Basic excavation of chemical waste landfill completed

Cylinders, batteries, munitions, scrap, chemicals — they found all that, and some surprises too

By Will Keener

Ponder this. Two thousand intact chemical containers with unknown contents. Three hundred and fifty corroded, banged-up compressed-gas cylinders. Nine hundred thermal batteries. Three dozen aging munitions components. Several hundred cubic yards of scrap metal, wood, paper, concrete, and plastics. Rocks, in all sizes, amounting to a thousand cubic yards. And 43,000 cubic yards of soil, some of it — about 25,000 yards — stained with chemicals and other contaminants.

In a nutshell, you now know what a dedicated team of environmental workers has been doing for the past two and a half years at Sandia's Chemical Waste Landfill in the southeast corner of Technical Area 3. The basic landfill excavation, to a depth of 12 feet, was completed this summer without any serious injury to team members.

"Our team is going to be happy when we can take off these plastic suits and hard hats," says Sharissa Young (6134), Environmental Restoration (ER) Team Leader for the project. "But we'll all breathe a sigh of relief when this landfill project is completed."

All workers at the site were specially trained in health and safety issues, and those working on the landfill surface wore "Level B" protective equipment, which includes synthetic coveralls, hard hats, safety glasses, and self-contained breathing systems. Chemical-vapor monitors and radiation-detecting instruments are also part of the safety gear.

There is still work to do, Sharissa says. But the excavation of the buried contents of the landfill marks a major milestone.

The 1.9-acre Chemical Waste Landfill site was Sandia's main dump for laboratory-generated wastes and other chemical trash from 1962 until 1985. About half of the landfill contents were documented with disposal records, but no written records were kept for the site until 1975, making the job even more difficult.

"Although the landfill was intended only for chemicals, we've found radioactive materials, which we were prepared for, and a huge variety of other things in this landfill," says Don Schofield (6134), the project's assistant task leader. "That's why I started calling it the 'A to Z' landfill."

During operations, the rule of the day was to use unlined pits or trenches for various chemicals, relying on the depth to groundwater — almost 500 feet — and the remoteness of the location — four miles from the Albuquerque city limits — to create natural barriers to protect human health. That concept failed in part because some of the chemicals dumped at the site moved in a vapor state through the soil to reach the groundwater underlying the site.

Environmental professionals discovered sol-

(Continued on page 4)

UNUSUAL SORTS — Workers in "Level B" protective gear sort debris on a conveyor at the Chemical Waste Landfill. Although more work remains to be done, the basic excavation of the landfill, which took Sandia waste from 1962-1985, has now been completed.
(Photo by Sharissa Young)

Sci-tech can move nation to new energy era, Bingaman tells audience of Sandians

By Bill Murphy

While talk of "energy crisis" has largely subsided in Washington and around the country, Congress still remains committed to passing a comprehensive national energy policy, Sen. Jeff Bingaman, D-N.M., told a standing-room-only crowd of Sandians on Monday at the Steve Schiff Auditorium. And that's good news, he says, because it will make for good public policy.

SEN. JEFF BINGAMAN

Past energy policy initiatives, Bingaman said, were driven "largely in reaction to perceived crises" — the 1973 oil embargo, the 1979 fuel shortage, the 1991 Gulf War. The current political environment, with its raised awareness of energy issues, "will allow us to develop legislation that is not in response to a crisis," Bingaman said.

Bingaman in June became chairman of the

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Sandia LabNews

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Sandia National Laboratories

Sandia's binational lab concept broadened by US-Mexico workshop participants

Real-world insights offered from many directions

By Neal Singer

A binational laboratory, set directly on the US-Mexican border to solve joint water problems and improve the region's economy, is a startling concept.

But when hesitant high-ranking Mexican funding officials asked how such a lab would help improve not just the border region but all of Mexico, Sandia's Advanced Concepts Group (ACG) — originator of the joint national lab idea (*Lab News*, April 6) — hosted a binational workshop Aug. 2 at the Albuquerque Marriott to seek answers to that question and others.

Among those attending were representatives from the North American Development Bank, Mexico's National Council for Science and Technology, the Mexico Electric Power Institute, the US Consul General, the Consulate of Mexico, DOE headquarters, and the offices of Senators Pete Domenici and Jeff Bingaman.

The concept of a border lab — meant to be both symbol and reality of the joint interests of the two nations — obviously interested the participants. They were agreeable but not intimidated by presentations featuring Sandia's technical achievements and Lab successes in partnerships with large and small businesses, starting others, and providing free technical advice. Attendees went beyond technical proficiency not only to discuss the possible benefits that could accrue beyond the border region but also to broaden the discussion to include the social and economic basis for such a lab. Speakers mentioned the necessity of providing decent sanitation, water, education, and cultural life before the lab could attract and retain the scientists needed to become an ongoing entity.

Local participation, joint leadership

Guillermo Fernandez of the US-Mexico Science Foundation stressed the importance of local involvement, consulting with community leaders, long-term strategic thinking, and identifying specific business opportunities. He also emphasized the necessity of joint participation rather than single leadership through "the

(Continued on page 4)

This & That

The most managers — I ran an item in June from Stan Kawka (2345) who wondered whether he has had the most managers here in the fewest years. Stan has had either 16 or 21 managers in 23 years — 21 if you count four acting managers and one person twice who was his manager two different times.

I then asked other Sandians about this, but I can't name an outright record holder because I didn't establish the ground rules well — such as a minimum number of service years, whether to count managers twice if an employee returned to a group after working in another for a time, whether to count directors and VPs employees reported to directly, whether a new manager resulted from a job change on the part of the employee or the manager, etc. But, here are some real contenders and their particulars.

• Patrick Murphy (7854) claims 26 managers in 34 years, the most total managers anyone claimed. "I had the opportunity to work for some wonderful people," he adds. What a nice thing to say, but I note that Pat didn't say they were ALL wonderful.

• Gary Hoe (7861) has had six managers in 7 years.

• Reeta Garber (9140) says she has been "privileged to have 11 managers" in her 11 years and 7 months at the Labs.

• Diana Frederick (15201) has had 9 managers in 7 years.

• Jeff Pfohl (5907) has been at Sandia less than 3 years but has already had 5 managers. If that pace continues for 20 years, he'll get the record some day, but I'm not sure he really wants it that badly.

* * *

More amusing names — Sandians sent more amusing business names/slogans after seeing those in the last issue. Several were too good not to share:

• Retiree George Anderson recalls seeing a hearse on a visit to Hawaii in the early 1990s with the word "Dodo" on the side. He looked in the phone book and sure enough found a listing for the Dodo Mortuary. Seems an appropriate name since folks riding in the back are extinct.

• Jeff Foster (9231) says he used to drive by a small ranch southwest of Denver that had this sign: "Oleo Acres — One of Your Cheaper Spreads." (That reminded me of my old Iowa buddy who has a very small farm he calls "Damphew Acres.")

• Paul Johnson (15271) remembers a bar in California called "The Office." Can't you just hear a phone call like this? "Sorry I'm gonna be late for dinner tonight, dear. I'll be stuck at 'the office' several more hours."

• Marty Kodlick (5832) says he had a part-time job in high school in Pennsylvania near a fancy restaurant/bar called the Rathskeller. A large sign in front said "Terrible Food — Lousy Drinks — Don't Come In." The place was packed day and night, says Marty. Go figure.

* * *

E-mail re-education needed? — I propose Sandia establish a new group: the E-mail Re-education Dept. Its first and most important task would be to go around the labs and rough up people who don't have enough sense to know when not to hit the "reply all" button after receiving an initial message that goes to a long list. Any volunteers?

— Larry Perrine (845-8511, MS 0165, lgperri@sandia.gov)

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LOCKHEED MARTIN

Sandia MTI satellite, VCSEL groups win Lockheed Martin NOVA awards

Word came last week that two Sandia teams are winners of Lockheed Martin NOVA awards.

The annual NOVA awards honor 50 Lockheed/Martin individuals/teams "who have made outstanding contributions to Mission Success."

Here are the two winning Sandia teams:

• MTI (Multispectral Thermal Imager) Launch & Operations Team. Nominators: Tim Taylor (5711) and Gracie Rubio (5743); Team Rep.: Brian Brock (5743). *For sustained outstanding team performance resulting in the successful launch and operations of the Multispectral Thermal Imager satellite.*

• 1.3-Micron VCSEL (Vertical Cavity Surface Emitting Laser) team. Nominator: Peter Esherick (1744); Team Rep.: John Klem (1742). *A Sandia/industry team has developed the first 1.3-micron electrically pumped vertical cavity surface emitting laser (VCSEL) for ultra-high bandwidth datacomm and integration with silicon microsystems.*

These two teams were among 62 Sandia teams that won Employee Recognition Awards earlier this year (*Lab News*, May 4). The NOVA winners will receive their awards in a special ceremony in Washington, D.C., later this year.

Sandia visit by team from Lockheed Martin termed fruitful

A nine-member team of Lockheed Martin officials — primarily from the Technology Services business area — that visited the Labs last week (July 31-Aug. 2) for a periodic performance assessment left "with a renewed appreciation for what Sandians and Sandia provide to the nation," VP Frank Figueroa (10000) reports.

Frank, who was present for the bulk of the three days that were filled with a broad brush of briefings and tours, also reports, "We got a good report card in terms of relationships with our customers — particularly DOE/AL and KAO. We're meeting our commitments."

The sessions, Frank adds, "Also provided a forum to discuss opportunities for enhancing Lockheed Martin's stewardship of Sandia."

The Technology Services business area periodically conducts these assessments of its long-term contracts. The team's stated goal was to "review the performance record of the Sandia Corporation, its organization and management, customer relationships, and other operational factors to ensure that Lockheed Martin and Sandia are meeting all their commitments to the government."

Bill Hammetter named an ASTM Fellow

Bill Hammetter, Manager of Ceramic Materials Dept. 1843, has been named a Fellow of the American Society for Testing and Materials (ASTM) and been given an ASTM Award of Merit. Being named a Fellow is the highest Society recognition for individual contributions to standards activities.

Bill, an ASTM member since 1986, was cited "as an innovator of novel standards development procedures related to thermal analysis techniques, and for his vision, initiative, and leadership in setting goals, long-range planning, and self-assessment for the committee." The committee referred to is ASTM Committee E37 on Thermal Measurements, one of 128 ASTM technical standards-writing committees.

BILL HAMMETTER

Bill's research at Sandia is related to electrical and thermodynamic properties of metal oxides, synthesis and processing of ceramics, and the melting and casting of high-performance metals and alloys.

For the ASTM, Bill is chairman of the E37 committee's Editorial Subcommittee and of a task group on dielectric thermal analysis. He has also served the E37 committee as its membership secretary and its chairman, from 1994 to 1999.

In announcing the award on July 31, the ASTM said: "Throughout his tenure with E37, he has championed a forward-looking, strategic approach to consensus-based standards development that notably includes using 'virtual' task group meetings through Internet communications, which can be a model for conducting committee business in upcoming years. He has also worked to harmonize E37 efforts with those of the international standards community, he has made significant contributions to standards developed and revised by E37, and he has received an E37 Award of Appreciation."

As chairman of E37, the ASTM says, Bill "advocated a common description of thermal analysis techniques" and "oversaw the doubling in the number of standards completed by E37."

Sympathy

To Iris Aboytes (12640) on the death of her father, Gregorio Garcia, in Espanola, July 27.

To Josie Chavez (7140) on the death of her mother, Christina Chavez, in Belen, July 19.

Pop-off instrument packet helps study, track giant blue whales through the wine-dark sea

Recoverable data recorder provides clues to these largest animals' feeding habits in ocean ecosystem

By Nancy Garcia

The word "predator" conjures up images of a jagged-toothed feline on the African plain. But the world's largest predators carry out their carnage far from the watchful eyes of trained observers.

Eating up to two tons a day, blue whales cruise the world's oceans, diving down to 100 meters to feed on krill and other small crustaceans they filter from the ocean water. These endangered animals — as long as three school buses and as heavy as 50 elephants — dwindled in number an estimated 97 percent by the time whaling stopped in 1966. After resurging locally in the 1990s, there are now some 2,000 blue whales off the coast of California, and perhaps 12,000 worldwide.

