

Sandia researchers discard organizational lines to prototype innovative MESA work arrangement

MESA TOP a sociological experiment or a start-up? Skunk Works reborn in Research Park?

By Neal Singer



FESTIVAL OF THE CRANES — Construction cranes, including a 190-foot giant, tower over the MESA construction site on the east side of Tech Area 1. The cranes, brought in by general contractor Hensel-Phelps for work on the MESA MicroLab facility, are the most visible sign yet that the MESA project is moving full speed ahead. The multi-building MESA complex, scheduled to be completed in 2007 with a price tag of more than \$450 million, is the largest building project in Sandia's history. (Photo by Bill Murphy)

A radically innovative work arrangement for Sandians is blooming in the Emcore facility in Research Park, just outside the Eubank gate. There, in a facility known as MESA TOP, 73 researchers from the domains of four Sandia VPs are cooperating across organizational lines to build a single weapons part — a silicon reentry switch for the W76 life extension project — more rapidly, more imaginatively, and more economically than conventional line-org interactions would have ever made possible.

Or so they hope.

“Explaining how we’re working to improve safety and security is easy,” says Don Cook, MESA program director (1900), “but explaining why we think MESA TOP will be more efficient, isn’t easy.” It turns out, he says, that “Co-locating work groups [from different organizations] is a very important thing. The present arrangement isn’t just what we could fit into the building space. We considered what would be the most productive size of an integrated work group.”

Whatever the immediate result, these pioneers from divisions 1000, 2000, 9000, 14,000 — some initially hesitant, some enthusiastic — will help determine a larger company objective: the working arrangements to be finalized next year

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ReStore open

ReStore, a new building materials/hardware thrift store run by the Albuquerque Habitat for Humanity, welcomes receiving your appliances. Read about it in a story by Iris Aboytes on page 8.

Sandia workers evacuated from Carlsbad office for seven days following gas well blowout, fire

Evacuation of 65 employees, contractors forces Sandians to find other places to work

By Chris Burroughs

Sixty-five Sandia employees and contractors were evacuated from the Carlsbad office for seven working days following the blowout of a natural gas well being drilled near the Labs building.

They joined up to 1,500 Carlsbad residents who were also forced to leave their homes as a precaution to avoid danger caused by noxious fumes being emitted from the well and the eventual flaring designed to consume those gases.

The evacuation of the Carlsbad office caused the Sandians to find other places to work — home, DOE offices, and contractors' facilities — until they were allowed back.

The incident started about 9:30 a.m. Thursday, March 11, when employees heard what sounded like a freight train coming through their parking lot.

“Employees looked outside the buildings to see what turned out to be the well blowout,” says Paul Shoemaker, Level II Manager of

Carlsbad Programs Group. “As a precaution, we got everyone out of the building, telling them to report back to work at 1 p.m.”

But the gases coming from the well site were dangerous enough that, not only were the Sandia building and a nearby fire station evacuated, but all other businesses and hundreds of homes in a one-mile radius were evacuated as well.

On Friday, March 12, the drilling rig operator, Chi Operating Inc., brought in blowout-control experts from out of state to cap the well. Part of the capping process involved burning off the dangerous gases, which started on Saturday.

While the red flare coming from the well as the gases burned off was a good sign that one danger was coming under control, it was bad for Sandia because it was close — way too close — to the Labs' facilities. From the wellhead to Sandia property parking lot is approximately 750 feet. At its longest the flare was 150 feet, and the tip of the flame was about 200 feet from the Sandia parking lot. And one of Sandia's buildings is 20 feet from the edge of the parking lot.



RED FLARE — Gases are burned off at the gas well that blew. The tip of the flame was about 200 feet from the Sandia/Carlsbad office parking lot.

(Photo provided by Washington True Solutions)

Meetings to decide how to deal with the situation were set up March 14, 15, and 18 at the Sandia Emergency Operations Center (EOC) with representatives from the NNSA Sandia Site Office and a variety of Labs organizations, including ES&H, purchasing, legal, gas well drilling technology experts from Center 6100 and 6200, and Division 6000. Suzanne Weissman (6006) became the primary contact at Sandia/Albuquerque, talking several times a day with Paul and keeping Division 6000 management informed.

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➤ **2** Sandia, three University of Texas institutions announce partnerships

3 Role of biology in national labs highlighted in California lecture

What's what

There's nothing quite like the political season for hype. A presidential campaign TV ad reminded me of that a few days ago. Grumbling inwardly about the prospect of enduring several months of such florid, vacuous fare, I started thinking about advertising versus journalism. And that led to thinking about corporate journalism.

