Sandia researchers use quantum dots as a new approach to white, blue solid-state lighting

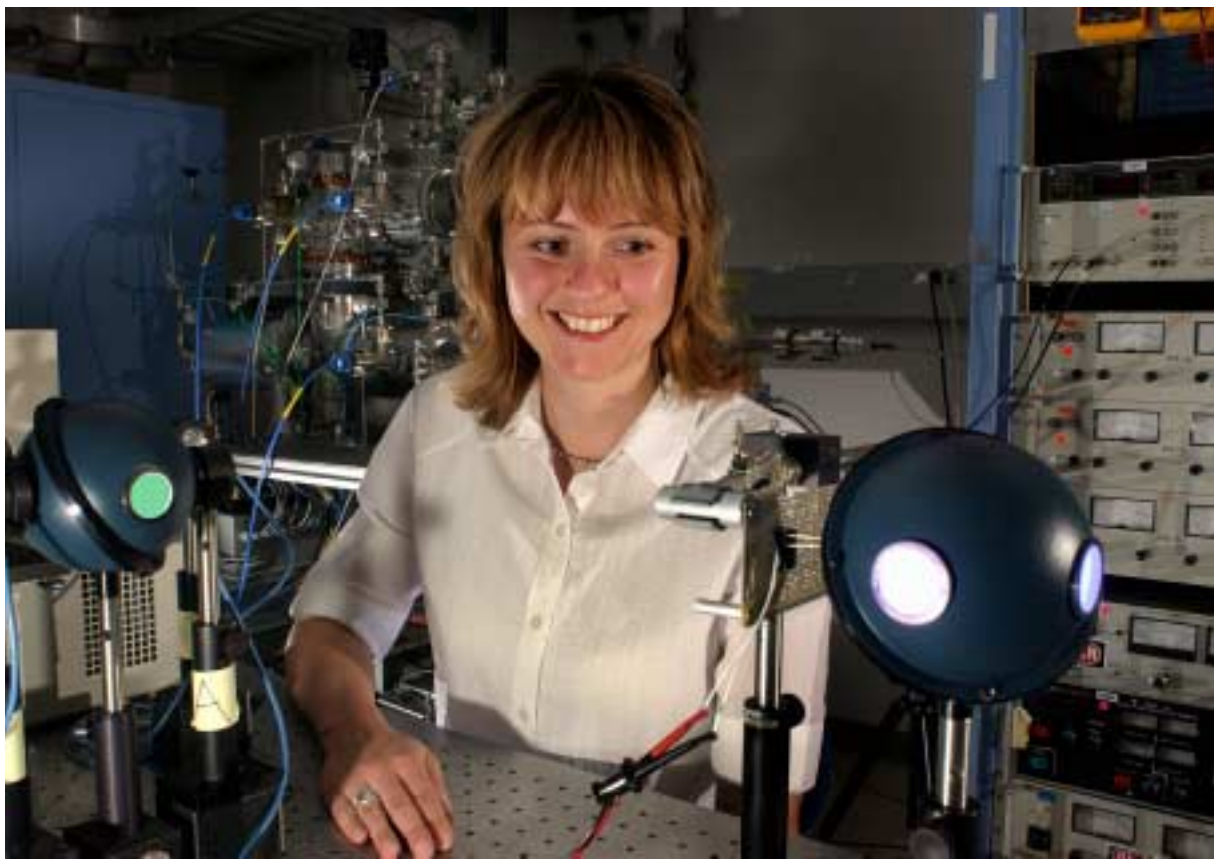
By Chris Burroughs

In a different approach to creating white light several Sandia researchers have developed the first solid-state white light-emitting device using quantum dots. In the future, the use of quantum dots as light-emitting phosphors may represent a major application of nanotechnology.

"Understanding the physics of luminescence at the nanoscale and applying this knowledge to develop quantum dot-based light sources is the focus of this work," says Lauren Rohwer (1745), principal investigator. "Highly efficient, low-cost quantum dot-based lighting would represent a revolution in lighting technology through nanoscience."