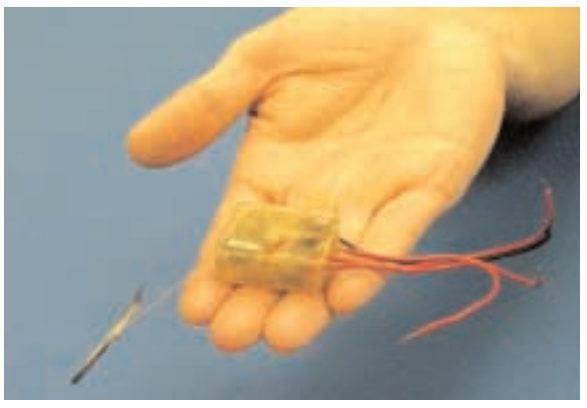
Marine biologists at the University of California at Santa Cruz who spend their careers tracking these creatures' elusive and mysterious habits received a little help not long ago from Sandia. The scientists had tried to modify a pager to create a radio tag to

Sandia CaliforniaNews

track the cetaceans. A colleague at the Naval Postgraduate School in Monterey suggested they contact Sandia for assistance. With $5,000 provided through the Small Business Technical Assistance program, the biologists received a matchbox-sized receiver that makes their data logger pop off automatically in response to a signal, much like a garage door opener functions by sending a digital code.

Now they're easier to recover

The scientists were overjoyed with this advance



THE MATCHBOX-SIZED receiver is embedded in epoxy resin to protect the electronics from sea water.

that permitted them to recover the flashlight-sized, buoyant orange data loggers (each worth $2,500) when they were in the vicinity during calm seas. Previously, they had relied upon a corrodible magnesium link that breaks apart over time, releasing the data pack to send out a locator signal. Recovering the data loggers had been time-consuming and uncertain — some never were found.

Bearing a time/depth recorder (about the size of a deck of cards), the data logger also records light level. Once the retrieved data logs were downloaded onto a computer, the light levels and clock signals together revealed, roughly, where the whale had traveled — by indicating day length (latitude) and time of day (longitude). A pressure sensor, meanwhile, revealed depth of dives, while a resistance detector logged when the whale had surfaced above the waves.

The scientists received a research permit to tag the whales, who carry the data logger embedded by a thumb-sized barb in their skin for a couple of weeks. Penetrating about an inch, the barb does not extend past the skin into the whale's blubber layer. It is eventually sloughed off much the way a person's skin will thicken and heal beneath a splinter.

"The whale doesn't even know it's there," says Jamie Stamps (8111), an electrical engineer who received a patent for design of the releasable device. He built about 10 copies for the researchers to assist their studies of whale feeding behavior. The devices were also used by scientists at the Southwest Fishery Science Center in La Jolla and the Marine Mammal Center in Sausalito. Jamie also fielded inquiries from the Canadian Fisheries and National Geographic Television.

One bottleneck in creating the final device was acquiring an integrated receiver that was only intermittently available from distributors, he says. Other aspects were fairly straightforward. A couple of AA batteries powered the devices for a month. Dick Jones (8414), who had experience with high-reliability valves, also assisted the work, helped locate a low-power wire cutter that could be activated by small batteries. Dick and Jamie also sketched out plans to create a spring-loaded device that could be reset, which would spare the cost of the non-reusable wire-cutter (each runs $180).

Coupled with video from cameras mounted by corrodible suction cups to the marine mammals, the data logs are revealing a story of animals who must be as efficient as athletes to capture their prey and thrive, says UCSC marine biologist Terrie Williams. Studying Weddell seals and blue whales, she observed the animals conserving a surprising degree of energy during dives, essentially dropping like a stone, then propelling and gliding back to the surface. Williams says it took a bit of ingenuity to discern any motion of the blue whales — she couldn't detect any change in hours of tape until she increased the speed by a factor of seven. "These are the largest creatures in the world, and I had to get down to whale speed," she says.

Part of the story she expects to emerge shortly involves blue whales' only natural enemy, orcas — or killer whales — who can hunt in packs and, being warm-blooded, require more food than predators like sharks. Salmon and other rich fish that are a food of choice for orcas have been vastly depleted. Sea otters are declining in number too — possibly because orcas have increased their intake of these mammals (Williams has photos of orcas eating sea otters). She says impacts on blue whales, however, are hard to discern since their worldwide population figures are so uncertain.

Blue Whale, largest whale, and the largest creature ever to inhabit the earth

Blue whales are found in all oceans of the world. Most populations migrate extensively, traveling from the Tropics or near Tropics in winter to the edges of the pack ice in the northern and southern hemispheres in summer. Blue whales produce loud, low-frequency moans that can be heard in deep ocean waters from more than 160 km (100 mi) away. It is likely that they communicate by means of these moans, enabling the members of a group to remain in contact across a vast expanse of ocean.

Blue whales may reach 30 m (100 ft) in length; mature females are usually

slightly longer than mature males. A small dorsal fin is set far back on the body. The skin has a light-gray-and-white mottled pattern, which appears light blue when the whale is just below the surface of the water on a sunny day. The mottled pattern, which is unique to each animal, has been used by researchers to identify individual whales.

Blue whales feed by lunging openmouthed into dense groups of small sea creatures such as krill or fish. As water and food rush into the whale's mouth, more than 60 throat pleats expand so that the whale's throat, or gular pouch, forms a huge bag that extends from the front of the whale's snout to its navel. The whale then partially closes its mouth, leaving a small gap, and forces water past 270 to 390 pairs of wide, black, fringed baleen plates that hang from the roof of the mouth. The plates act as a sieve, catching food inside the fringes. Blue whales often lunge through their prey side by side, apparently using each other to block the escape of their prey.

Mature females may give birth once every two or three years. Mating occurs during the summer season, and the gestation period lasts about 11 months. A single young is usually born the following spring; twins are rare. The young nurse for seven or eight months, gaining as much as 90 kg (200 lb) per day.

Blue whales were heavily hunted for oil, baleen, meat, and other products from the 1930s to the 1960s. This hunting nearly caused the extinction of the species. They are now protected and may gradually be returning in several areas of their range; since 1985, blue whales feeding in Monterey Bay, California, have become a familiar sight in late summer. The blue whale is classified as an endangered species.

"Blue Whale," Microsoft® Encarta® Online Encyclopedia, 2001 http://encarta.msn.com © 1997-2001 Microsoft Corporation. All rights reserved.

R&D 100 winners Richard Olsen and Eilene Cross

RICHARD OLSEN (8727) and Eilene Cross (8517) hold a solid-state radiation detector, winner of a 2001 R&D 100 Award. In the July 27 *Lab News*, writer Chris Burroughs described the single-crystal cadmium zinc telluride radiation detector, as well as the other two 2001 Sandia R&D 100 winners, the ion electron emission microscope and polymer hydrogen getters. (Photo by Lynda Hadley)

Landfill

(Continued from page 1)

vents (TCE) in the groundwater below the landfill in 1989 and initiated a number of measures that culminated with the present excavation. Beginning in September 1998, workers used a labor-intensive approach to landfill excavation. Each bucket of excavated material was picked through by hand after dumping on a two-inch mesh screen top. By July of 1999, the process was reengineered using a mechanized screen table and a conveyor belt to improve productivity while maintaining safety. By last summer the landfill was 50 percent excavated (*Lab News*, June 16, 2000).

Soils, chemicals, items: What's being done?

"By excavating the main body of debris from the landfill, we've removed the source for potential future groundwater contamination," says David R. Miller, Manager of Landfills and Test Areas Dept. 6134. Earlier projects, extracting chemical vapors from the soil between the landfill and the groundwater table, combined with the excavation, eliminate the potential for significant future contamination of the regional aquifer. Groundwater monitoring results during the past year for the site appear to confirm that result.

Some of the soils from the landfill will be returned as fill after sampling is completed to confirm that this is safe. Other soils will be stored, treated, and contained at a site adjacent to the landfill, called the Corrective Action Management Unit (CAMU). More concentrated chemicals, gas cylinders, batteries, and other items will be sent off-site to regulator-approved disposal facilities. Investigations are under way to determine if some of the precious metals recovered from the landfill can be recycled.

In some places soil contamination reaches deeper than the 12 feet excavated, Sharissa says. Sampling will help define several areas that can be safely excavated to deeper depths. In some cases, however, complete excavation of all contaminated soils will not be possible.

"Long-term monitoring will be needed at the site, but I believe we are going to have a successful closure," Sharissa says.

After the clean portion of soils from the landfill is returned to the excavation, backfilling will be completed with clean soil and an engineered cover will be put in place as part of the long-term maintenance.

Unusual items, 150,000 hours, staying prepared

Despite a number of "unusual" waste items encountered, the Chemical Waste Landfill excavation was carried out during a two-and-a-half-year period with more than 150,000 person-hours without a serious injury. The key to the success was a positive Integrated Safety Management approach to the project, including:

- Detailed planning
- Use of appropriate protective gear
- Extensive environmental monitoring
- A network of experts with specialized information, and
- An experienced, trained field team.

The project involved emergency planning and frequent communication with workers at neighboring facilities, says Sharissa Young (6134), excavation task leader. "We prepared workers for a worst-case event that, fortunately, never happened."

One unanticipated problem was the discovery of 3,700 cubic yards of polychlorinated biphenyl compounds (PCBs). These are regulated under the Toxic Substances Control Act, and their management requires more controls than for soils contaminated with other hazardous constituents. Low levels of tritium are also associated with much of the PCB-contaminated soils, further complicating the available disposal options.

Explosive Ordnance Disposal experts from Kirtland Air Force Base responded twice to discovery of munitions components and other explosive debris. "Once we found what turned out to be a practice landmine and another time what appeared to be a pipe bomb," says Don Schofield (6134) assistant task leader. "The Air Force guys scooped them up and took them away."And workers understandably became concerned with the discovery of several vials with the label "polio" on them. Some quick research concerning the origin of these vials turned up the original laboratory experiment notebooks, documenting that the vials had been sterilized in an autoclave prior to disposal.

BIG TOOL — This track-hoe with explosive shielding was used to excavate much of the Chemical Waste Landfill.

Binational lab

(Continued from page 1)

GERRY YONAS (left), VP 16000, principal scientist, and head of Sandia's Advanced Concepts Group, makes a point to Mexican Consul Juan Solana during a recent workshop on development of a binational laboratory. Workshop participants included representatives from the North American Development Bank, Mexico's National Council for Science and Technology, the Mexico Electric Power Institute, the US Consul General, the Consulate of Mexico, DOE headquarters, and the offices of Sens. Pete Domenici and Jeff Bingaman.

strong articulation needed among the different actors to share, plan, and work in teams, as a way to educate and improve the actors that participate."

Other issues, raised by Pilar Noriega of the Monterrey Institute of Technology and Higher Education, included the necessity of an educated labor pool and successful Mexican methods of preventing high school dropouts: scholarships to students attending two-year technical schools with a prior agreement to immediately hire them, with greatly increased wages, upon graduation. Other participants discussed the importance of K1-12 education and higher education as foundations for improving technology and science throughout Mexico, and the benefit to the nation of a first-class lab

"It's easier, cheaper, and less painful for everybody to engage in preventive defense — to prevent conflicts that occur at borders, boundaries, and between haves and have-nots — rather than deal with it when it happens."

to which scientists could come for a year or two and then return to their communities with new information and methods.

Emphasizing education's importance, Mexican economist Sarah Martinez Pellegrini discussed the possibility of technical centers springing up about the lab: "Companies interested in establishing themselves in a community look for educational profiles that match their markets."

Jessica Turnley of the Galisteo Consulting Group mentioned the work of the Appalachian and Mississippi Delta commissions, whose functions are to take systemic looks at social and economic conditions and help correct them. "A third possible area is along the border," she said.

Others mentioned the emergence of NAFTA in making Mexico more attractive for direct foreign investment, the possibility of changing Mexican laws to provide more incentives to science centers and businesses, and the possibility of Mexico teaming with US technology hubs in Austin, San Diego, Albuquerque, and Santa Fe (i.e., Los Alamos).

Sandia workshop leader Gerry Yonas, VP 16000, principal scientist, and head of ACG, welcomed the insights. "No one is smart as all of us [together]," he said. Analyzing the responses, he said, "Given these complexities in time and space, we need a map with all these areas itemized." The roadmap would have long-term and short-term goals expressed in local, regional, and national applications. The map would include factors such as education, resources, and financial opportunities small and large.

Economic development as a force for peace

"Columbus had a map. We need one too," he said. He said he realized that Columbus thought he was going to India, but with a map, everything worked out OK nevertheless.

Sandia's Advanced Concepts Group was created to examine the long-term security needs of the nation, find potential problems that might threaten national or world peace, and, if possible, prevent them from occurring or demonstrate a method of doing so.

"It's easier, cheaper, and less painful for everybody to engage in preventive defense — to prevent conflicts that occur at borders, boundaries, and between haves and have-nots — rather than deal with it when it happens," Gerry said. "We first started thinking about economic development as a force for peace in the Middle East. We didn't get there in time, as you probably know. We should've gotten there, oh, about a thousand years ago."