Corporate journalism is different from "real" journalism. For example, corporate publications are usually filled with "grip and grinner" photos, snapshot-size frames with – oh, maybe a dozen – notables, all smiling out at the reader, wearing hardhats or crowded around someone with giant scissors or throwing shovelfuls of dirt at the photographer. (The *Lab News*, of course, struggles to avoid those.)

And awards are different, too. Outside the corporate world, writers win Pulitzers, broadcasters win Peabodys or Emmys, actors get Oscars or Tonys or Golden Globes, scientists are awarded Nobel Prizes, and so forth.

But in corporate journalism, there are no ordinary awards. They're always "prestigious" or "distinguished" or "honored" – the prestigious Elmer D. Fudd Pwize for Exceptional Pwogwam Wecycling, or the distinguished Wiley Coyote Award for Lifetime Achievement in Survival, or some such.

With that in mind, the *Lab News* is accepting nominations for the extraordinary What's what Gold Medal of Excellence for the Overuse of Superlatives in Journalism. E-mail entries to the address at the bottom of the column. Wondrous prizes could be yours.

* * *

And speaking of superlatives, is there any entertainer of any note who is not a superstar? Well according to at least one Albuquerque news anchor, Britney Spears is not – she's an "international megastar."

You have to wonder what order of stardom's next for her. Solar system splendifera, maybe? . . . or, galactic gigagal?

* * *

While we're still thinking about hype and superlatives, the web pub space.com reported last week that "The finding by the Opportunity Mars rover of a body of gently flowing saltwater translates to shrimp for all." Did I miss something? Did one of the rovers get its tires wet?

Well, no matter. The Long John Silver's restaurant chain ballyhooed in January that if NASA found conclusive evidence of a Martian ocean, the restaurants would serve up free giant shrimp (isn't that an oxymoron?). "Now that one of the rovers has coughed up the scientific goods, the company is making good on its promise: Giving America free Giant Shrimp on Monday, May 10," space.com reported.

"Between the hours of 2 p.m. and 5 p.m. on May 10, customers can stop by any participating Long John Silver's restaurant and enjoy a free Giant Shrimp (one piece per customer).

"In a letter to NASA chief Sean O'Keefe, Long John Silver's President Steve Davis noted: 'This is one small step for man, and one giant leap for Giant Shrimp.' He expressed interest in Long John Silver's becoming the first seafood restaurant on Mars." Aaarrrrr. . .

* * *

What Sandia VP has more hats than Captain Kangaroo? And wears 'em – one at a time, of course.

– Howard Kercheval (844-7842, MS 0165, hckerch@sandia.gov)

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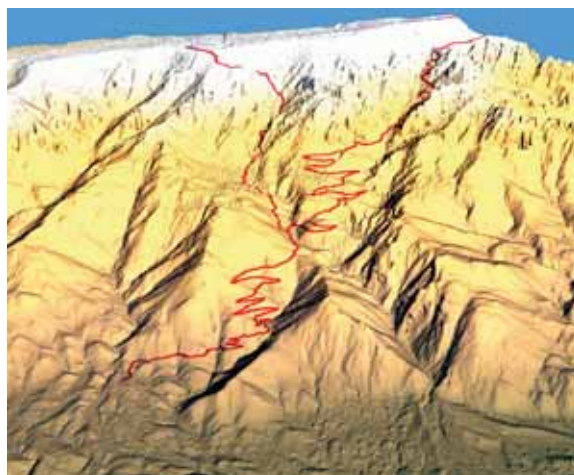
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For the record Rapid terrain visualization



The caption accompanying the 3-D image of the Sandia mountains on page 11 of the 2004 Labs Accomplishments issue incorrectly identified the image as being produced using scannerless range imaging technology. The image was produced using rapid terrain visualization precision mapping synthetic aperture radar. The pdf version of the document on the Web (www.sandia.gov/LabNews) features the correct information.

Sympathy

To Kathryn Lindell (14020) on the death of her husband, Chad Lindell, in Albuquerque, Feb. 15.

Sandia, three Texas institutions announce research partnership

Sandia and three University of Texas System institutions in the Dallas-Fort Worth area on March 19 officially formed a partnership aimed at undertaking collaborative research and other joint activities.

Officials gathered at UT Southwestern Medical Center to sign a memorandum of understanding (MOU) outlining potential areas of joint research, education, technical training, and exchanges among faculty, staff, and students from Sandia, UT Arlington, UT Dallas, and UT Southwestern Medical Center at Dallas.

Sandia President Paul Robinson helped lead the signing of the MOU.

"This opportunity strengthens Sandia National Laboratories' already strong relationship with the University of Texas System," Paul said. "We are delighted to support UT System investments in higher education, research, and technology at their North Texas institutions. The partnership being created under this memorandum of understanding will accelerate creating a trained, high-tech workforce and new technology that enhance our nation's economic prosperity and security."