The project is part of Sandia's internally funded Laboratory Directed Research and Development (LDRD) Solid State Lighting Grand Challenge. The approach is based on encapsulating semiconductor quantum dots — nanoparticles approximately one billionth of a meter in size — and engineering their surfaces so they efficiently emit visible light when excited by near-ultraviolet (UV) light-emitting diodes (LEDs). The quantum dots strongly absorb light in the near-UV range and re-emit visible light that has its color determined by both their size

(Continued on page 4)



NEW APPROACH TO SOLID-STATE LIGHTING — Lauren Rohwer is the principal investigator of a research team developing the first solid-state white light-emitting device using quantum dots. (Photo by Randy Montoya)

Employees, teams receive recognition

During the recent Sandia Employee Recognition Night, 66 individuals and 57 teams were honored for exceptional achievements. The program carries on a tradition that since 1994 has honored Sandians for outstanding service rendered to the Labs and the nation. Read about the winning teams and see pictures of the individual recipients on **pages 6 through 10.**

Paul Robinson discusses management changes

On June 26 Sandia President and Labs Director C. Paul Robinson sent a message electronically to all Labs employees regarding several major changes in management announced a few days earlier. Last week Sandia provided to local news media photocopies of a 29-page summary of the "Bay report," the independent internal investigation Paul commissioned last August coordinated by Norman Bay, a former US attorney in New Mexico and assistant professor at the University of New Mexico School of Law. Read the full text of Paul's message on **page 5**.

Sandia LabNews

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Sandia National Laboratories

Managed by Lockheed Martin for the National Nuclear Security Administration

Sandia energy security team works to make key military bases 'grid-free' in the future

By Will Keener

Dave Menicucci thinks that it was Mother Nature as terrorist who ultimately pushed the Department of Defense toward improving its energy infrastructure security. He knows September 11, 2001, had a role as well. "Prior to that date, most experts felt border security was sufficient and concern about infrastructure security at domestic military bases was minimal," Dave says. After September 11, that changed.

And then in May 2002, a fierce wildfire cut both feeder lines supplying a remote military base with power. Completely off the grid, the base went to its back-up mode. Although some facilities were equipped with diesel generators, officials soon realized the base would need more fuel for the significant amount of time needed to restore grid power. But by the time they turned attention to this problem, the generators had run out of diesel.

The result: the base was at a diminished state of readiness for 16 hours. Costs attributed to the downtime were approximately $3 million. True, this strike was from nature, but it illustrates how effective a coordinated attempt at sabotage could be.

"This really raised awareness as to how vulnerable these bases are," says Dave, project lead and staff member in Energy Infrastructure and Distributed Energy Resources Dept. 6251.

In the months since, the Army has asked Sandia to look at three pilot forts and make recommendations for an optimal mix of generating technologies to help them achieve energy security. In addition, a US Marines Corps base is also very interested in the Sandia approach, Dave reports. They want to bring their generation inside their fences and distribute it around so that there won't be any one clear target. Sandia is working to help them develop a "grid-free" plan that will be in place by 2007.

Bill Black of Solar Technologies Dept. 6218 is project manager for several of the military energy security projects and has visited three pilot Army bases. "This is a natural extension of our work with nuclear weapons security," he says. "It builds on what Sandia has done with dams, transmission lines, and other vulnerability assessments."

The Sandia goal is not just to assess and implement distributed energy resources for the three pilot bases, but to develop a methodology that can be used by others as well. "We want to be able to say, 'Here's a workbook you can apply to any military base to provide combined heat and power systems,'" Bill says. Nonmilitary applications, such as support for emergency services in smaller communities, also are a possibility for this approach, he says.

The Marines have asked Sandia to integrate a 7.6-megawatt cogeneration power plant with a one-megawatt photovoltaic system. "They want a plan to show how they can get off the grid if they need to and still have the mission capabilities they need to respond," says Dave.

The Sandia approach will be to provide solutions that are based on full-time generation by a distributed energy system, which can be isolated for security reasons when the grid goes away. "This is

(Continued on page 4)

What's what

Despite the discomfort, anxiety, embarrassment, frustration, angst, and a whole range of other emotions Sandians have felt about the disclosure of problems with the lab's security over the past few months, we can all be proud of the way those difficulties have been handled.