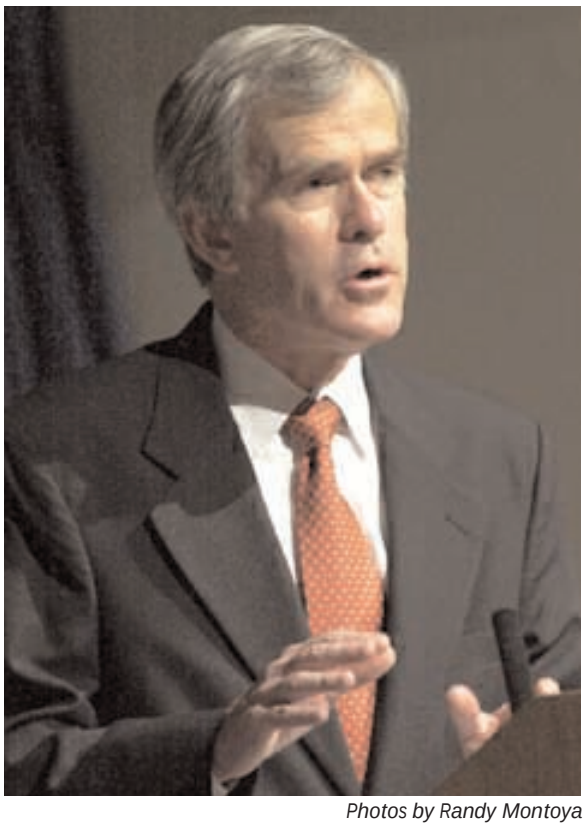
Sandia, Los Alamos, and UNM join to boost nanotech R&D in New Mexico

A MEMORANDUM OF UNDERSTANDING among Sandia, Los Alamos National Laboratory, and the University of New Mexico to establish a New Mexico Nanoscience Consortium was signed by top-level representatives of the three institutions at a ceremony at the Technology Ventures Corp. Tuesday. The consortium will be open to all New Mexico institutions with interests in nanoscience. The *Lab News* will carry a fuller description of the Aug. 7 event, which featured political and industry leaders, in its next issue. From left to right are Sandia President Paul Robinson, Sen. Jeff Bingaman, UNM President Bill Gordon, Sen. Pete Domenici, Los Alamos Lab Director John Browne, and Hewlett Packard Fellow R. Stanley Williams, the keynote speaker at the MOU ceremony. (Photo by Randy Montoya)

Bingaman

(Continued from page 1)

Senate's Energy and Natural Resources Committee and sits on the Armed Services Committee, both of which deal with issues that directly impact DOE and Sandia. The Senate has been debating aspects of energy legislation, including Bingaman's own Comprehensive and Balanced Energy Act of 2001, and will likely vote on a complete bill this fall. The House of Representatives passed energy legislation in July.



Photos by Randy Montoya

In prepared remarks for his Sandia colloquium, Bingaman outlined his vision for a national energy policy. That vision places emphasis not just on finding new sources of fossil fuel — that's like the general who is fully prepared to fight the last war, he said — but also on using 21st-century technology to increase energy efficiency, transmission, and distribution. Sandia and other national laboratories, he said, can play a key role in developing the enabling technologies for a new era of energy use that doesn't rely solely on burning ever-greater amounts of fossil fuels.

Bingaman said sound energy legislation should address four goals:

• Assure abundant sources of energy, including fossil fuels and alternatives.

• Assure that the energy supply is reliable and secure.

• Assure that energy is affordable for the average family and for the nation's businesses.

• Assure that the supply is as environmentally friendly as possible.

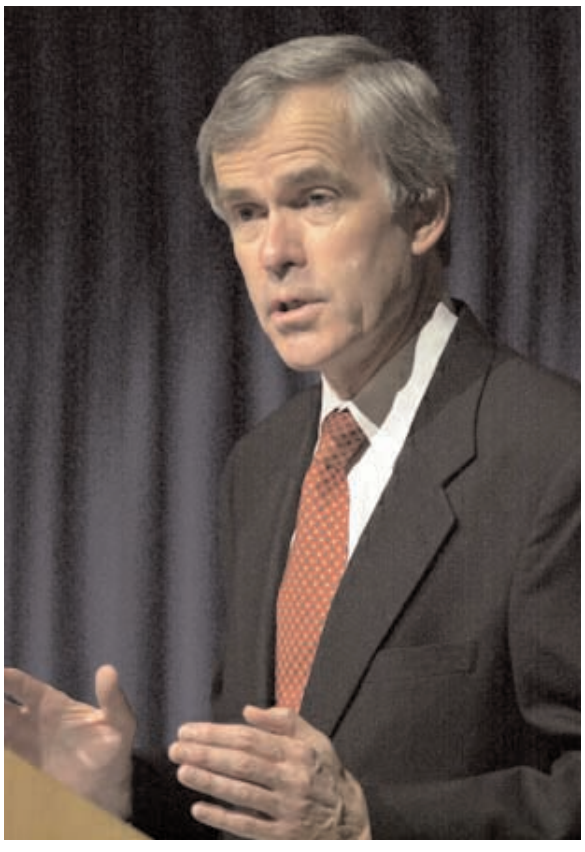
The current debate, notably the Bush administration's energy plan, Bingaman asserted, focuses too much attention on producing and burning more fuel, specifically fossil fuel.

"There hasn't been enough discussion on achieving new efficiencies and developing alternative sources of fuel," he said.

"The model [for energy distribution] that we've adopted is the large centralized power plant, often coal fired, generating 100 megawatts or more." That model has built into it huge inefficiencies. Advances in technology are moving the nation toward a new model of distributed energy, he said, one that is more efficient and takes advantage of a diverse range of energy sources: fuel cells, gas turbines, gas microturbines, co-generation, photovoltaics, wind power. And nuclear: "We are looking at it [nuclear power] again, and I think that is positive.

Noting that America has a national economy, Bingaman said "we clearly need a national energy grid," rather than the regional system of grids now in place where moving energy from region to region is difficult, both for technical and regulatory reasons. Legislation can address the regulatory obstacles," Bingaman said, and "new technologies can help" address the technical hurdles. (The *Lab News* plans to examine the national grid system in an article in the Aug. 27 issue.)

Bingaman noted that technologies, likewise, can make a significant contribution at the consumption end of the energy cycle: automobiles — and there are some 700 million of them worldwide, "each with its own internal combustion engine" — can be made much more fuel efficient. The current first-generation hybrid vehicles are a case in point, he said. Legislation should require — on a gradual pace — a new round of auto fuel-efficiency standards. He noted that during the period of 1975-89, when automakers were required to meet fleet-wide fuel-efficiency standards, tremendous efficiencies were achieved. Since 1989, the fuel standards have been frozen — and so have the



improvements in fuel economy.

"Technology has evolved to the point where we can make major strides again," he said.

Technologies can also aid in making buildings, and even home appliances, more energy efficient, Bingaman said. "Science and technology promise to help us greatly in these areas," he said.

Bingaman said he considers it vital to the national interest that Congress make a commitment to fund energy research and development on a sustainable level, "and I hope we can do that in our [energy policy] legislation." He noted that his energy bill calls for 11 percent per year increases for the next several years in R&D for DOE labs on renewable energy and also includes significant investment in R&D on nuclear energy and even on fossil fuel.

The year 2001, he said, offers "a great opportunity for Congress to begin a sustained effort" to address energy issues in a responsible and long-term way. "We have to keep our eyes on the future," he said, "and not just do more of what we've always done," i.e., produce and burn more fossil fuels.

"Sandia," he said, "is in a good position to help us in this effort."

New Mexico public safety officials visit Sandia for five-day security training course

By John German

State and local law enforcement and corrections officials from New Mexico and across the nation got a crash course in security techniques and technologies last week courtesy of Sandia and Lockheed Martin.

The 25 participants in the five-day course, July 30-Aug. 3, heard presentations from various Sandians about designing security systems and evaluating their effectiveness, improving their home communities' security infrastructures against serious crime and acts of terrorism, and preventing and responding to public safety incidents such as natural disasters, prison escapes, or riots.

Demonstrations of candidate security-enhancing technologies complemented the classroom presentations.

TECH TOUR — Bob Surran (15201, right) shows course participants a robotics system during a tour of robotics facilities that served as a primer on how automated systems could be used to enhance the abilities of cops and corrections officers.

"As a nation we worry about serious incidents, but local and state officials don't always have access to the resources they need to plan for them," says Gordon Smith, Manager of Sandia's Public Safety Technologies Dept. 5861.

"This training brings some of the security expertise available at the national level to bear on public safety issues in our cities and rural communities," he says. "The goal is to make New Mexico a safer place to live."

The conference included workshops on defining potential threats, identifying security vulnerabilities, indoor and outdoor security technologies, security-system assessments, entry control, response to security incidents, and risk analysis, as well as a tours of Labs areas incorporating advanced security technologies and methods.

Participants represented the New Mexico Department of Public Safety, New Mexico Department of Corrections, New Mexico State Police, Albuquerque Police Department, Albuquerque Public Schools, Albuquerque Fire Department, Bernalillo County Sheriff, and Rio Rancho Department of Public Safety.

Out-of-state participants included federal immigration officials, federal and state prison officials, and various county sheriff's departments.

Sandia and Lockheed Martin provided the course at no charge; participants paid only their travel expenses.

The course also highlighted the availability of law enforcement and technology assistance through the Office of Science and Technology (OST) of the National Institute of Justice. Among the resources available through OST is the Center for Civil Force Protection (CCFP), which is managed by Sandia.

The CCFP provides a national hot line, a virtual information booth, and security and technology advice for government and business officials responsible for safeguarding their communities (*Lab News*, April 21, 2000).

"We've heard a lot about support technology that could improve safety and security in our business and in our community," said Lt. John Sarember of the Bernalillo County Sheriff's Office. "This is the best and most valuable training I've had in 20 years."

"There are a lot of good technologies out there that I did not have a clue about," said Doug Dukes, Sheriff of Noble County, Indiana, who operates a 230-person jail. "There are a lot of sensors, cameras, and weapons that will help address the safety of our employees and assess our corrections facility security systems."

"We hope to do more of these courses in the future," says Gordon.

Sandia hosts two-week NATO computer-simulation security study

NATO airbase security force personnel recently completed a two-week computer simulation study hosted by Sandia's Security Systems and Technology Center 5800.

The study was conducted as part of Sandia's US European Command (USEUCOM) technical support contract. It involved military security personnel from the US, Netherlands, Belgian, and German air forces. All the participants are from member organizations of the NATO Joint Theater Surety Management Group (JTSMG).

"This year was the first time we've been able to coordinate the field exercises and computer study so closely."

The JTSMG is co-chaired by USEUCOM and Supreme Headquarters, Allied Powers in Europe (SHAPE). The group coordinates nuclear surety policy and requirement implementation among the seven Program of Cooperation (POC) nations. These nations support the NATO nuclear strike program by providing base facilities, aircraft, and personnel.

The year's JTSMG study and five previous annual studies were built around a software tool called JTS (for "Joint Tactical Simulation"). JTS provides a way to accurately simulate large numbers of small and medium-size tactical engagements at much less cost than most field exercises. As a research tool, this software permits numerous repetitions of the same attack scenario with variations in key parameters. JTS combines databases of validated weapon and personnel characteristics with a custom environment map on a relatively simple graphical interface. In many cases, 10 attack-defense scenarios can be run in the time it takes to conduct a single field exercise.

Before each simulation scenario is run, adversary and defense force teams must deploy their personnel and specify how they will act during the simulation. During the run, team members may command element movements, or they may act as individual element members. The computer calculates its results from real-world weapon effectiveness data for each shot fired.

In all cases, the computer system itself is handled by Sandia operators who have extensive experience with the JTS software and with security force operations.

SIMULATED DEFENSE — Sandian Laura Myers (5861, right) deploys simulated defense forces for a Dutch Air Force security officer.