Mark Yudof, chancellor of the UT System, said the collaborations envisioned by this new partnership will help accelerate the research role of all three UT System institutions in the Metro-



PARTICIPANTS APPLAUD after signing the memorandum of understanding March 19 on the UT Southwestern Medical Center campus. Seated, from left, are Sandia President C. Paul Robinson, US Sen. Kay Bailey Hutchison (R-Texas), and UT System Chancellor Mark Yudof. Standing, from left, UT Southwestern Medical Center at Dallas President Kern Wildenthal, UT Arlington President James Spaniolo, and UT Dallas President Franklyn Jenifer.

plex and will create new educational and employment opportunities for students.

"We look forward to a fruitful relationship between these campuses and Sandia, and we are deeply grateful to Sen. Hutchison and others who have helped create this partnership."

US Sen. Kay Bailey Hutchison, R-Texas, helped university and laboratory officials celebrate the agreement.

"I'm proud to have worked closely with Sandia and the UT System to bring this partnership to fruition," Hutchison said. "This type of collaboration between our national labs and higher education will ensure future generations of Americans are poised to further our position on the cutting edge of innovation."

Collaborative research areas identified in the MOU include nanoscale science, engineering, and technology; homeland security; materials research; chemical, thermal, radiation, and biological sensors; chemical and biological weapons threat reduction; computational science and engineering; energy generation, storage, and conversion; microsystems and engineering applications; electrical engineering; chemistry; cell and molecular biology; bioinformatics; and medical devices and bioinstrumentation.

Sandia has had a similar MOU with UT Austin for about two years and had worked with other UT System institutions in various projects. In fiscal year 2003, Sandia had research contracts totaling \$887,000 with UT Austin, UT Arlington, UT Dallas, and UT El Paso. Sandia provides tuition reimbursement for employees who attend UT Austin undergraduate and graduate programs, and it provides graduate student research fellowships and contract research opportunities at UT Austin and UT El Paso.

—Michael Padilla

UC Davis, Sandia create two Excellence in Engineering fellowships to begin in fall at California site

By Nancy Garcia

Two new fellowships for the coming fall were created in March with a few strokes of a pen during a signing ceremony at the California site between California Laboratory VP Mim John (8000) and Enrique Lavernia, dean of the College of Engineering at the University of California at Davis.

UC Davis is matching the \$50,000 in Laboratory Directed Research and Development money that created the opportunity, waiving overhead, and providing tuition so two PhD students will be able to participate.

The Excellence in Engineering fellowships will fund graduate students in the computer security and embedded reasoning research areas. This brings to 42 the number of fellowships and research contracts at 29 universities. The fellow-

Sandia California News

ships are part of a strategic outreach plan with key universities, established through the Campus Executive program in 1997 to conduct world-class science, hire world-class scientists and engineers, and develop strategic collaborations in focused research areas.

Sandia executives, acting in the role of ambassadors, are paired with top university officials (usually deans of engineering) at schools that have synergistic research interests and capa-

bilities with Sandia.

Mim called the agreement an important partnership for the future. In establishing the fellowship, Sandia hopes to strengthen its partnership with UC Davis to encourage a new generation of scientists and engineers who can contribute to areas of national interest and critical need.

She is transitioning to become Sandia's UC Davis campus executive, replacing Senior VP Tom Hunter (9000).

Advanced Software R&D Dept. 8964 Manager Mike Hardwick is the point of contact for UC Davis interactions, which are facilitated by Norma Hibbs (8524).

Combustion & Physical Sciences Center 8300 Director Bill McLean is leading the effort to increase collaboration with UC Berkeley (where Mim is also the campus executive), UC Davis, and Stanford University (where Executive VP Joan Woodard is the campus executive).

On the same day as the signing ceremony,



FELLOWS TO FOLLOW — Enrique Lavernia, dean of the College of Engineering at the University of California at Davis, signs an agreement with California Laboratory VP Mim John establishing two Excellence in Engineering fellowships for PhD students funded by Laboratory Directed Research and Development money.

(Photo by Bud Pelletier)

Computer Sciences 8960 Deputy Director Jim Handrock hosted another UC Davis professor, John Rundle, director of the Computational Sciences and Engineering Center, who presented a seminar describing the wide variety of research being performed in the center. About 70 Sandians attended.

Role of biology in national labs research highlighted

Len Napolitano lecture cites systems-level approach for basic understanding, practical applications

By Nancy Garcia

After describing diabolical disease threats suitable for a segment from the Twilight Zone, Deputy Director Len Napolitano (8140) told his audience at an evening lecture of the Valley Study Group to sleep well because "these threats aren't here yet — but your 10-year-old will be thinking about them."