Rather than denying that problems existed – or worse, ignoring them – Labs Director Paul Robinson commissioned an outside independent review and, as we learned most recently, dealt with the problems pointed out in that review, then publicly acknowledged them.

As we've learned from the Exxon Valdez and other disasters, few organizations handle problems appropriately when the pressure's on. Sandia is an obvious exception. Read more about it on page 5.

* * *

Be sure to have a look at this year's Employee Recognition Award winners, beginning on page 6. All of them – individuals and teams – turned in terrific performances to be considered. They were feted at the Marriott Pyramid Hotel in Albuquerque, which is pretty good recognition in itself.

Congratulations to all the winners, and good work.

* * *

You may have heard a funny sound earlier this week. It was scores of folks around the lab sucking in their breath in shock when they learned that lab-wide network and Central Computer Services would be unavailable from late this Saturday until Monday morning.

Withdrawal, you know.

Facilities is doing major cooling system upgrades in Bldg. 880 and several other buildings around it, which means e-mail and all other corporate and scientific computing services will be turned off. Can you imagine? No e-mail? No weekend work?

Woops!. . . There it goes again – that anguished sucking sound!

* * *

Right off the top of your head, you might think the most common topic of discussion and debate around the lab is LED lighting, or maybe a prediction of the next Z machine triumph, or maybe some of the out-there ideas hatched in the Advanced Concepts Group.

Well, maybe in your group. But in ours – and I suspect in a lot of others – it's the battle of wills pitting the donut dudes against the bagel bunch. You know, on Friday (or maybe some other day in your group) somebody's supposed to bring in a morning gorging. And the day before, the factions line up and plead their preferences.

From one side there are shouts of, "Donuts! We don't want bagels, we want donuts! Gooey, glazed donuts!" From the other: "Yuuuck! All that sugar?!?! Let's have bagels, they're much healthier."

Well, one of our number brought in a blurb from the American Diabetes Association that showed a bagel and a donut side-by-side with the following information under each, respectively: "Plain bagel; 67 g. carbohydrates; 340 calories" and "Glazed donut; 23 g. carbohydrates; 180 calories."

Which does he prefer? Now, that's a no-brainer!

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

New-hire John Bowers honored with alma mater's Founders' Award

Sandia new-hire John Bowers (14011) was honored recently by Binghamton University's Watson School of Engineering and Applied Science with its Founders' Award. In recognition of the legacy of the Watson School founders, the award is given to those who have shown the same type of vision and commitment to the Watson School since its formation in 1983.

JOHN BOWERS

John recently started a new position as program engineer in Sandia's Concurrent Design and Manufacturing Program, where he will help manage programs for the nuclear weapons complex and production realization enterprise.

Prior to coming to Sandia, he worked in both the military and private sector. He earned his degree in civil engineering from the Coast Guard Academy and worked as a civil engineer for the Coast Guard before moving to Oneonta, N.Y., to work as manager of Custom Electronics' engineering department. While there he was responsible for new product development and design, and industrial, manufacturing and facilities engineering management.

Returning to school, Bowers became the first graduate from the Watson School's industrial engineering discipline when he earned his MS degree in 1989. Since then, he has put his knowledge and experience to use as an adjunct instructor and brought the small business perspective to both the Watson School Advisory Committee and the Industrial Engineering Advisory Committee.

President's Quality Awards: How, when to apply

The application deadline for the 2003 Sandia President's Quality Award is Oct. 1. Any Sandia-directed team is eligible to apply. The criteria are consistent with basic quality methods including Malcolm Baldrige, QC-1, and ISO 9000 programs. Information booklet, electronic application, training workshop registration, and critical dates can be found at: http://www-irn.sandia.gov/corpdata/pqa/pqa2003.htm.

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Sympathy

To Julie Walker (7000) on the death of her husband, Brian Walker, on June 16.

Recent Patents

Reid Bennett and Bruce Draper (both 1748): Monolithic Integration of a MOSFET with a MEMS Device.

