trailer, numerous accessories, \$1,500. Plummer, 823-1619.
- '94 MALLARD TRAVEL TRAILER, 24-ft., Bunkhouse model, AC, microwave, awning, sleeps 7, equalizer hitch, sway bar, mirrors, excellent, \$8,500. Beeson, 821-8393.

REAL ESTATE

- UNIMPROVED 21 ACRES (trees and views), beautiful, south of Belen at Manzano foothills, \$21,000 terms. Brainard, 296-9061.
- 4-BDR. HOME, 2,600 sq. ft., 2 baths, Los Lunas, 1-acre irrigated land, orchard, basketball court, \$130,000. Essenmacher, 865-7066.
- 3-BDR. NW PARADISE HILLS HOME, open floor plan, custom, golf course area, 2,700 sq. ft., 2-1/2 baths, loft, views, hot tub, \$198,500. Sikorski, 281-9838.
- 2-BDR. MOBILE HOME, 16 x 60, 2 baths, excellent condition, set up in adult park. Rosenberg, 296-1346.
- 3-BDR. TANOAN TOWNHOME, 2,100 sq. ft., 2-1/2 baths, 2-car garage, cathedral ceilings, balcony view of Sandia, new carpet, tile, appliances, quiet cul-de-sac., Rogers, 880-1100, ask for Monique.
- 2-BDR. FOOTHILLS TOWNHOME, 2-car garage, laundry/utility room, SW courtyard entry, private backyard, no association fees, \$98,800. Draper, 281-2663.
- 3-BDR. TOWNHOME, 2-1/2 baths, 2-car garage, 2,000+ sq. ft., NE area, easy-care landscaping, many custom features, \$157,000. Jackson, 881-8011.
- 3-BDR. MOBILE HOME, 2 baths, '87 DeRose Rembrandt, 14 x 80, located in nice park next to Sandia, \$15,500. Garcia, 237-0537.
- SIX ACRES, east mountain land, excellent view, covered in trees, near national forest, \$12,000/acre. Zurzolo, 898-1175.

WANTED

- HOUSEMATE, male/female, to share beautiful 3,000 sq. ft. home in east mountains, nonsmoker, \$350/mo., includes utilities. Milliman, 286-0508.
- CHILD-SIZE PLAYTABLE & chairs, folding or not. Brigham, 293-6914.
- LIVE ABOARD YACHT, July 20-26, swim with dolphins in Bahamian waters. Huning, 265-9082.
- FISHER PRICE cash register toy, already has coins. Lennox, 821-0474.
- WORLD BOOK ENCYCLOPEDIA, less than 25 yrs. old, complete set, good condition. Blain, 293-3971.
- TV ANTENNA, Broadcast, VHF, UHF, large-size roof type. Rector, 286-1217, ask for Mike.
- OLD IBM COMPATIBLE PC, for mid-school student, 386 & up, cheap or free. Candelaria, 344-4596.
- HOUSESITTING, visiting scientist looking for home in NE Heights, Eisenhower school district, close to shopping & Eubank, arriving Aug., leaving July 1998. Doyle, 844-7568.

LOST & FOUND

- FOUND: Sunglasses, gray corduroy case, parking lot south of MO184-MO203, 5/19/97. Mary Roehrig, 844-6787.
- LOST: Gold heart-shaped pendant, w/two small rubies (not on the chain), sentimental value. Courtney, 864-3184.
- FOUND: Woman's class ring, near Sandia Circle, around May 20, has green stone, says "Gulf High 1980," has pirate insignia. Sesma, 844-5643.