He displayed a toy he had ordered designed for children aged 10 and up who could use it to fingerprint DNA by snipping it with enzymes and separating bands on a slab of gel.

"Twenty-five years ago, when I was in college this was graduate-level work," Len said. "Now this is Easy Bake Oven stuff. Biology and biotechnology will be as influential in this century as physics and electronics were in the last. What are the national labs doing about it?"

They are modeling the system of functions within cells, understanding the basic science, and developing appropriate technology to speed and facilitate analysis and detection.

One impetus of the work is that biological agents are a serious threat to homeland security, he said, but there will be ancillary benefits in environmental, health, and consumer products.

The technology may be advancing, but biological agents are not new. They have been used in societal conflicts even before modern genetics was established as a field. For instance, in the Middle Ages, bacteria were used in bio warfare when a plague-ridden animal was hurled over a wall during sieges. During the French and Indian War, the British provided smallpox-contaminated blankets to Native Americans, who



LEN NAPOLITANO

had no immunity.

Modern biology is barely 100 years old, tracing its origin to obscure research published by the monk Gregor Mendel, who established patterns of heredity in cross-breeding experiments with peas. His 1865 paper went unnoticed for some 35 years.

Then in the 1920s scientists established the principle that each gene directs production of a single protein, such as an enzyme that carries out catalytic functions inside a cell.

In 1956, Francis Crick and James Watson solved the DNA helix structure, which encodes information, like an alphabet, that directs creation of proteins to carry out functions of a cell.

The field advanced again in the 1980s with the invention of the polymerase chain reaction, a technique to make many copies of a specific strand of DNA. With that advance, sequences could be easily analyzed. That in turn spurred completion in 2000 of the sequencing of the entire human genome, the set of genes for a person.

The next year, anthrax-laced letters that followed the 9/11 terrorist attacks alerted the nation to the seriousness of biological threats. They range from traditional protein toxins or infectious agents, viruses such as smallpox and

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bacteria (including anthrax), to fungi like Valley Fever. More novel engineered organisms or genetic maladies could be also considered, such as a Frankenstein-like germ stitched together to carry both ebola and smallpox.

Defenses to such threats would include prevention, interdiction, crisis management, protection (such as vaccination), consequence management (such as medicine or cleanup), and attribution.

A range of projects at Sandia are developing the science and technology that can contribute to these countermeasures. For instance, the Weapons of Mass Destruction-Decision Analysis Center models attacks for training public health officials and emergency response directors. Basic science projects focus on understanding the role of proteins that regulate what enters cells or activation of the immune system. And the MicroChemLab™ has been developed and fielded to place the capabilities of a full chemical lab into something the size of a small toaster, Len said.

What the national labs bring to biology overall is helping provide a broad perspective as biology undergoes a reformation from a science of collecting varieties of organisms, he said, to a more complete systems-level understanding.

Carlsbad

(Continued from page 1)

On Monday, March 15, three people from Sandia/Albuquerque, including Jared Mowrer (3120), Craig Nimmo (3129), and Johnny Montaño (3137), went to check out the site in Carlsbad and to supervise a temporary reentry into Sandia's facilities. Johnny was the incident commander and Craig and Jared measured chemicals, gases, and noise.



BLOW OUT — The gas well located behind the Sandia/Carlsbad facility blew out about 9:30 a.m., March 11. This is what Sandians saw outside their back door when the blowout occurred.

"Apparently the residual gas and chemical levels weren't bad, but the noise was," Suzanne says. "It was described as being similar to a jet engine with afterburner ignited."

On Tuesday, 12 people went into the Sandia buildings, turned on the servers to facilitate remote access, and retrieved other computers and critical files so that employees could work productively in their makeshift spaces.

Also on Tuesday, Les Shephard — one day after he officially took over as VP of Center 6000 — together with Dennis Berry, Director of Nuclear & Risk Technologies Center 6800, and Steve Kundsén, a gas well drilling technology expert, went to the Carlsbad site to support the Sandia family there.

"Given the circumstances, everything was going well," Les says. "The Carlsbad team was very resourceful and dealt with the situation in an effective manner. By Monday they understood the nature of what happened and had an action plan to keep productivity as high as possible."