Maher Tadros (16000) and Mark Tucker (6245): Formulations for Neutralization of Chemical and Biological Toxants.

Jill Glass (1843), Scott Nicolaysen (2613), and Edwin Beauchamp (1843): Apparatus for Controlling Fluid Flow in a Conduit Wall.

Kevin Linker and David Hannum (both 5848): Apparatus for Thermally Evolving Chemical Analytes from a Removable Substrate.

Kurt Wessendorf (1732) and Dale Kemper: Analog Pulse Processor.

Olga Spahn (1742), Charles Sullivan (1742), and Ernest Garcia (2614): Compound Semiconductor Optical Waveguide Switch.

Edward Cole and Paiboon Tangyunyong (both 1739): Data Processing Device Test Apparatus and Method Therefor.

Robert Axline (5711): Transponder Data Processing Methods and Systems.

Employee deaths

Brian Pardo of Range Integration and Lab Support Dept. 15406 died June 17.

He was 42 years old.

Brian was a technologist and had been at Sandia since 1984.

He is survived by parents Carol and Julio Pardo.

Elizabeth Stillie of Staffing/Recruiting/Placement Dept. 3554 died June 23 after a long illness.

She was 66 years old.

Elizabeth was an office administrative associate and had been at Sandia since 1993.

She is survived by her daughter Odessa Conley and granddaughter Ashley Conley.

Author Herken details establishment of 'Rad Lab'

His book Brotherhood of the Bomb *portrays 'underrated' E.O. Lawrence, plus Teller, Oppenheimer*

By Nancy Garcia

A "straight arrow" who was unabashedly proud of his admission to the Soviet Academy of Sciences, Ernest O. Lawrence was a much-underrated figure of modern American science, according to author Gregg Herken, who spoke in Livermore recently about his 2002 book, *Brotherhood of the Bomb*.