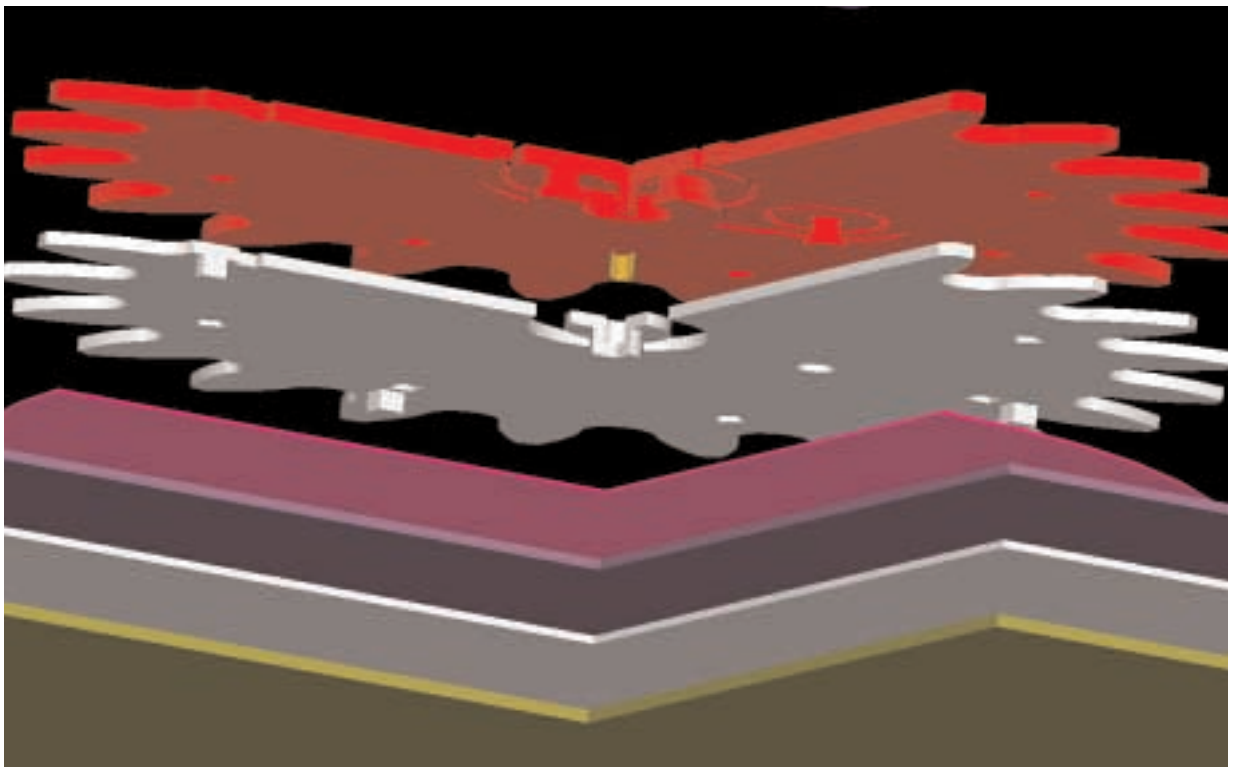
"This year was the first time we've been able to coordinate the field exercises and computer study so closely," says Paul Weber (5831), who hosted the NATO group for 5800. "It made a real difference in the quality and quantity of our simulation runs. Complementary results from both kinds of exercises will make the discussion and decision process much easier."

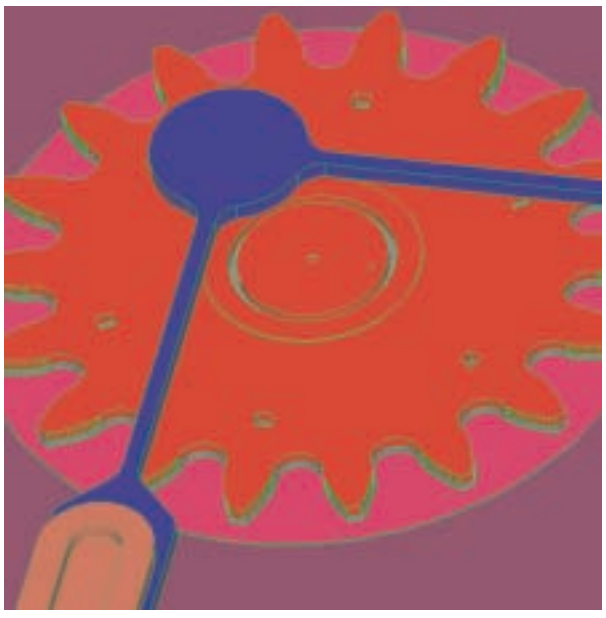
This year's JTSMG security study complements live force-on-force exercises conducted at operational NATO airbases earlier this year. Those exercises and the just-completed computer studies were both designed to compare current security requirements, procedures, weapons, and tactics, to test proposed enhancements. Recommended changes to US and NATO security manuals will be developed from this study's results. The recommendations will be discussed at the next JTSMG plenary meeting in September.

The JTSMG and its working groups help ensure that nuclear safety, security, and survivability policy and requirements are uniformly implemented by all POC nations. A Sandia Resident Technical Advisor (RTA) has been at USEUCOM in Stuttgart, Germany, since 1981. The current RTA there is Tom James (5833).

Sandia modelers make life easier for new MEMS designers

Previews do more than sell movies





Images generated by Sandia's 3-D MEMS modeling software designed by Craig Jorgensen and Vic Yarberry

Story by Neal Singer

After months of hard work to design a prototype device, followed by the time and cost necessarily involved in fabricating it, designers of MEMS (microelectromechanical systems) often can be disheartened to learn their brainchild needs further modifications before it can be marketed as a workable device.

Such glitches occur because most researchers who design multilayered microdevices find it difficult to visualize how the micron-sized features of the etched layers fit together.

"It's not intuitive how the layers interact," says Craig Jorgensen (1769). "MEMS are wonderful in that they come out thousands at a time, all in one piece with no assembly necessary, but there's nothing simple about their design. You're building patterned layers on top of other patterned layers, which can create a complex 3-D geometry."

To make life easier for designers, Craig and Vic Yarberry (1737) have designed 2-D and 3-D modeling programs. Two-dimensional modeling shows the flat-plane cross sections of devices as they would look if fabricated. The 3-D version allows designers to twirl their virtual microdevices like airplane parts modeled in the macroworld, the still-imaginary part viewed from any perspective. Unworkable portions of the design can be modified or eliminated before — not after — fabrication work is paid for at the foundry.

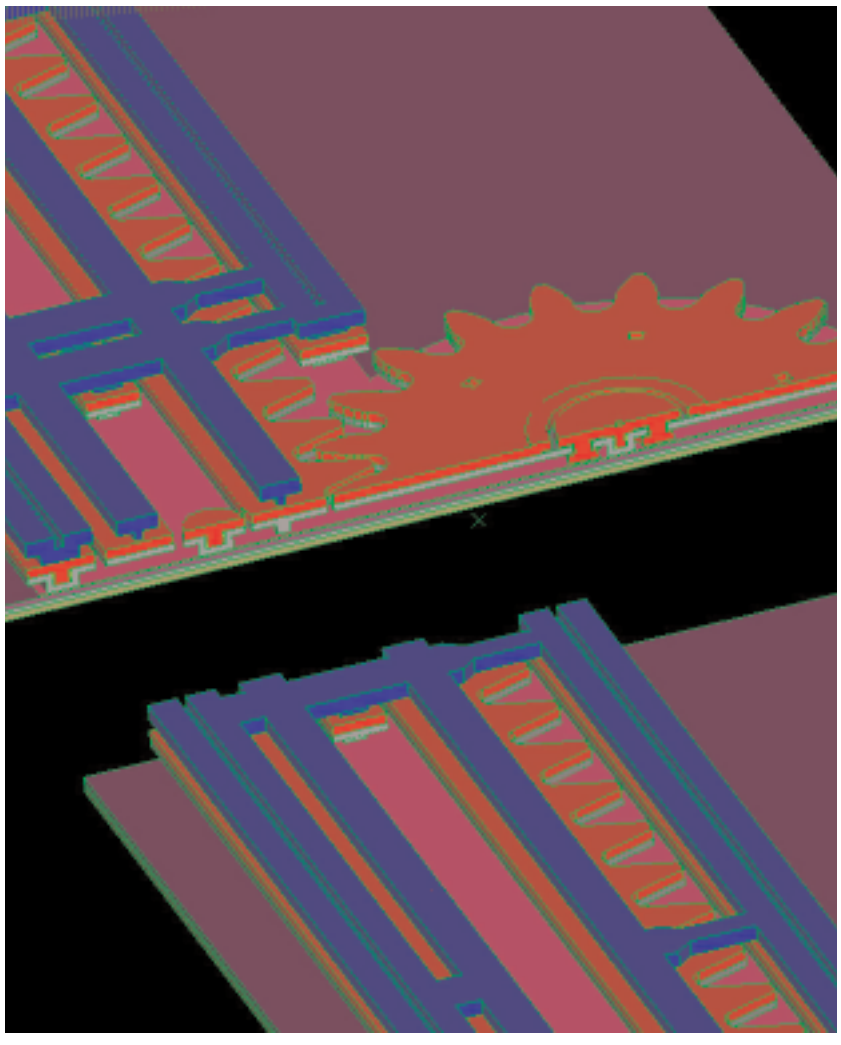
The simulation process does take time. A simple microdevice can be simulated in seconds; a complicated one can take hours. Still, waiting for a computer to complete its complex modeling beats waiting months to find out what modifications one should have made.

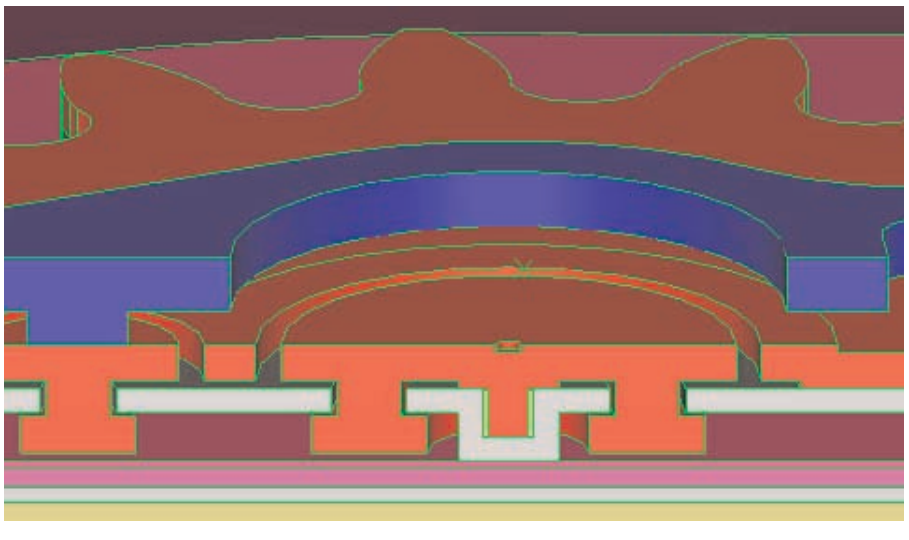
"It's not easy for former macro-world designers to combine 2-D mask geometry with newly learned information about the MEMS fabrication process itself," says Vic, "and, on the first try, to create functional 3-D structures."

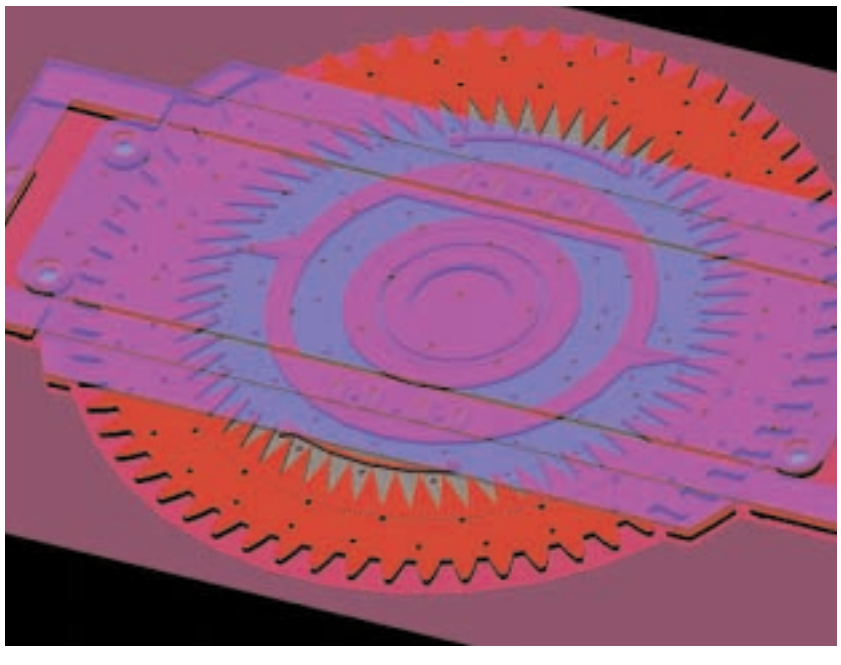
The previews, like a movie theater's "coming attractions," help designers choose the version they want to see in its entirety.