Suzanne says the evacuation showed how well Sandians work together. Besides gas well drilling technology experts, Dave Palmer (10200), Director of Purchasing, and Anthony H. Sanchez, Procured Services Dept. 10256,



ON MARCH 12 the drilling rig operator, Chi Operating Inc., brought in blowout-control experts to cap the well. Part of the capping process involved burning off the dangerous gases, which started the next day.

jumped in to gain concurrence from NNSA's Sandia Site Office to apply in Carlsbad a policy to allow Sandia contract associates there to charge up to 44 hours for time not worked during the emergency. (This was put in place at the Albuquerque facility after 9/11 due to base closures, but it had never been extended to Carlsbad.) In addition, two other drilling technology experts participated in the EOC meet-

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MESA TOP

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in Sandia's newest building start-up, the Weapons Integration Facility (WIF). The WIF will complete Sandia's massive MESA project, the largest ever undertaken by the Labs, in 2007.

How close is close enough?

The project's leaders, under Nuclear Weapons Senior VP Tom Hunter (9000) and Don, had always envisioned a close working relationship among engineering/science analysts and experimentalists, micro engineers, and weapons designers. But determination of the most effective arrangements had yet to be achieved. Put simply, how close is close enough? How threatening is total integration among members of different orgs, or how stimulating?

Says budget analyst Edna Nolan (10505), "The culture in one division can differ quite a bit from another. They may not even have a history of working together well."

Success for the project required a kind of group personality adjustment.

"In the beginning, the discussions [between leaders] were civil — not hostile, but not necessarily cooperative," she says. "But from there, we evolved to a state where they were willing to say, 'Our org is certainly willing to integrate equipment,' because each had equipment that could help the other."

Negotiations, she said, were in progress from January to August. "People went from, 'We'll go because our directors said we'll go,' to, 'This can be a really great thing.' They've been able to maintain that attitude and even improve it since they've been working together."

Hallway interactions

According to MESA deputy program director David Plummer (2330), hallway interactions now allow researchers "to put together disparate ideas from people with wildly different backgrounds."

Says Fred Sexton (1762), who has wholeheartedly joined the new enterprise, "There's so much going on in the hallways, it's like stream-of-consciousness interactions — much more so than in once-a-week meetings."

Says Manager Steve Kempka (9100), who's moved into MESA TOP and was caught by *Lab News* in his old office in Bldg. 880 only because, he said, his car was in the shop, "I'm very excited to be part of MESA TOP. My org does analysis and experiments, and typically we provide these services to anyone who needs them. But at MESA TOP, we're right among our clients, we're much better engaged. The few people we have there are much more in tune with the project because they're sitting with Gerry Sleaf's people. MEMS people and materials people are fully integrated in the project. We don't have to make phone calls or take quarter-mile walks to have a discussion. It used to be, it might take a week to get a meeting with someone I now see a few times a day. Researchers routinely meet at the lunchroom and talk. And they don't have to do all the work. They can be conduits back to their groups."

Dynamic environment

"It was intended from the get-go to be a very dynamic environment," says Dan Fleming, who helped design and develop the space for the synergistic layout desired by nine managers.

On the other hand, the *Lab News* noticed that some managers had nametags on desks or doors but had moved zero of their personal belongings into the new project. Apparently, unlike Fred and Steve, who had moved in their family pictures, they were still hanging out at their line org haunts. Fred and David joked that the problem might be that the vaunted company exercise room still sports only a ping-pong table, and that, merely four tables put together with a one-foot-tall metal divider serving as a net.

More seriously, agrees Don, "There are shortcomings to working at MESA TOP. People are out of sight, and they fear out of mind, from their own center." Researchers worried it might hurt in merit review. "They also don't like the idea they might have to go inside and outside KAFB more often. And parking at Sandia can be difficult."

People who volunteer, he says, "therefore tend to be technology leaders."

Most important, Don says, it's fine for people to move in and out as a project phase is completed. "Long-distance collaborations work after people have formed trusting human bonds with other humans. People remember when they've been part of a closely knit team because they've

fought with each other or been part of a focused study group. Such bonds are difficult to create through e-mail alone," he says.

Working across org lines

One advantage of working across org lines, says David, is that probe stations and cleanrooms get shared instead of underutilized. "It's an efficiency of co-located space," he says. "Casual users of high-end equipment have everyday access."

"That does happen within Centers," says Fred, "but rarely across Centers."

Participants are not told when to use particular machines, but to work it out between themselves in a form of self-government that, says David, is essential to effectiveness.

Says MEMS researcher Danelle Tanner (1762): "I was dragging my heels moving out here but I really like it now. All the people I need to interact with are here." She felt, she says, "a great loss leaving [org] 1700 and [Bldg.] 858, but the lab facility is sweet."

David, who describes the MESA TOP experiment as a cross between a sociological experiment and a well-financed start-up, says that a reason for line org integration is precisely because microsystems allow the enclosure of more functionality in a device. "Sandia is organized by function," he says, "and the orgs originally executed those functions in weapons. But microsystems technology smears the boundaries. A and B look like C. That drives us to take experts from those two groups and put them together."