Sandia News Briefs

Second meeting on NASA cooperation scheduled June 9

A second meeting of Sandians interested in NASA opportunities is scheduled for June 9. The meeting, a followup to the successful May 9 meeting (*Lab News*, May 23), will take place in the Explosive Components Facility (Bldg. 905), room 103E, from 1-3:30 p.m. The meeting will give Sandians a chance to offer their perspectives for a strategic NASA/Sandia business plan. The meeting will also explore the possibility of building an "Action Network" of Sandians, complete with: 1) a cooperative calendar of NASA/Sandia events on Sandia e-mail; 2) a NASA "partnering opportunities" index; 3) a list of contacts for each existing project with NASA; and 4) a framework for fielding suggestions for new initiatives. There will be presentations on the status of current projects with NASA by Bob Blewer (1305) and Roger Lenard (9360).

Prestigious Herzl Award goes to Les Krumel

Les Krumel, Optics and Exploratory Technologies Dept. 5725, is the recipient of the Herzl Award at the 31st Aerospace Mechanisms Symposium, hosted by NASA and sponsored by Lockheed Martin Missiles & Space. The award was presented for his paper describing the development of "A Reactionless, Bearingless Linear Shutter Mechanism for the Multispectral Pushbroom Imaging Radiometer (MPIR)." The Herzl Award is given for the best paper at the symposium, a three-day event that circulates yearly among eight NASA centers. The conference attracts international participation. The award is named after the late George Herzl, one of the founders of the symposium, who in the early days of US space exploration recognized the need for mechanical engineers to share and learn from each other's experiences. Les's department is part of Monitoring Systems and Technology Center 5700, which deals with satellite instruments and remote sensing. Les was responsible for physical design and mechanical engineering on MPIR. His award-winning paper describes part of this design.

Dan Fleetwood named Fellow of IEEE

Dan Fleetwood of Radiation Technology and Assurance Dept. 1332 has been named a Fellow of the IEEE (Institute of Electrical and Electronic Engineers). The citation naming him a Fellow reads: "For contributions to the field of electronic devices and materials." Dan joined Sandia after receiving his PhD in physics from Purdue University in 1984. He began his Sandia career in the Advanced Microelectronics Development Division, and moved to the Radiation Technology and Assurance Division in 1986. He was named a Distinguished Member of the Technical Staff in 1990 for his contributions to the field of radiation effects in electronics. Dan has published more than 140 journal articles on radiation effects and other subjects, and has received seven outstanding conference paper awards for publications on radiation effects on MOS devices.

Calvin Jaeger named brigadier general in Army Reserve

Calvin Jaeger (5845) has been promoted to brigadier general in the Army Reserve. He is the first New Mexican to be promoted to general officer in the Army Reserve in 33 years. In his military hat, Cal is deputy commander of the 377th Theater Army Area Command located in New Orleans. The 377th is the Army's major logistical headquarters, supporting Army forces under Central Command and in Southwest Asia. Cal, who has 28 years of active and reserve Army service, received his commission in 1969 through ROTC at Kansas State University, where he graduated with a BS in chemistry. He also holds an MS in chemistry from UTEP and a PhD in physical chemistry from the University of Texas at Austin. Prior to moving to Albuquerque, he was awarded a Fulbright-Hays Fellowship for a year of research at the Fritz Haber Institut der Max Planck Gesellschaft in Berlin. Cal began work at Sandia in 1980 doing research on lithium batteries. Since 1988 he has worked in the Security Systems and Technology Center. He works primarily in the areas of nuclear nonproliferation and safeguards. He has led teams that have provided safeguards and security and nonproliferation support to a variety of projects involving nuclear reactors, linear accelerators, complex chemical processes, and nuclear material disposition and storage. He was recently co-leader of a joint US-Russian plutonium disposition study.



CALVIN JAEGER

Send potential Sandia News Briefs to Lab News, Dept. 12640, MS 0165, fax 844-0645.



Sandia Web Watch

List upcoming events and conferences for free on External Web

Sandians and people outside the Labs can now keep track of upcoming Sandia-sponsored events and conferences and get more information about them on the Labs' External Web site. Only those events and conferences that are open to the public (or to specific outside groups or individuals) can be listed on the External Web. The three or four nearest upcoming events are listed near the bottom of the External Web home page (<http://www.sandia.gov>).