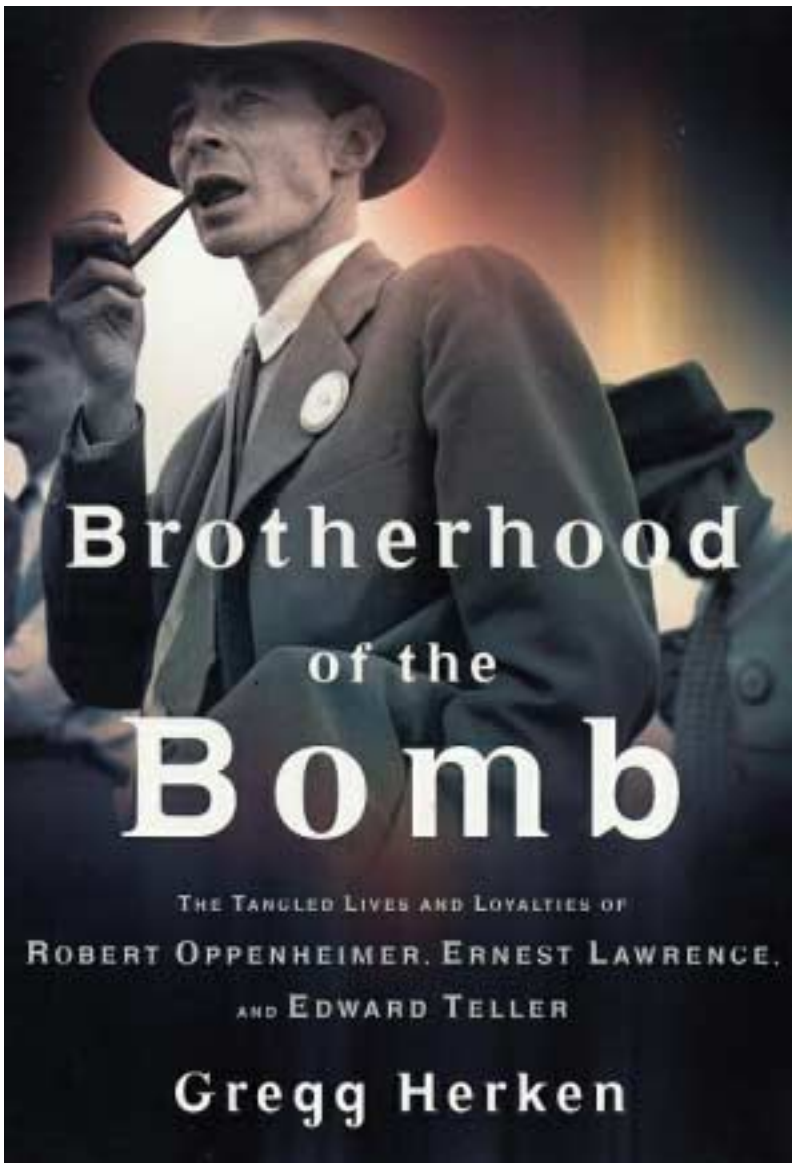
GREGG HERKEN

A historian, curator, and professor, Herken spent 10 years working with a researcher to pull together thousands of newly released documents from the FBI and former Soviet Union for the book, supported by a 1991 MacArthur research and writing grant.

"As opposites, [E.O. Lawrence and J. Robert Oppenheimer] attracted. Arguably, it was the perfect marriage in physics."

He initially planned to write about Edward Teller, an advocate of the H-bomb that became the rationale for creating a second weapons laboratory in Livermore during the Cold War. When concentrating on Teller alone proved difficult, Herken expanded the scope of his book to include Lawrence and J. Robert Oppenheimer, Lawrence's friend from the University of California at Berkeley, who directed the Los Alamos effort during the Manhattan Project.

"As opposites, they attracted," Herken said. "Arguably, it was the perfect marriage in physics." Lawrence, an experimentalist, was buoyant, complex, and conflicted. He was described as "a commanding figure . . . by sheer force of personality."



BOOK COVER of *Brotherhood of the Bomb* by Gregg Herken, published by Henry Holt and Co. Herken spoke in Livermore recently.

Sandia CaliforniaNews

A theorist, Oppenheimer was enigmatic and charismatic, destined to eventually face a falling out with Lawrence over revocation of his security clearance due to communist sympathies.

In the opening pages, Herken calls the book "a cautionary tale of arrogance, betrayal, and unforeseen consequences; of what comes from invoking forces — both political and physical — that one neither fully understands nor controls."

In 1936, Lawrence founded the University of California Radiation Laboratory at Berkeley. Three years later, he won a Nobel Prize for this work on the cyclotron, where he was considered a "maestro."

Herken credits Lawrence with moving forward the Manhattan Project in 1941 after he was approached by Marc Oliphant of Britain's Cavendish Laboratory with a report indicating an atomic bomb was feasible. "It was the first time Lawrence learned that an atomic bomb could be built," Herken said. The effort was mobilized the February after Pearl Harbor, as Lawrence's 184-inch cyclotron was converted to provide uranium. "The Rad Lab was the top of the KGB list," Herken remarked.

Part of the H-bomb debate following the war, Lawrence only wanted a second lab to be "additive" to the Los Alamos one. But, Herken said, he was "sincerely convinced an H-bomb was necessary to American security," and also wanted to remobilize American scientists to fight the Cold War.

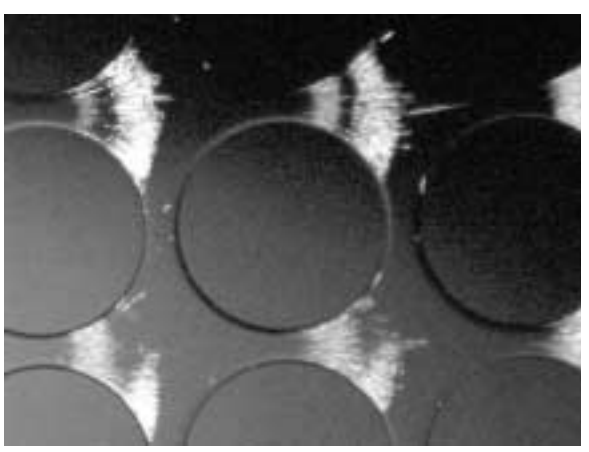
Lawrence sent Herb York — a postdoctoral student at UC Berkeley — to survey physicists about creating a second lab. The first person York talked to was Edward Teller, who convinced York a "completely independent" second laboratory was best. The lab was established in 1952 on the basis of an Atomic Energy Commission letter citing the need for "an additional and broad effort."