Says Don, "It's too easy for an enemy to defeat 1970s technologies, and that's what's on the shelf. Down the road, the technology coming out of MESA will be used in weapons, in our own security systems [at our various locations], and to improve security around the NNSA complex."

In his more enthusiastic moments, David compares the unleashed creativity possible from such co-located, interdisciplinary work groups with those from Lockheed Martin's Skunk Works and even the Manhattan Project. Still, he says, "Line organizations will always exist to maintain our capabilities. MESA may take part of this and focus them on problems to get solved, and then return them to their groups."

A second WIF prototype project is expected to involve gallium arsenide, and may be situated at a facility in the same research park.

Rochelle Lari talks about differences in culture and Iranian post-revolution environment

Rochelle Lari, program leader for Sandia's Diversity Leadership Program, wore the traditional dress of Iran, which includes a manto (coat), scarf, and chador (veil) at her Women's History Month talk last week at Los Alamos National Laboratory. (She repeated the talk two days later at the VA Hospital in Albuquerque.) The chador can be worn various ways such as almost covering or low on the face to hide a woman's hair, said Lari. This report appeared in LANL's electronic Daily News-bulletin, and we publish it here by permission of LANL's Public Affairs office.

"We learn through storytelling and my story is about my journey, who I am and who my family is," said Rochelle Lari, program leader for Sandia National Laboratories' Diversity Leadership Program. Lari spoke last week in the Materials Science Laboratory Auditorium for Women's History Month.

"An American Woman in Iran," depicts Lari's personal journey to meet her Iranian immigrant's husband's family.

Lari said she met her husband Mohammad in 1976, while both were attending the University of New Mexico. They dated for four years before marrying in a civil ceremony, then by the church and eventually by Islamic tradition. The Laris have been married for 23 years.

To avoid being drafted into the Iranian military, Lari's husband could not return to Iran until he was 40 years old. His first journey home was made alone, but the following year, 1997, the Laris and their two sons traveled to Iran, she said.

Lari's husband has a large family of four brothers and five sisters and many other extended family members, which is similar to Hispanic cul-



ROCHELLE holds a piece of traditional Iranian art. During his Women's History Month talk at LANL, she also displayed other art objects, such as leather paintings, jewelry boxes, small tapestries and a tea set that were purchased in Iran. Lari also is wearing her dowry of 18- and 22-karat gold jewelry that she says she doesn't normally wear to work.

(Photos by LeRoy N. Sanchez, LANL Public Affairs)

ture, she said. To prepare for the journey in 1997, Lari learned about her husband's family's customs. One Iranian custom, she told the audience, is to provide gifts to all family members of equal value at an initial meeting. To be prepared, Lari compiled a spreadsheet of names and gift ideas such as American clothes and sizes, cosmetics, hair dye, and dishes, she said.

Two weeks of gift packing and eight suitcases later, the family flew to Iran. "Our initial meeting was an instant connection of love; very emotional with kisses on both sides of the cheeks, lots of crying and hugging. I was the princess goddess who could do no wrong," Lari said.

According to Lari, upon extending her hand to her sister-in-law's husband he would push her hand away. Lari's husband later explained to her that she was not supposed to touch him, because he was [Mohammed Lari's] brother-in-law and technically not Lari's relative. "I pulled out the spreadsheet and tried to figure out who do I touch and who do I not touch. I learned to let them take the initiative," she said.

Lari said in Iran, family members eat and sleep a lot and food is served on the floor on a long tablecloth. "The food is prepared fresh and there are no prepackaged foods. We drink bottled Coke and everyone sits together," she said. After dinner family members come to visit and everyone sits on the floor on Persian rugs — the same place where we sleep on mats, she added.

Lari described the south of Iran as dry and hot with average temperatures of 117 degrees and the north as beautiful because of the greenery, mountains, and the Caspian Sea. She also said Iran is the only Islamic Republic in the Middle East.

According to Lari, the Islamic Republic requires women to wear a manto (coat), scarf, and chador (veil) in public. Lari found it difficult to accept wearing the chador at times, because of its cumbersome nature, especially in the heat, she said. She educated herself by asking family members what the chador represents to each of them. A respected aunt said, "The chador is my space, no one can come into my space unless I let them." Lari's sister-in-law said, "I wear the chador to demonstrate the love for God."

Lari said that today and in the future she and her family will keep their traditions intact including speaking the English, Spanish, and Farsi languages along with their nuclear and extended family values.

"What I've learned is that there are good and bad people everywhere, to challenge assumptions and to strive for responsible journalism, to have compassion and empathy, to have a universal common ground, and the importance of good deeds," Lari said.