Marc Polosky (2614), who designs safety components in weapons systems, says the 2-D cross-sectioner enables him to visualize the effect of cuts in different thin film layers. Put simply, he says, "If you're making a gear on a pin joint, the program helps make sure you're not designing a gear that's rigidly fixed to the substrate and can't move." While the 2-D program is a valuable design tool that should help new designers get up to speed faster, Marc says, the 3-D modeler has potential of going to the next step — kinematic modeling — that will demonstrate these devices performing in environments.

Two papers by Vic and Craig on their modeling work were selected for presentation at the Fourth International Conference on Modeling and Simulation of Microsystems, held this spring at Hilton Head Island. The conference is the largest and probably most prestigious in providing an interdisciplinary forum for modeling, simulation, and scientific computing in the microelectronic, semiconductor, sensors, materials, and biotechnology fields.







Sandians volunteer at American Solar Challenge checkpoint and media stop in Albuquerque

Event demonstrates the potential of renewable energy

By Chris Burroughs

Nearly 20 Sandians served as volunteers during the American Solar Challenge checkpoint and media stop at the University of New Mexico (UNM) July 19-21.

"We did everything from welcoming the car race teams to Albuquerque to baking more than 600 cookies in Sandia's solar oven to operating a hospitality tent and directing traffic, to passing out Sandia informational pamphlets," says volunteer and primary liaison Jeannette Moore of Photovoltaic Research and Development Dept. 6218. "This was a wonderful opportunity to promote goodwill and technology in New Mexico and between Sandia National Labs and the National Renewable Energy Lab [NREL]."

The American Solar Challenge was an educational sporting event in which university teams, companies, and clubs from around the world competed to design, build, and race solar-powered cars across country. Some 35 cars participated, traveling America's historic Route 66 from the Museum of Science and Industry in Chicago to Claremont, Calif.

The cars were powered by electricity generated by sunlight. No external power source could be used to charge batteries. Instead, the racers used solar or photovoltaic cells to convert sunlight into electricity and therefore charge their batteries.

National sponsors of the race were DOE and NREL. Local sponsors included Sandia and UNM.

"The American Solar Challenge demonstrates the potential of renewable energy," says DOE Secretary Spencer Abraham. "In the future, with the Department of Energy's research efforts into promising technologies, renewable energy can contribute to our nation's energy supplies."

UNM, which provided use of a new parking lot for the affair as well as use of a gym shower to those team members who wanted it, was one of several resting points for the car drivers and their support teams. The university also coordinated the event with an event of its own — the 75th anniversary celebration of Route 66.

Also featured were demonstrations by the New Mexico Solar Energy Association, which included a toy solar car drag race and a portable demonstration unit. The unit, which teaches about renewable energy such as solar, wind, and fuel cells, drew a lot of attention.

While no New Mexico entries were in the 2001 race, Ernie Correa of Dept. 14172 and head of Sandia's American Indian Outreach Committee, is leading efforts to have a New Mexico student car team in the 2003 American Solar Challenge. The committee will provide mentoring and in-kind services for specific engineering problems.

AMERICAN SOLAR CHALLENGE — Jeannette Moore (6218) and Ernie Correa (14172) greet Principia College (Elsah, Ill.) student Ryan McFall, right, during a pit stop of the American Solar Challenge at the University of New Mexico.

"We look forward to this project as a way to promote interest in the math and science disciplines," Ernie says. "We are anticipating a good interface between tribal governments, Sandia, and universities throughout the state. We hope to increase energy awareness, demonstrate the feasibility of photovoltaic systems, and encourage more research and development in these areas."

Jeannette and Ernie welcomed the car teams to Albuquerque with banners and hospitality tents, a solar-powered public-address system and CD player (the power unit had been tested at Sandia), hotel rooms for the race officials, Sandia information, washrooms, and an evening security guard. There was even a mini cheering section complete with pom-poms, Jeannette says.

The "Villager" sun oven, which belongs to Dept. 6215, was used to bake more than 600 cookies that were circulated among the teams and the crowd.

Sandians playing a key role in encouraging the Labs to participate in the American Solar Challenge were Joe Tillerson, Manager of Photovoltaic Systems R&D Dept. 6218; Paul Klimas, Manager of Photovoltaic Programs and Renewable Energy Systems Dept. 6219; and Beth Richards (6218).

Miriam Hilborn and Patricia Toya (both 14172) operated the hospitality tent. They purchased, prepared, and served refreshments and handed out meal tickets for the Frontier restaurant.

Other volunteers included Ramona Abeyta (9612), Daryl Reckaway (14184), Linda Reckaway (9821), Lee Hall (7821), Jose Torres (1677), Diana De La Rosa (7131), David Calkins (141862), Rose Cordova (7826), Kirt Nakagawa (7138), Richard O'Rourke (15309), Marlene Brown, Bill Boyson, and Barry Hansen (all 6218).

Sandian publishes Z-pinch article in science fiction magazine, ***Analog***

Mark Derzon's 'Pinch me, I'm Fusing,' describes serious idea

In the June issue of *Analog: Science Fiction and Fact*, under the evocative title "Pinch Me, I'm Fusing," Sandia researcher Mark Derzon (16000) has taken the unusual step of publishing an eight-page article describing a possible means for the Z-pinch technique to create usable peacetime nuclear fusion for electrical power generation.

"I was trying to find a way to bring Z-pinches to the attention of a larger audience than technical journals reach, and I happened to meet Stan Schmidt, the editor of *Analog*, at one of our [Sandia] Advanced Concepts Group meetings," Mark says. "I asked if he'd be interested in an article, he said 'yes,' and the rest is history."

According to a representative of *Analog*'s advertising department, the magazine's circulation is approximately 70,000 readers.

A Z-pinch is a way of compressing ions at a considerable fraction of the speed of light. The process occurs along a vertical (to a mathematician, z) axis. Sandia has led development of this process, achieving the world's largest laboratory output of X-rays and temperatures approximating that of the sun. But the X-ray emissions are not viewed as a source of power in themselves. They are a kind of heating element in the oven in which a deuterium-tritium pellet will be placed. The momentary storm of X-rays on the pellet could cause high-yield fusion.

One major problem for the technique is that even if a pellet ignites, in terms of generating power, it would be the equivalent of one cylinder igniting one time in a gasoline engine. What's needed is fusion over and over again, rapidly. Mark describes a way to do this that may actually work.

Mark, a former worker at Z before joining the ACG, has proposed a carousel concept that rotates firing chambers much as the old Colt six-shooter rotated its gun barrel, with explosions taking place serially in successive chambers. In Mark's proposal, the carousel's chambers are robotically replaced as they pass a suitable point in their swing cycle. Mark and his associates — Craig Olson (1600), Gary Rochau (6415), Greg Rochau (1677), Steve Slutz (1674) of the Pulsed Power Program, and others — are developing an article for publication in a more serious scientific journal that goes into greater detail and with more rigor. The basic idea of the procedure was published in the proceedings of the 1999 Fusion Summer Study at Snowmass, Colo.

If you can't find the magazine, you can save the $3.50 and go to www.sandia.gov/ACG/articles/pinch-me.htm for a version of Mark's piece that includes a link to an animation that shows how the proposed carousel would work.

— *Neal Singer*

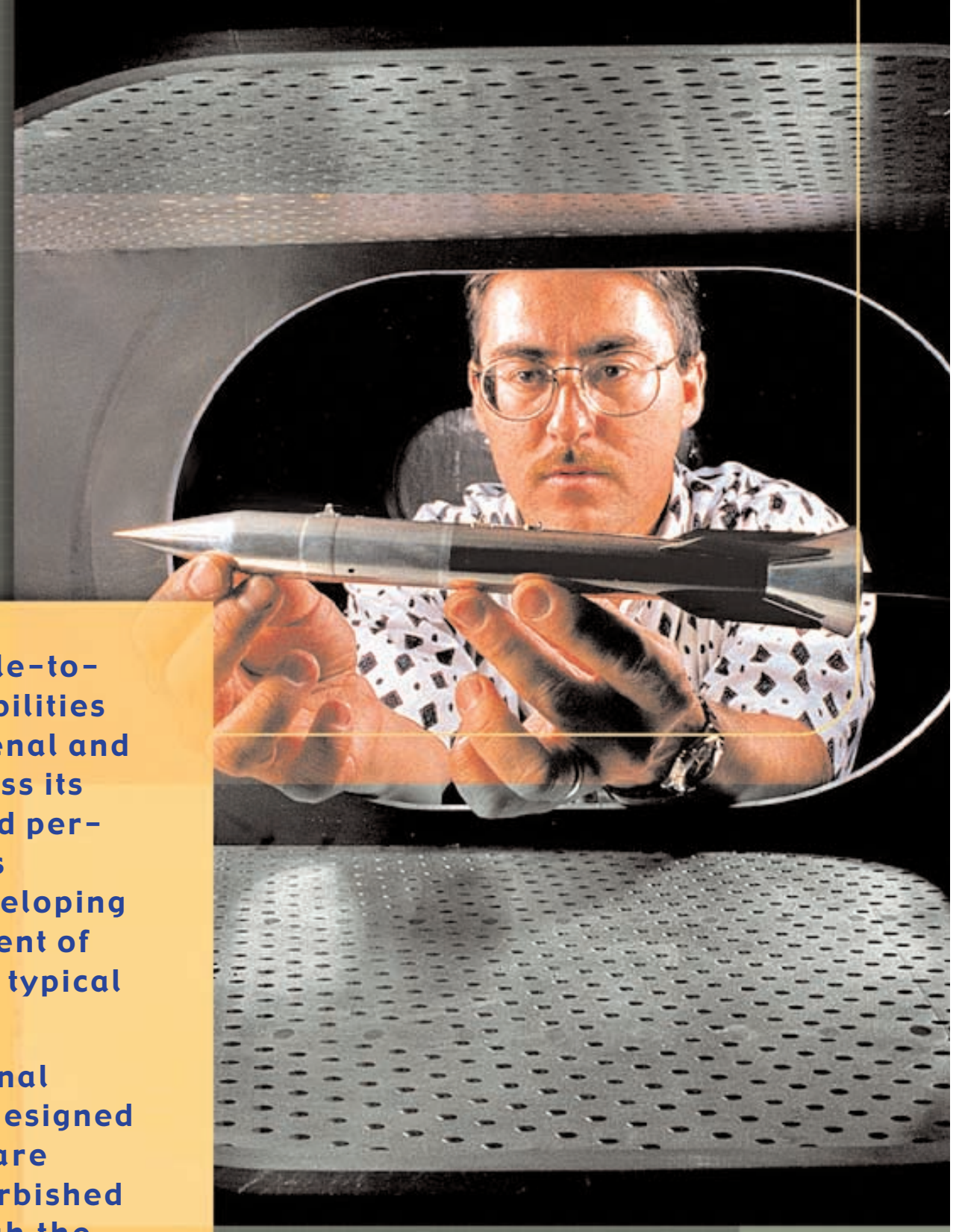
Stockpile Stewardship posters to be displayed

In the mid-1990s, DOE initiated the Stockpile Stewardship Program as a means of ensuring the United States maintains a safe and reliable nuclear stockpile without actual testing. The program seeks to model the performance of nuclear weapons using basic science principles, a task that is pushing Sandia and the other nuclear weapons laboratories to ever-greater levels of scientific discovery and achievement.

Sandia's work in Stockpile Stewardship extends to almost every area of the Labs and forms the core of its national security mission. A series of 10 posters, recently compiled into a single exhibit for display in Washington and elsewhere, shows the extent of that work, ranging from the Stockpile Life Extension Program and the Accelerated Strategic Computing Initiative, to the Z machine, and our world-leading work in microsystems, nanoscience and materials development, robotics, and the safe retirement of hazardous wastes. Displayed to the right on **page 9** is one of the 10 posters.

Sandia's scientific research and technology development help to ensure the nation's nuclear deterrent remains robust, while creating many spinoff technologies, ranging from new medical devices and better automobile airbags, to innovative software that drives the world's fastest computers, and technologies that protect our nation's infrastructures.

Guardians of the Nuclear Arsenal



We exercise cradle-to-grave responsibilities for the nuclear arsenal and independently assess its safety, security, and performance. Sandia is responsible for developing and testing 97 percent of the 6,500 parts in a typical nuclear weapon.

As the nuclear arsenal ages, components designed with a limited life are systematically refurbished or replaced through the Stockpile Life Extension Program to ensure they are the most advanced and reliable.

With nuclear testing suspended and other testing greatly reduced, we use surety science and engineering to understand the effects of aging and the reliability of the new or refurbished components.