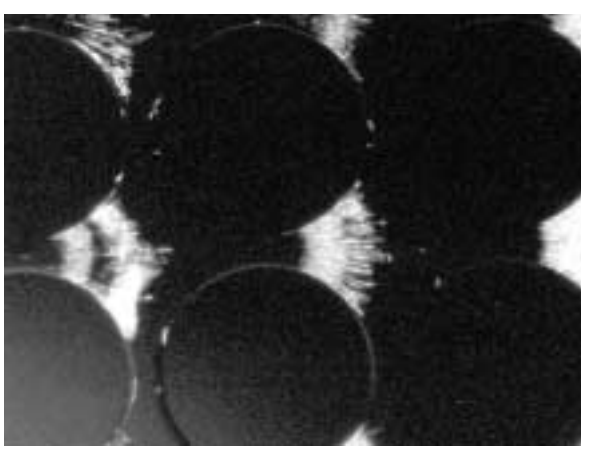
Herken said this mollified Teller that an H-bomb could be pursued, while assuring Lawrence the facility would not just be a second weapons lab alone.

Suffering from ulcerative colitis, Lawrence declined to "unfrock Oppenheimer in his own church" by testifying at Oppenheimer's security hearing before the Atomic Energy Commission. Teller was sent instead. His clearance revoked, Oppenheimer entered "academic exile" as head of the Institute for Advanced Study at Princeton. Lawrence succumbed to colitis in 1958 at the age of 57.

Teller continues to keep an office at Lawrence Livermore National Laboratory, where he met with Herken at the time of his talk. "He certainly is the most politically influential scientist of the 20th century," Herken said, referring to the respect he feels for him. "I view him as more a force of nature."

Inventing a live-pathogen concentrator for monitoring drinking water





SEPARATING THE LIVING FROM THE DEAD — Across a microfabricated array of circular posts, dead and live *E. coli* bacteria collect into separate bands when a voltage is applied. Particles are repelled from the field between the posts because they are less conductive than the fluid. Live cells are even less conductive than dead ones, so are more strongly repelled and appear as outer bands. This phenomenon is being used by Blanca Lapizco (8358), Blake Simmons (8722), Yolanda Fintschenko (8358), and Eric Cummings (8358) to make a selective concentrator for live pathogens in drinking water for an Energy and Critical Infrastructures Laboratory-Directed Research and Development grant. Although a few live cells appeared in the dead-cell zone, "We believe that there were few dead cells present in the live-cells sample," says Blanca.

East Avenue being closed to all but limited access

The road separating Sandia/California and Lawrence Livermore National Laboratory, East Avenue, is being converted to controlled access later this month.

Access will be limited to persons with official badges from DOE facilities or who are on an authorized access list. Badged employees and contractors from Lawrence Livermore or Sandia can add names to the access list.

Access permits secured in advance will be available at any security checkpoint at either end of the block. A "super-kiosk" at the west portal will handle unannounced visitors.

An interim truck inspection station will open at the east end of East Avenue until a permanent facility is completed in October.

For more details and updated information, see http://www.ran.sandia.gov/EastAve/.

Quantum dots

(Continued from page 1)

and surface chemistry.

This nanophosphor-based device is quite different from an alternative approach based upon growth of blue, green, and red emitting semiconductor materials that requires careful mixing of the those primary colors to produce white illumination. Efficiently extracting all three colors in such a device requires costly chip designs, which likely cannot compete with conventional fluorescent lighting but can be attractive for more specialized lighting applications.

Lauren and the quantum dot team — Jess Wilcoxon (1122), Stephen Woessner (1122), Billie Abrams (1123), Steven Thoma (14172), and Arturo Sanchez (14172) — started on the project two-and-a-half years ago. Subsequently, their research has advanced significantly, including recently reaching a major milestone of creating white and blue lighting devices using encapsulated quantum dots.