— Kathryn Ostic

Carlsbad

(Continued from preceding page)

ings. They were Norm Warpinski (6116) and John Finger, who recently retired from Sandia. Attorney Ellen Gallegos (11100) provided legal advice.

Paul says the Carlsbad Sandia site pulled through this tough situation with flying colors.

"This came at a very challenging time," Paul says. "We had two major deliverables due to the Carlsbad Field Office of DOE with urgent deadlines and we were able to meet them despite what happened. I am very proud of how we pulled together. I am also very grateful for the support we received from many in Carlsbad who volunteered to help us out."

The Sandia/Carlsbad site provides scientific and technical advice to the Waste Isolation Pilot Project (WIPP), which is currently applying for recertification by the EPA. Sandia staff in Carlsbad have just completed the process of finalizing recertification documents that were presented to the EPA on Friday, March 26, in Washington, D.C.

Suzanne says the Sandia building may be evacuated again for a few hours when some final work is done on the well.

"This time we will know when it's going to happen. We'll plan ahead and take proper precautions," she says.

Editor's note: An upcoming Lab News will feature stories on Sandia/Carlsbad operations.

'Mr. Sandia'
Bob Henderson
 honored in metal

NUCLEAR PIONEER — A large bas-relief plaque honoring former long-time Sandia VP Bob Henderson has been created and installed in the Bldg. 800 lobby. Above is an image of the actual 20x30-inch brushed aluminum plaque; at left is the artwork used to make it. Bob worked on the Manhattan Project, witnessed the first atomic bomb explosion, headed Sandia before it was Sandia, and was essentially the Labs' senior engineer from 1947 to 1974. He was often referred to as "Mr. Sandia." He died in 2002 at the age of 87 (*Lab News*, June 28, 2002). The plaque's text further describes his vision and contributions. Labs Executive VP Joan Woodard, VP 5000 Al Romig, and retired Senior VP Roger Hagengruber helped champion the idea to honor Bob this way. Others involved in creating the plaque include Rebecca Ullrich and Myra O'Conna of Corporate Archives, David Humble of Facilities, and Mike Clough of Media Relations and Communications.

Mileposts

New Mexico photos by Michelle Fleming
California photos by Bud Pellitier

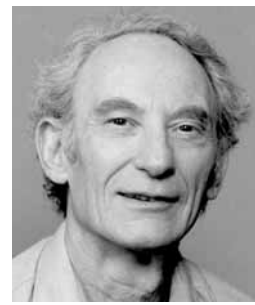


Dick DiPrima
40 14402



Ed Cull
35 8510

Recent Retiree



Stuart Kupferman
24 2542



Tim Evans
30 11600



Pam Barr
25 8114



Bert Brown
25 8146



Gloria Chavez
25 6927



William Davidson
25 9328



Bill Even
25 8760



Don Lind
25 8242



Jose Lopez
25 2113



Charles Brusseau
20 4148



Donald Larrichio
20 10257



John Olson
20 5742



Kenneth Perano
20 8964

Cyber Enterprise Management gets new home



BLDG. 727 DEDICATION — Todd Bruner explains the monitoring process of the recently completed Cyber Enterprise Management (CEM) Integrated Network Security and Reliability Center (INSRC) in Bldg. 727 at a dedication of the building March 24. INSRC was designed and built to integrate multiple functional areas by bringing together Sandia's computer and network specialists. This includes the Corporate Computing Help Desk, network and security specialists, various computer technicians/experts, and Computer Security. The heart of the INSRC is the Systems Operations Center, which is equipped with large viewscreens and consoles and will be staffed around the clock starting this summer. Computer specialists will be able to monitor all of Sandia's networks as well as focus on discrete areas to immediately identify, diagnose, respond, and communicate computing issues. The team will also be able to identify external threats such as worms, viruses, and hackers that may attack the system and quickly isolate, patch, and restore servers and networks. (Photo by Bill Doty)

Sandia News Briefs

Thomas Reed 'At the Abyss' talk April 1 at Sandia, April 3 at Atomic Museum

For those who can't get to the Thomas Reed Sandia colloquium "At the Abyss: An Insider's History of the Cold War" at 3 p.m. Thursday (April 1) in the Steve Schiff Auditorium (see March 19 *Lab News*), Reed is giving the same talk Saturday (April 3) at the National Atomic Museum at 10:30 a.m. For reservations call 245-2137 ext 112. We plan to cover Reed's Sandia talk in our next issue.