Ken Chavez prepares a 7.5 percent scale model of the B61-11 for a wind tunnel test.

Second in a series of 10 posters on "Stockpile Stewardship: Strength Through Science" prepared by Public Relations & Communications Center 12600 in cooperation with the Nuclear Weapons Strategic Business Unit. All 10 posters are on display in the Bldg. 800 corridor. (See Chris Miller's brief story on facing page for more details about the poster project.)

Mileposts

David Berst
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Robert Anderson
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Dick Pettit
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Louis Malizia
20 2522

David Morrison
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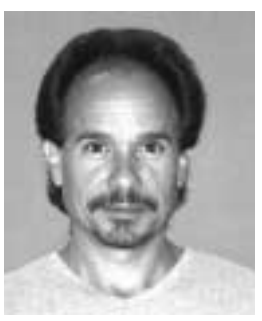


Duane Schneider
20 6245

Steve Yearout
20 5733

Recent Retiree

Carla Perea
24 7845

Spotlight on Sandia

In cooperation with Chief Financial Officer (CFO) and Div. 1000 VP Frank Figueroa and his team, the *Lab News* offers a quarterly update on Sandia's financial health. Below are data compiled by the CFO organization for the third quarter of FY01.

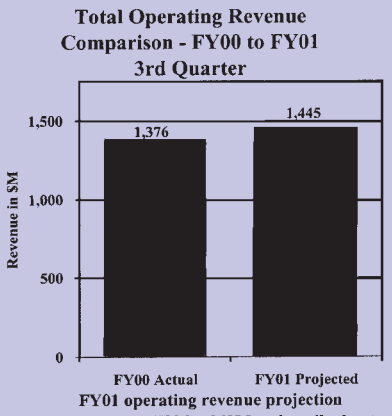
• The first chart (top left) compares Sandia's projected total operating revenue for FY01 to total actual FY00 revenue. The latest revenue projections generated by the SBUs/SMUs for Mission Council are used to update this chart. The current revenue projection of $1.445 billion exceeds last year's actual revenue by $69 million, primarily due to growth in the Nuclear Weapons SBU.

• The second chart (top right) compares Sandia's FY01 operating revenue received year-to-date to the comparable FY00 revenue. Currently, FY01 revenue received is ahead of last year's revenue by $106 million and it appears the Labs will have no trouble in meeting the FY01 revenue projection.

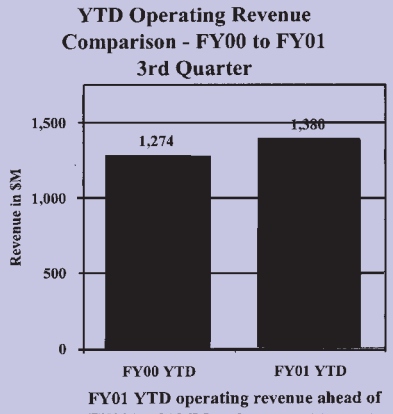
• The third chart (lower left) shows Sandia's current affordable FTEs (full-time equivalent employees), actual FTEs, and the adjusted on-roll count. The affordable FTEs are the latest projections generated by the SBUs/SMUs for Mission Council. Currently, actual FTEs and adjusted on-roll count remain significantly lower than affordable FTEs, primarily due to the new hiring ramp-up.

• The fourth chart (lower right) highlights a different aspect of Sandia's financial health each quarter. For this report, the chart compares our FY02 operating revenue projection to the current operating revenue projection for FY01. This comparison highlights an anticipated increase of $90 million in revenue in FY02, primarily due to growth in the Nuclear Weapons SBU. This growth continues the trend shown in the first chart.

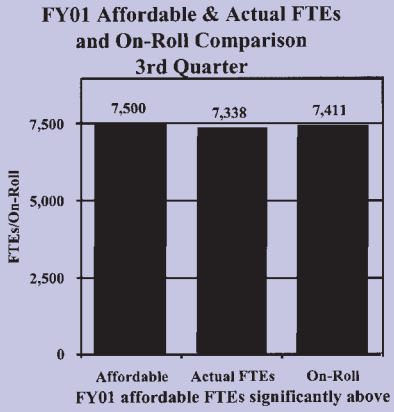
These charts are updated and published each quarter. They are intended to keep you informed of the Labs' financial health.



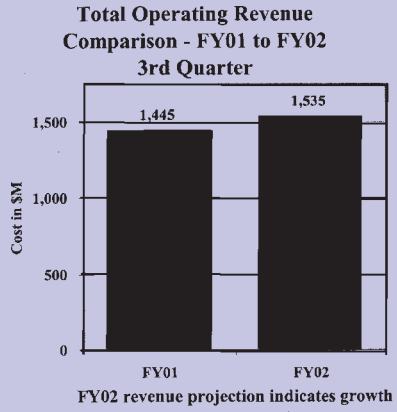
FY01 operating revenue projection exceeds FY00 by $69M, primarily due to growth in NW SBU.



FY01 YTD operating revenue ahead of FY00 by $106M and on target to meet FY01 projection.



FY01 affordable FTEs significantly above actual and on-roll, primarily due to our new hiring ramp-up.



FY02 revenue projection indicates growth of $90M over FY01, primarily due to growth in NW SBU.

Feedback

Director's departure for private sector no conflict of interest, says Sandia VP Al Romig

Move to Ardesta will aid Labs and regional economy

Q: *The* Sandia Daily News *reported that the current director of Microsystems Science, Technology, & Components at Sandia [David Williams] will be joining Ardesta LLC on Aug. 6 as Vice President and CEO of Ardesta's Southwest office. Ardesta and Sandia entered into an intellectual property agreement that called for Ardesta to establish a design and training facility and a microsystems fabrication facility in Albuquerque.*

Concurrent with this announcement, our Internal web and other forms of corporate communication are now notifying us of upcoming 2001 ethics training. I find it hard to believe that a person who undoubtedly had to play a key role, either directly or indirectly, in executing the aforementioned agreement now can potentially profit from the execution of that agreement. There may be a perception of what may be occurring that could potentially jeopardize Sandia's reputation.

A: There is no conflict of interest. The commercialization of Sandia's microsystems technologies and the establishment of a microsystems cluster (i.e., a "Silicon Valley" for microsystems) with the Labs at its hub are key strategies in achieving Sandia's mission success. The Intellectual Property Agreement Sandia has with Ardesta, one of its commercialization partners, is a vital tactic for these strategies. Therefore, it is essential that this Agreement be fulfilled. The decision to place a proven, knowledgeable Sandia leader at Ardesta was made to help ensure that fulfillment.

"... I realized that a solution would be to place a senior Sandian in a leadership role 'outside the fence.' "

Allow me to share three key pieces of information associated with this action.

1. The IP Agreement, finalized in February 2001, requires Ardesta to make significant, risk-filled investments in the Albuquerque region over the next 30 months. These investments must be made well in advance of any market pull or hope for financial return. Also, these Ardesta investment requirements have the potential to significantly benefit Sandia and the Central New Mexico economy. However, these potential benefits are also significantly at risk if the cluster is lost to competitors with similar visions in other communities. Such an outcome would not only destroy the benefits potential from the envisioned cluster but would also result in the loss of Ardesta's investment. Since there is competition, time is clearly of the essence in maximizing the possibility for a successful outcome.

2. The IP Agreement was off to a slow start. Ardesta and Sandia were both concerned and disappointed by this lack of progress. We mutually concluded that one of the major factors in this lack of progress was the absence of an Ardesta executive in Albuquerque.

3. It was shortly after the above conclusion was drawn that I realized that a solution would be to place a senior Sandian in a leadership role "outside the fence." Through deliberations with David, it became obvious that he was the individual best suited to undertake this challenge (i.e., create the cluster.) After 2-3 weeks of additional discussions, David contacted Ardesta in late-May to explore this solution option.

After several more weeks of discussions among Ardesta, David, and me, David decided to join Ardesta and accept the leadership challenge of fulfilling Ardesta's Intellectual Property Agreement with Sandia.

— Al Romig, VP 1000

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

MISCELLANEOUS

TWO SW AIRLINE TICKETS, anywhere Southwest flies, expire 12/21/01, $295 firm. Wagner, 823-9323.

RIMS, full set, from '00 Toyota Tacoma, brand new, cost $1,400 from Toyota, asking $900. Flores, 831-0253.

REFRIGERATOR, Gibson, 27.4 cu. ft., ice-maker, almond color, 10 yrs. old, excellent condition, $150 OBO. Miller, 272-8424.

WHIRLPOOL ELECTRIC RANGE, 30-in., self-clean, almond color, very good condition, $150; La-Z-Boy sofa, off-white/gray floral pattern, new condition, $750. Buteau, 891-2925.

WEAVER 1.5-4X PISTOL SCOPE, excellent optics, retail $278, asking $135. Dietz, 797-7650.

ELECTRIC GRAIN MILL, $75; regular quart canning jars, new box of 12, $7; beige corduroy bed rest, $5. Babb, 865-6843.

TWO EVAPORATIVE COOLERS, box-type, purchased in June, $75 ea. Lungstrom, 268-1284.

WIDE-MOUTH CANNING JARS, used, $4 per dozen; various other sizes available, $3 per doz. Sedden, 299-8159.

LAPTOP COMPUTER, Toshiba Pentium II, 4.1GB HD, 32MB RAM, CD ROM, $600; Kimball rhythm organ, double keyboard, foot pedals, bench, $550. Freeman, 296-3452.

TEXTBOOK, CMS 370 Systems Analysis: *Systems Analysis and Design Methods*, 5th Ed., Whitten, Bently, Dittman, $65. Jaramillo, 263-2153.

SINGLE BED, French provincial style, white, mattress & box spring, $25. Floran, 237-2620.

GUITAR, Guitarra Artesana, beautiful Spanish design, inlay, excellent condition, hardshell case, $475. Pendall, 265-3008.

GE REFRIGERATOR, w/icemaker; Whirlpool washer & dryer, super-capacity; gas stove, self-cleaning; all in very good condition. Sedillo, 298-2527, evenings.

BASS GUITAR BOTTOM, 1-18" cabinet, Eminence Kappa-8 driver, 400W rms/800W max, never used, $275. Kureczko, 286-4426.

TWO INDOOR CATS, to good home, must stay together, very sweet & affectionate, clean, short hair, approx. 3 yrs. old, moving in Oct. Purchase, 899-9888.

'79-'81 280ZX PARTS, new, more than 40 items, for tune-ups, brakes, suspension, & more, $275 for all. Michaels, 892-2450, leave message.

PUPPIES, full-blooded miniature Chihuahuas, chocolate female, chocolate male, & tan male, not registered, $350. Gutierrez, 424-8872.

BUNK BEDS, red metal frame, twin-size top & full-size bottom, good condition, $40. Giersch, 228-3528.

TWO SNOWBOARDS: Morrow 158, w/Burton custom freestyle bindings, $225 OBO; Joyride 160, w/Preston bindings, $150 OBO. Johnson, 296-4659.

HOME COMPUTER, Mac IIsi, complete, including printer but no monitor, free to good home. Bisbee, 293-0356.

YARD SALE: Aug. 10-11, furniture, books, art supplies, teaching aids, tools, toys, 9935 Academy Knolls. Randall, 299-3935.

GIRL'S BEDROOM SET, bed, comforters & sheets, dresser, end table, desk w/hutch, paid $1,400, asking $650. Jones, 856-7439.

GARAGE SALE: Aug. 10 & 11, 8 a.m.-noon, waterbed, dresser, misc. items, 8705 Opportunity NE, near San Francisco & Barstow. Bailey, 821-4394.

YAMAHA KEYBOARD, PSR220, portable, 61 full-sized keys, 128 general MIDI Wavetable voices, built-in speakers, & amp, $100. Duncan, 293-1875.

FLEXSTEEL SECTIONAL SOFA, 2 recliners, double mattress, corner, single unit, mauve, excellent condition, $1,200 OBO. Witek, 296-5198.

TWO LOVING MALE CATS, 2 & 3 yrs. old, shots, neutered, need good home. Plake, 291-4929.

CAR ROOF-TOP CARRIER, Sears, hardshell, 15 cu. ft., great condition, $15. Meeks, 828-9825.

DRESSER DRAWERS, $75; entertainment center for TV, VCR, stereo, $200; both great condition. Wheeler, 856-5675.

WEIGHT EQUIPMENT, Gold's Gym bench w/leg curls, Olympic bar bell set, $350 OBO. Lamb, 332-2219.

PIANO, Lagonda cabinet grand, $200. Stirbis, 299-8442.