The last link in the list ("Complete list . . .") leads to a subpage (<http://www.sandia.gov/events.htm>) that lists all such upcoming events. Each event is linked to either a Web page that has details (if such a page is available) or to the e-mail address of a Sandian who can provide information. The bottom part of the same subpage contains links to Web pages of recently held events/conferences that need to stay on the Web for a while.

"Our External Web team encourages Sandians who are planning and leading events open to the public or to outside groups to use this free service," says Sandia Webmaster Larry Perrine. "There's no charge to list a Sandia-sponsored upcoming event or to link it to an existing Web page or e-mail address. About 1,500 people throughout the US and around the world now visit our External Web site daily, and it's a great tool for promoting appropriate upcoming events to them."

Only unclassified events that are open to people outside the Labs can be listed and only after the information has been reviewed and approved for outside distribution. Eligible events include those that are being held at Sandia or sponsored by the Labs at other locations.

For more information, contact Larry Perrine (12640) at 845-8511 or e-mail lgperri@sandia.gov.

Coronado Club

June 5, 12, 19, 26 — Thursday bingo night. Card sales and a la carte buffet start at 5 p.m., early birds' bingo at 6:45 p.m. Pool open to 9 p.m.

June 8 — Sunday brunch buffet, 10 a.m.-1 p.m. \$7.95 all-you-can-eat buffet. Kids 3-12, \$1, under 3 free. Music by Starlighters, 1-4 p.m.

June 13 — "Western Night" dinner/dance. Music by the Isleta Poor Boys, 7-11 p.m.

June 15 — Father's Day barbecue. A la carte dining on the patio, noon-6 p.m. Music by Bob Weiler, 11 a.m.-6 p.m.

June 27 — Kids' bingo. Free hot dog and soft drink with \$2.50 bingo card. Bingo starts at 7 p.m.; buffet line open 5-8 p.m.

June 29 — Sunday brunch buffet, 10 a.m.-1 p.m. \$7.95 all-you-can-eat buffet. Kids 3-12, \$1, under 3 free. Music by Swingshift, 1-4 p.m.

Forecast: Booms expected through June 20

If you heard some booms lately — or hear some in the coming weeks — don't worry.

System Technologies Dept. 5914 is conducting a test series of high-energy explosions at the USAF Explosive Ordnance Disposal Site (EOD) on Kirtland AFB from May 28-June 20.

This test series will set off 30 to 40 detonations of uncased TNT spheres, provided by Dept. 9333, ranging in weight from 8 to 1,000 pounds.

For more information or if you are interested in participating ("piggy backing") or if you have uncased explosives you would like to dispose of, contact Lydia Boye (5914) at 844-1708 or Terry Herther (5913) at 844-4384.

Congratulations

To Vicki and Doug (2314) Weiss, a son, Seth Alexander, April 12.

To Liz (9782) and Victor Schexnayder, a son, Mykell Jejuan, April 23.

To Renee and Nick (2111) DeReu, a daughter, Gabriella Renee, April 18.

To Lauren Dyer and Dave (5511) Swahlan, a daughter, Amy Elizabeth, May 2.

To Dea Watson and Don Marchi (1553), married in Albuquerque, May 3.



DIGIT PACE — In full protective gear, a Sandia crew including Daniel Summers (12332, in tent), Jim Wolcott (12332, standing, foreground), and Harry Cinotta (2111, bending over, background) set up Sandia's Portable Integrated Video System (PIVS) near the accident scene during the Digit Pace nuclear weapon accident response exercise on Kirtland Air Force Base May 19-23 (see the May 23 *Lab News*). In the background is an Air Force Explosives Ordnance Disposal unit from Kirtland. PIVS provides a secure video and audio link from the scene of a nuclear weapon accident back to the accident command post through a single fiber-optic line, which allows fewer people to be exposed to the danger in the vicinity of the accident. The tent protects some of the PIVS equipment from the elements.