"This accomplishment brings quantum dot technology from the laboratory demonstration phase to a packaged component," Lauren says.

LEDs for solid-state lighting typically emit in the near UV to the blue part of the spectrum, around 380-420 nanometers. Conventional phosphors used in fluorescent lighting are not ideal for solid state lighting because they have poor absorption for these energies. So researchers worldwide have been investigating other chemical compounds for their suitability as phosphors for solid state lighting.

Quantum dots represent a new approach. The nanometer-size quantum dots are synthesized in a solvent containing soap-like molecules called surfactants as stabilizers. The small size of the quantum dots — much smaller than the wavelength of visible light — eliminates all light scattering and the associated optical losses. Optical backscattering losses using larger conventional phosphors reduce the package efficiency by as much as 50 percent.

Nanophosphors based upon quantum dots have two significant advantages over the use of conventional bulk phosphor powders. First, while the optical properties of conventional bulk phosphor powders are determined solely by the phosphor's chemical composition, in quantum dots the optical properties such as light absorbance are determined by the size of the dot. Changing the size produces dramatic changes in color. The small dot size also means that, typically, more than 70 percent of the atoms are at surface sites so that chemical changes at these sites allow tuning of the light-emitting properties of the dots, permitting the emission of multiple colors from a single size dot.

LAUREN ROHWER displays the two solid-state light-emitting devices using quantum dots her team has developed. One is blue and the other is white. (Photo by Randy Montoya)

"This accomplishment brings quantum dot technology from the laboratory demonstration phase to a packaged component."

"This provides two additional ways to tune the optical properties in addition to chemical composition of the quantum dot material itself," Jess says.

For the quantum dots to be used for lighting, they need to be encapsulated, usually in epoxy or silicone.

"Doing this, we had to take care not to alter the surface chemistry of the quantum dots in transition from solvent to encapsulant," says Steven, who worked on the encapsulation portion of the project.

Quantum dot phosphors are integrated with a commercial LED chip that emits in the near ultraviolet at 400 nanometers by encapsulating the chip with a dot-filled epoxy, creating a dome. The quantum dots in the dome absorb the invisible 400 nanometer light from the LED and reemit it in the visible region — a principle similar to that used in fluorescent lighting.

However, a key technical issue in the encapsulation process had to be solved first. When altering the environment of the dots from a solvent to an encapsulant, the quantum dots would clump up or agglomerate, causing them to lose their light-emitting properties. By attaching the quantum dots to the "backbone" of the encapsulating polymer they are close, but not touching. This allows for an increase in efficiency from 10-20 percent to an "amazing" 60 percent, Steven says.

The team notes that other people working in the field of quantum dots have reported conversion efficiencies of nearly 50 percent in dilute solutions. However, to their knowledge, Sandia's team is the first to make an encapsulated quantum dot device with such high efficiencies.

To date, the Sandia's quantum dot devices have largely been composed of the semiconductor material cadmium sulfide. Cadmium is a toxic heavy metal similar to lead, so alternative nanophosphor materials are desired. Fortunately, quantum dot phosphors can be made from other types of materials, including nontoxic nanosize silicon or germanium semiconductors with light-emitting ions like manganese on the quantum dot surface.

"Silicon, which is abundant, cheap, and nontoxic, would be an ideal material," says Stephen. "The scientific insights gained through the team's success with cadmium sulfide quantum dots will enable this next step in nanophosphor development."

In the next year the researchers will increase the concentration of the quantum dots in the encapsulant to obtain further increases in light output while extending the understanding of quantum dot electronic interactions at high concentrations.

While the researchers investigate the use of quantum dots as phosphors as part of the LDRD grand challenge, they also have a grant from the DOE Office of Building Technologies for a collaborative project with Lumileds Lighting, a joint venture between Agilent Technologies and Philips Lighting. In this project they are helping Lumileds measure quantum efficiency of light emission from various types of dots.