Sandia receives Quality New Mexico Compañero Recognition Award

Jim Rice (9700) accepted the Compañero Recognition Award on behalf of Sandia at the 2004 Quality New Mexico Conference and Awards Ceremony at the Hyatt Regency March 5. Sandia's award was one of three given this year. The Labs was nominated by Western New Mexico University (2003 Zia Award winner) on the basis of five years of training and mentoring by Gail Willette (9724) from 1994-98. WNMU officials said they would not have started or continued the climb to performance excellence without Sandia's and Gail's mentoring. Quality New Mexico's Compañero recognition promotes partnerships between "experienced quality organizations" that have previously been recognized by the NMQA and those beginning their journey. Sandia received Roadrunner recognition in 1995 and 1998. In addition, two Sandia organizations later received NMQA recognition — Sandia Corporate Quality (2001-Piñon) and Sandia Science and Technology Park (2002-Roadrunner). The Sandia Laboratory Federal Credit Union was a Piñon winner in 2002.

Trinity Site tour is April 3

The National Atomic Museum will conduct its semi-annual Trinity Site tour on Saturday, April 3. Tour buses will leave the museum at 6 a.m. and return around 4 p.m. Participants will be treated to lunch at New Mexico Tech. Cost of the tour is \$50 per person. Reservations can be made by calling 242-6083.

Habitat for Humanity opens ReStore, and everyone wins

Have you recently remodeled your kitchen and wondered what to do with the old cabinets and appliances? You know, the ones that are still in good condition and you wished you knew someone who could use them? ReStore, a new building materials/hardware thrift store, run by the Albuquerque Habitat for Humanity, welcomes receiving them. They will even pick them up.

The store opened last May at 204 San Mateo Blvd. SE, Suite E, an old roller skating rink building. It has 16,000 square feet of building materials, plumbing, hardware, electrical wire, nails, etc. The inventory is not unlike what you would find at a local building supply store.

All the inventory (new and used) is donated by contractors, home builders, and the general public. All proceeds benefit programs of Greater Albuquerque Habitat for Humanity.

What all this means is that now the public can purchase new and used building materials at a greatly reduced price. In addition, by taking your reusables to ReStore instead of the landfill, the environment is spared. Call 217-0130 for donation guidelines. Pickup of donations can be scheduled for Wednesdays and Thursdays.

The store was opened thanks to the donations of Sandia retiree Irv Hall (see *Lab News*, June 2, 2000), who donated \$30,000, and the McCune Foundation. Says Irv, "I am in the final chapters in the Book of Life and I thought this was a worthwhile project. It will be here when I am not."

The store is open Wednesday through Friday 10 a.m.-5 p.m., and Saturday 9 a.m.-4 p.m. Week-day hours will be extended to 6 p.m. when daylight savings time begins. — *Iris Aboytes*



BUILDING DREAMS — ReStore manager Ruth Friesen (below) inspects lamps donated to ReStore, while shoppers inspect its vast selection of items, such as the stained glass panel at right. (Photos by Randy Montoya)



KNME sponsors Science Crawl in Old Town Saturday, April 3

Visit Albuquerque Old Town's three science museums on Saturday, April 3, 11 a.m.-3 p.m. for KNME TV's Science Crawl. Inspired by the PBS mini-series "Innovation," which features new technologies and looks at both the questions they raise and the opportunities they provide, Science Crawl is designed to make New Mexicans aware of the richness of science and technology resources and opportunities in our state.

KNME extends a special invitation to students, mid-school and up (and their parents), who might be considering science or technology as a career. Career information will also be available to adults who may be considering a career change.

To participate, buy a passport at the National Atomic Museum, Lodestar, or outside Explora at the Formula 1 race car. Use it to get

free admission at the Atomic Museum and Lodestar and reduced admission at Explora. Visit all three museums and get your passport stamped to qualify for a drawing. Prizes include a set of all eight Innovation series programs and museum family memberships.

Events:

National Atomic Museum — "Strange Matter" exhibit and speakers at 12:30, 1:30, and 2:30 p.m.

Lodestar — Booths and free planetarium show with passport

Explora — Special Innovation-themed projects at the Activities Bar

Additional information:

Linda Kelm at 277-1226 or lkelm@knme.org. On the Web: www.sciencecrawl.com.

Feedback

Why aren't Labs' internal e-directory photos available?

Q: Why aren't Sandia Directory employee photos visible by default? These photos are underutilized resource that could help employees recognize people in key positions such as ES&H coordinators, computer security representatives, building owners, etc. At a very minimum, all managers, project leads, and secretaries should be visible.

A: As you noted, not all Sandians have their picture posted in the Sandia Directory. The reason for this is that each employee can make a personal decision as to whether or not to display his or her photo. The current default is not to display the photo to protect employee privacy. Since the IIS [Information Systems Development] organization (9500) owns the Directory database, you can pursue this matter further with them if you wish. — *Al West (3100)*