VOICESTREAM CELL PHONE, Nokia model 5190. Martinez, 296-9035.

BROYHILL SOFA & LOVESEAT, 2 chairs, excellent condition, $475 for everything OBO. Brito, 266-1018.

HP IIP PRINTER PARTS: 2.5MB memory expansion board & letter-size lower paper tray, $50 ea. Edmund, 881-7974.

INSULATED HOT TUB COVER, for a Morgan Laguna hot tub, never used, still in box, retail $250, make offer. Stockham, 856-7768.

BUNDY TROMBONE, good condition, perfect for student, $175; Gateway P-120, 32MB, 1.6GB, w/software, $100 OBO. Campbell, 296-8304.

GATEWAY P5-120 COMPUTER, 17-in. monitor, HP 720C printer, $350 OBO. Lewin, 898-2303.

KITCHEN ISLAND, 2' x 2' x 14" butcher block on carved legs, solid maple, Appleton, w/knife holder, $350. Dubicka, 296-6557.

FLOORMAT SET, complete, Nissan Quest, dark blue, $50 OBO. Spears, 266-9782.

WEIGHT MACHINE, Weider Pro 9625 (Sears), complete documentation, $95. Higgins, 299-3669.

SOLID-OAK BAR, great for entertaining, 1 inside shelf, top surface approximately 2' x 5', $350. Platzbecker, 299-6096.

RECLINER, brown fabric, good condition, $50. Casbourne, 268-3942.

TAYLOR MADE DRIVER/3 WOOD SET, SS, graphite bubble shafts, $150 OBO; Taylor Made golf bag. Bodmer, 991-4823.

SEARS FREEZER, 22 cu. ft., $22; large entertainment center cabinet, $100. Dean, 299-3281.

SINGLE LOT, Sunset Memorial Gardens, w/deed, $1,000. Carleton, 344-1093.

ENTERTAINMENT CENTER, for up to 27-in. TV, brown mahogany, $100 OBO. Martinez, 294-2846.

RAINBOW VACUUM CLEANER, $50. Bessette, 798-9067.

SONY SPORTS JOGGER RADIO, 5 memory presets, FM stereo, like new, cost $60 new, asking $30. Miller, 892-3257.

CAMPER SHELL, fits full size truck, paneled inside, excellent condition. Guthrie, 822-0968.

CAR DOLLY, by Automatic/1997, good tires, tilt bed, straps, magnetic lights included, like new, $999 OBO. Shepherd, 296-1238.

MAGNETIC MATTRESS PAD, queen, home-made, similar to Nikken, $35. Hansche, 281-5623.

TWIN-SIZE BED, mattress, box spring, frame, new condition, $80. Buteau, 856-7705.

BABY GRAND PIANO, DH Baldwin (model C-152), glossy black, mint condition, hardly used, $6,999. Jaramillo, 291-1794.

ROUNDTRIP TRAVEL VOUCHER, Southwest Airlines, fully transferable, expires 9/15/01, $300 OBO. Baca, 299-4875.

WHEEL LOCKS, for locking tandem trailer wheels, $75 for pair; trailer awning tie-down, new, $12; camping chairs, $7. Muchow, 299-1813.

SEASON TICKETS, Lobo football, 4 great seats on 45-yard line, west stands, $100 per seat. Hartley, 292-7437.

SOUTHWEST AIRLINE TICKET, 1 roundtrip, anywhere Southwest flies, expires, 6/27/02, $300; antique Coke machine, operational, $725. Castillo, 828-9603.

BUNK BEDS, w/mattress, laminated white oak, w/built-in desk w/light, shelves, drawers, ladder, 3 yrs. old, $600. Garcia, 864-8240.

PENTIUM III, 450MMX, DVD ROM, Zip drive, Win 98, Altec Lansing speakers, equalizer, $700; scanner, Artec, $30; Canon printer, BJC7000, $30. Nienow, 296-2453.

ROLLTOP DESK, solid pine, dark stain, good condition, 55"W x 28"D, 2 file drawers plus others, $200. Wright, 298-4567.

GET IN SHAPE: Stairmaster 4000-PT, allows you to stair-step into shape while reading technical journals, $950. Stubblefield, 298-2991.

REFRIGERATOR, GE Profile, 19 cu. ft., used for 3 yrs., black, icemaker, no-finger-print surface, $450. Rhodes, 828-3585.

TWO WHEELCHAIRS, battery-operated; chile roaster; Formica-top counters; best offer. Sanchez, 873-4281.

AIRLINE TRAVEL VOUCHER, Continental, expires April 2002, must sell, worth $200, asking $180 OBO. Amparan, 620-9548.

VERSALADDER, 16 ft., folds in 4-ft. sections to 4-1/2 ft., new condition, $100. Jeske, 899-2216.

COUCH, doubles as 2 recliners w/snack tray between them, matching loveseat, only 3 yrs. old, $450. Langwell, 293-2728.

SEARS 18-IN. SCROLL SAW, $85; metal FSBO sign, $10; 30-in. wooden bar stool, $30. Williams, 344-9276.

PLAYSTATION, w/2 controllers, $50; JVC X-Eye video game system, w/2 controllers & 10 games, $50. Garcia, 344-3406.

GARAGE SALE, Aug. 11 & 12, 6101 Rogers NE, lots of kids' stuff. Strauch, 836-6663.

KITTENS, about 8 weeks old, very loving and playful, need a good home. Armijo, 350-1358.

LOBO BASKETBALL: swell pair of chairback seats, halfway down in section 6, $840. McDonald, 821-3215.

REFRIGERATOR, white, Maytag, 23 cu. ft., excellent condition, $200. de la Fe, 271-6694.

BAQUACIL/SOFTSWIM pool chemicals, going back to chlorine, approx. $300 worth, $100 takes all. Mozley, 844-6288.

RABBIT, male, Dutch gray, healthy, cute, affectionate, large hutch & food included, $30 OBO. Ruby, 821-0982.

How to submit classified ads

DEADLINE: Friday noon before week of publication unless changed by holiday. Submit by one of these methods:

- **E-MAIL: Janet Carpenter (jacarpe@sandia. gov)**
- **FAX: 844-0645**
- **MAIL: MS 0165 (Dept. 12640)**
- **DELIVER: Bldg. 811 Lobby**
- **INTERNAL WEB: On Internal Web homepage, click on News Center, then on Lab News frame, and then on the very top of Lab News homepage "Submit a Classified Ad." If you have questions, call Janet at 844-7841.**

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. Submit the ad in writing. No phone-ins.
4. Type or print ad legibly; use accepted abbreviations.
5. **One ad per issue.**
6. We will not run the same ad more than twice.
7. No "for rent" ads except for employees on temporary assignment.
8. No commercial ads.
9. For active and retired Sandians and DOE employees.
10. Housing listed for sale is available without regard to race, creed, color, or national origin.
11. Work Wanted ads limited to student-aged children of employees.
12. **We reserve the right not to publish an ad.**

SOUTHWEST ROUNDTRIP TICKET, expires 7/27/02, good anywhere Southwest flies, $300, cash only. Giere, 792-4960.

SEGA DREAMCAST VIDEO GAME, 1 controller, w/2 games, like new, $75. Anderson, 897-2772.

KENMORE WASHER/DRYER, desk, furniture, tools, 2-family moving sale, Sat., Aug. 11, 8323 Holbrook NE. Lusader, 856-9506.

EUPHONIUM (baritone horn), Besson model 764, 3-valve, excellent playing condition, couple of dents, $800 OBO. Shirley, 883-3210.

CONVERTIBLE CARSEAT, infant/toddler, $20; changing table, w/drawers & bathinette, $40; high chair, $15; electric breast pump, $20. Lauben, 275-7466.

YAMAHA SAXOPHONE, like new, used 1 year, great for beginners, $750 OBO. Andersen, 298-9300.

RADIAL ARM SAW, w/stand, Craftsman blades, $100; Craftsman 17in. heavy-duty 5-hp rototiller, good condition,$200. Mead, 323-2253.

PURE BASSETT HOUNDS, brother & sister, 5 yrs. old, to good home; clarinet, $75; swingset, $20. Wanya, 294-2050.

LIVING ROOM FURNITURE: Italian leather sofa, loveseat, chair w/ottoman, black, excellent condition, $1,250 OBO. Lininger, 856-0422.

TWO CHAINSAWS, Micro XXV 2533ccm Poulan & Sears Craftman 2.5ccm. Bender, 281-1989.

TRANSPORTATION

'91 HONDA CIVIC LX, 4-dr. sedan, AC, AM/FM cassette, 93,500 miles, great condition, 33 mpg in town, $3,000. Jorgensen, 275-6045.

'96 GEO TRACKER, 4WD, low mileage, AC, AT, 4-dr., AM/FM cassette, white, alarm, excellent condition, $7,800. Dawson, 828-0873.

'88 FORD F-150 TRUCK, 5-spd., 150K miles, good condition, new clutch & master brake cylinder, $2,999 OBO. Anderson, 897-2772.

'86 ACURA INTEGRA, 2-dr., new tires, AM/FM, Sony CD, sunroof, runs well. DeAguero, 379-7730, ask for Angelica.

'55 OLDS, V8, AT, good condition, still runs, 2-tone green, $3,000 OBO; '55 Olds, hardtop, minus motor, body in perfect condition, blue/white, $500. Rowe, 286-5432.

'98 BMW 318ti, silver, 15K miles, loaded, mint condition, 5-spd., sport pkg., sunroom, trip computer, cruise, keyless, $18,200. Kholwadwala, 459-2258.

'96 SATURN SL1, tan, 4-dr., 5-spd., PW, cruise, AC, 75K miles, good condition, $5,300 OBO. Carpenter, 858-3415.

'92 SATURN SL2, blue, gray interior, AT, all power, ABS, new tires, great AC & heater, 1 owner, 121K miles, perfect 1st vehicle, $4,000. Valles, 830-3768, ask for Melissa.

'96 FORD EXPLORER, 2WD, 5-spd., excellent condition, 52K miles, white, see at 725 Solano NE, $9,200. Mares, 884-4843.

'95 FORD F250 PICKUP, Supercab, Powerstroke, 4x4, , $18,000. Smith, 890-5388, ask for Stacy.

'01 FORD EXPLORER SPORT, Trac, 2K miles, brand new. Otero, 480-2726.

'85 VOLKSWAGEN CONVERTIBLE, AC, 5-spd., 55K miles, AM/FM cassette, maintenance records, red w/white top, immaculate, $4,250. Crego, 292-0266.

'98 TOYOTA SIENNA CE, 6-cyl., AM/FM cassette, PS, PB, AT, AC, 41K miles. McDowell, 823-0897.

'94 TOYOTA TERCEL, less than 50K miles, AC, AM/FM cassette, excellent condition, 1 owner, $4,800. Francis, 797-4593.

'90 FORD ESCORT GT, 123K miles, good condition, $2,000 OBO. Vigil, 363-5106.

'89 CUTLASS CIERA, AT, FAC, cruise, 1 owner, $2,000. Martin, 505-471-5524.

'84 S10 BLAZER, 4WD, w/snowplow, AT, 6-cyl., 4 new tires, $1,500. Eberhart, 505-377-1650.

'00 CHEVY METRO LSI, 4-dr., AT, AC, 29K miles, $8,000 NADA book, will sacrifice at $5,600. Lenberg, 238-0362.

'90 RANGE ROVER, tan, leather, sunroof, 111K miles, good condition, below trade-in, $8,199. Eagan, 281-9589, leave message.

'96 JEEP GRAND CHEROKEE LAREDO, 4x4; bids accepted through 8/17/01; right to refuse bids; sold as is. SLFCU, 237-7384.

'92 PONTIAC GRAND AM, 138K miles, 4-dr., V6, body/interior very nice, overheats, $1,000 OBO. Wickstrom, 275-7795.

'95 MAZDA PROTEGE, AC, good condition, new tires & parts, $4,100 OBO. Zayas, 833-3458.

'78 VW CONVERTIBLE, good condition; Lobo basketball tickets, 2 chairbacks. Bass, 856-2407.

'98 CADILLAC SEDAN DEVILLE, power sunroof, CD/cassette, alarm, 28K miles, perfect condition, blue w/bone leather interior, manufacturer warranty, wholesale value of $18,800 OBO. Dwyer, 271-0741.

'95 GEO METRO, green/gray, V4, new tires, AT, AC, 50K miles, runs and looks perfect, $3,000 OBO. Potter, 345-3332.

'92 BUICK LESABRE, 4-dr., light blue, well cared for, new R-134 AC, 94K miles, $4,300. Benson, 299-3315.

'87 MAZDA 626, 133K miles, 1 owner, good condition, $1,400. Evans, 299-6888.

'00 TOYOTA CAMRY SOLARA SLE V6, loaded, leather, 6 CD changer, 16K miles, remainder of factory warranty, Michelins, perfect condition, light pewter/silver, $20,800 OBO. Vigil, 271-1328.

'99 PONTIAC SUNFIRE, 45K miles, 4-dr., AT, AC, great condition, must sell, $8,000 OBO. Atchison, 262-9598.

'84 MAZDA B2000 PICKUP, long bed, 5-spd., w/camper shell, 87K miles, excellent condition, $1,995. Gendreau, 268-3436.

'93 FORD RANGER XLT, standard, PB, PS, ABS, towing package, AC, AM/FM, sliding rear window, great condition, $4,500. Boyd, 821-7484.

'94 SATURN SL1, 5-spd., excellent condition, $3,750; '85 Toyota 1/2-ton pickup, very reliable, $1,750. Thorne, 342-1589.

RECREATIONAL

'84 HONDA NIGHTHAWK S, 20K miles, fair condition, Arai Helmet, heated vest, tank bag, $1,400. Groom, 250-7106.

BICYCLE, Nishiki "Cascade" MTN/Tour, Shimano components, 21-spd., 20-in. frame, computer, lights, pannier, bags, clean, $225. Roesch, 281-9751.

'99 DELUXE "RODEO CAPRI" CAMPER, shower, sink, refrigerator, table, TV antennae, microwave, new condition, $6,000. Bitsui, 897-1268.

MOUNTAIN BIKE, 18-spd., center-pull brakes. $50. Guttmann, 888-5114.

SAILBOAT, Robroy 23-ft. yawl, green hull, teak & bronze trim, 7.5-hp inboard, tandem trailer, excellent condition, $12,000. Errett, 856-1592.

KAYAK, older fiberglass model, w/new spray skirt, $125. Courtney, 296-3459.

'88 WINNEBAGO CHIEFTAN 22, Class A, 33K miles, 4KW generator, excellent condition, Chevy 454 chassis, $16,000 OBO. Corn, 881-7568.

'97 SPORTSMENS CAB-OVER CAMPER, 9.5-ft, 2-way refrigerator, AC, heater, 4-burner stove, oven, full bath/shower, AM/FM cassette, self-contained, excellent condition, $5,800 OBO. Rohl, 833-3697 or 221-7801.

JET SKI, '99 Kawasaki 1100 ZXI, includes trailer & cover, excellent condition, $5,500 OBO. McCarthy, 291-9727.

'83 MINI MOTORHOME, 18 ft., Lindy II, sleeps 4-5, 35K miles, garaged most of time, very good condition, $4,000, Rosales, 837-1644.

'81 GOLDWING GL1100, 31K miles. AM/FM cassette, new battery, front tire, & fork seals, $2,200. Salmi, 294-3022.

RECREATIONAL TRAILER, 12-ft., camp & haul, motorcycles or balloon, stove, refrigerator, sink, water heater, dual axle, E brakes, $4,000 OBO. Pasco, 890-1434.

'78 DODGE SPORTSMAN MOTORHOME, sleeps 6, new refrigerator, new AC compressor, trailer hitch, 69K miles, $5,000. Stromberg, 255-6131.

REAL ESTATE

2-BDR. MOBILE HOME, 1 bath, alarm system, carport, porch, well-maintained, $5,000 OBO. Luther, 294-2863.

2-BDR. MOBILE HOME, '85 KB Baywood, 14' x 52', w/all appliances, in 4-Hills Park, clean & affordable, $10,500. Haushalter, 362-4084.

2-BDR. MOBILE HOME, 2 baths, built-on addition, 1-1/2-car garage, carport, fenced, landscaped, fruit trees, nice. Santistevan, 864-6198.

1/2 ACRE, Mission Park Loop, Los Lunas, septic tank, electricity, phone hook-up, shared well, $27,000. Crosby, 260-1070.

BEAUTIFUL MOUNTAIN HOME, 25-min. drive, 5.7 acres, fully fenced, national forest adjacent, fantastic views, $154,000. Kleban, 281-9255.

3-BDR. HOME, quiet neighborhood. Romero, 873-2157.

3-BDR. HOME, 2 baths, Pergo floors, tile roof, 1,570 sq. ft, 6-yrs. old, many extras, will sell at cost — instant equity. Kear, 440-2764.

2-BDR. HOME, 1 bath, 1-car garage, large lot, covered porches, 2 sheds, dog run, open floor plan, cathedral ceilings. Clements, 896-8115.

DOUBLE-WIDE MOBILE HOME, beautiful condition, lots of storage, modern renovations, great retirement home in fashionable "Meadows Senior Plus" mobile home community. Lagasse, 856-0857.

3-BDR. MOBILE HOME, double-wide, 2 baths, excellent condition, at 4HMHP, many upgrades, great yard w/fruit trees, $19,500. Romero, 275-1737.

WANTED

PART-TIME NANNY, for adorable toddler in pleasant non-smoking Ridgecrest home, light housekeeping 5-10 hrs./week, references required. Mills, 256-4110.

LAWNMOWING, needed biweekly for the rest of summer, for a house & small duplex. Zelnio, 877-1465, ask for Diana.

AFFORDABLE HOUSE OR CONDO to rent, for 2 female students. Salas, 933-9514.

VOLUNTEERS: Peacecraft needs you to help staff Albuquerque store selling Third-World handicrafts. Singer, 255-5229 or jill@peacecraft.org.

VW VAN, stick, fuel injection, will trade '85 Honda Prelude; solar panel, 30W minimum. Horton, 883-7504.

CEMENT MIXER, homeowner 3-1/2 cu.-ft.-size, electric or gasoline, reasonable price for reasonable condition. Scully, 897-7094, leave message.

BOWFLEX exercise equipment. Sayers, 873-2815.

SWEDISH TUTOR, I desire experience in conversational Swedish. Jellison, 271-2158.

HOUSEMATE to share home, private furnished bedroom & bath, kitchen & laundry privileges, nonsmoker. Taylor, 822-9819.

WHEELCHAIR-ACCESSIBLE APARTMENT, w/walk-in shower, NE Heights preferred. Sorrell, 892-9434.

TWO LARGE DOGHOUSES for reasonable price. Tapia, 280-8888.

HOUSESITTER, Sept. 4-8, care for 4 dogs & cats, in Algodones. Putelli, 867-6653.

WORK WANTED

HOUSE/PET SITTING, college student will watch your house/pets while you are away, references available. McRee, 898-5037, ask for Andrea.

Timing is everything: J.D. Williams gets to greet president on return to White House

Sometimes it pays to be in the right place at the right time. It certainly did for J.D. Williams, Senior Manager 5350, and his wife Wilma recently.

J.D., on a temporary assignment to NNSA/DOE headquarters in Washington, and Wilma were taking a tour of the West Wing of the White House and the Executive Office Building Sunday evening, July 8, at the invitation of a couple they had met in their apartment building.

They had planned to be part of the welcoming party as President George W. Bush returned from his short stay at Kennebunkport, Maine, to celebrate his birthday with his father, brother, and other family members. But they were just in the right place after the president's helicopter landed on the south lawn. He was shaking hands with some of the crowd and allowed a few pictures. So now J.D. has a nice souvenir.

J.D. provides direct technical support to the Russian Materials Security Task Force in connection with the Materials Protection, Control, and Accounting (MPC&A) Program. He serves as technical advisor to the Director, Office of International Material Protection and Emergency Cooperation (NN-50), and assists by applying his expertise in nuclear safeguards to cooperative nuclear safeguards activities with Russia.

The MPC&A program is a cooperative link between DOE and the nuclear institutes and enterprises of the Russian Federation. J.D. notes that the program's goal — reducing the risk of direct use of nuclear materials and nuclear weapons proliferation by strengthening MPC&A systems — is vital to the national security interests of both countries. — *Ken Frazier*

RIGHT PLACE/RIGHT TIME — J.D. Williams and his wife, Wilma, were on the south lawn of the White House when President George W. Bush returned from a stay at Kennebunkport, Maine, and they had this photo taken.

'Your Thoughts, Please': California/New Mexico comparisons; new VP shadowing question posed

A new question to ponder and chime in on. Responses to read about Sandians' thoughts when comparing Sandia's New Mexico and California sites. Both are now available on the "Your Thoughts, Please" internal web site.

The site is accessible through the intranet's News Center page (http://www-irn.sandia.gov/newscenter/news-frames.html). The current question being posed reads:

"If you could have a Sandia VP shadow you for a day as you do your job what do you believe the VP would learn? Find most surprising?"

This question is a slight rephrasing of an open-ended comment by a person who completed the recent *Lab News/Daily News* Readership Survey. Your responses can be submitted through Aug. 24

The 18 Sandians who responded to the compare-Sandia/CA-with-Sandia/NM question offered a variety of opinions.

Excerpts from a few:

"The California and New Mexico sites share common mission and goals in support of the national interest. We share common heritage, policies, and business practices."

* * *

"From a business development point of view, I found it most effective when dealing with a customer from the military, or a large company/industry, to send someone from Sandia/New Mexico. Conversely, when dealing with smaller, less hierarchical companies/industries, a Sandia/California type seems to be more effective. While not totally the case, the two sites seem to resonate better with different customer sets."

* * *

"Sandians in New Mexico need to understand that because California is such a small site they don't always take as long to make decisions and accomplish change much faster than New Mexico. Californians are more creative and quicker to act to make changes than New Mexicans. Unless the change or action is illegal, New Mexico should allow California to be different and *value the difference.* California needs to understand that some of the policies and procedures put in place by New Mexico are mandatory and not negotiable. They need to understand that New Mexico is different and *they need to value the difference.*"

* * *

"Even though I have heard it stated many times, through the years, that Sandia is one laboratory I have to chuckle to myself as I think of the oxymoron 'Sandia National Laboratories is one lab.' If it is true that we are one, then make our name singular not plural."

* * *

"I don't think that one place is better or worse and I would be happy at each lab and each location and have made life-long friendships and work relationships at both sites."

Coronado Club

Aug. 12, 19 & 26 — Sunday brunch, 11 a.m.-1 p.m. Entertainment, 1-4 p.m.

Aug. 14, 21 & 28 — Adult bingo. 6:15 p.m., early bird begins at 6 p.m.

Aug. 17 — Coronado Club's Dinner Theater presents "A Murder Mystery," 6:30 p.m.

Aug. 24 — Comedy show and dance. Food and drink specials. Cost is $10 per person. 7 p.m.

Aug. 31 — Hispanic Dance Night with DJ and karaoke, 5 p.m.

C-Club Swimming Pool — **Lap swim**: Mon.-Fri., 6-7 a.m. & 10 am-12:30 p.m.; Mon.-Tues. nights, 6-7 p.m.; **Recreation Swim:** Mon.-Tues., 12:30-6 p.m.; Wed., 12:30-5 p.m.; Thurs.-Fri., 12:30-9 p.m.; Sat.-Sun., 11 a.m.-6 p.m.

Feedback

Q: Sandia Daily News *has been discussing greetings for the voicemail system. The telephone is well recognized as not being a secure device. Does SDN really believe it to be a good idea to let anyone who might call know that someone will be away from home for a protracted period? This seems not such a good idea to me.*

A: Thank you for your question. Most certainly we are concerned for your personal safety. For that reason, SVIS [Sandia Voice Information System] has never suggested greetings such as "I'm out on travel . . ." or "I'm on vacation . . ." However, a greeting such as "I will be out of the office until . . ." or "I will be unable to answer your call until . . ." should be quite appropriate. You could be at home taking some days off. The caller does deserve to know that you are not taking calls at work (for whatever reason) and who to contact in your absence. This approach should not cause any personal security concerns since it doesn't indicate where you are, only that you're not answering calls. — *Gary Shepherd (9325)*

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Q: *I have always gotten excellent service from very helpful people in the Transportation/Shipping Department in the past, but now all of a sudden it's taking three or more days to arrange for pickups, etc. One must leave a voicemail; then, four hours later while you're away from your desk, they return the call. Then, you're back into the electronic system again. Annoying. What's going on?*

A: Thank you for sharing your issue regarding poor phone service standards. Unfortunately, you are correct. As a result of employee turnover, coupled with phone problems, service has not been up to the usual standards. In an attempt to update the telephone system, a glitch caused many calls to go to many different locations, everywhere except dispatch. Some calls went directly to voicemail.

We must give kudos to the Sandia Voice Information System staff, as they worked long and hard to get the system up and running. Things appear to be working properly now and we are confident they will continue in this manner.

— *Dave Palmer (10200)*