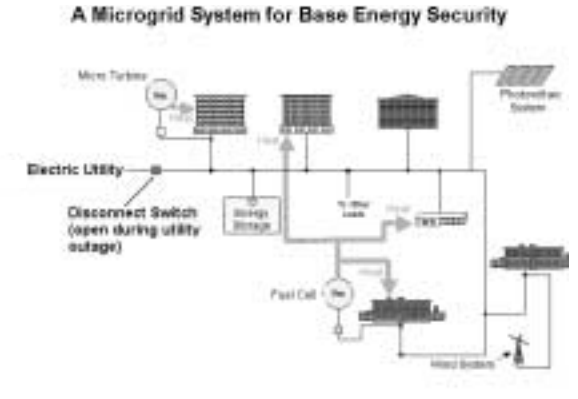
Jerry Simmons (1123), who with James Gee (6200) heads up the Sandia's Solid State Lighting grand challenge, says the quantum dot research is an integral part of the work at Sandia.

"We are very proud of these accomplishments," he says. "The team has come a long way in a short time."

Energy security

(Continued from page 1)

not a diesel backup approach. We want to consider a broad spectrum of energy generation capabilities ranging from conventional diesel to photovoltaics, fuel cells, wind, batteries, micro-turbines, or whatever it takes," says Dave.



DISTRIBUTED ENERGY RESOURCES — In this concept, a microgrid is used to provide combined heat and power for critical loads at an imaginary site. In this design, secure energy is provided regardless of the availability of the utility grid.

Part of the solution to moving to a self-sufficient mode involves the concept of a "microgrid." This is a grid dedicated to a campus, military base, or even a single building, explains John Stevens (6251). The microgrid must generate enough power to meet normal loads, have safeguards to prevent disruption of power, and offer a way to make fast disconnects from the power grid when necessary.

Sandia is working with the Army Construction Engineering Research Lab in Illinois on microgrid technology right now, John says. "The microgrid is largely an engineering problem, although there are a couple of places where we are using existing devices in new ways," he says.

Another goal of the projects is to work with private sector vendors, who can install and operate energy systems that compete economically with the grid and still meet military needs. "The trick is to develop solutions that not only meet the base's needs from a security perspective but also meet the private sector's needs from an investment perspective," says Dave. "It's identifying whatever makes sense depending on the resources of a given facility."

Sandia is providing essential expertise, evolved from Labs' efforts to leverage the use of renewable and emerging energy systems, not available commercially, notes Dave. Through a Laboratory Directed Research and Development proposal, the team hopes to reach out to tap other expertise within Sandia, as well. "We're sure there's related work out there where we can contribute technical value and vice versa," says Dave. "This fits at the heart of what Sandia is all about."

STAND-ALONE SYSTEMS — Sandia is working with military bases, like this one, to install conventional, renewable, and other advanced generation capabilities to ensure energy security in the event of a power grid failure.

Paul Robinson offers update and perspective on recent management changes at Sandia

By C. Paul Robinson

This week I've announced changes in our management team that have surprised and puzzled many people. Let me tell you, these decisions have been the most painful I've had to make at Sandia, both professionally and personally. But I am confident Sandia will be better for them.

By way of explanation, and contrary to what you've been reading in the newspaper, these changes were not a result of pressure by Congress or by the Government Accounting Office's report on security. They were the result of an independent investigation that I commissioned last August to understand the facts surrounding allegations that some of our past security investigations had been impeded or that our security investigators had been retaliated against.

The final report from this independent investigation headed by former US Attorney Norman Bay was delivered to my desk on June 4. Let me say here that I have the utmost faith in the completeness and accuracy of Professor Bay's report, and I am not alone in remarking that this is a "very professional and scholarly analysis." Following my review of the report and discussions with those individuals directly involved, I am also impressed with the way the investigation was conducted. Based on its findings and the advice of separate disciplinary review committees, I reached the only conclusions I believe I could have reached. The report concludes that although investigators were not retaliated against, a number of management actions were not aligned with either Sandia policies or our expectations. In one case, it concludes that an investigation was impeded. Our review unfortunately validated this conclusion.

We are using the following principles to guide our decisions. We prefer to reward in public but discipline in private. We publicly share what we learn so all Sandians can avoid the same mistakes in the future. We do our best to protect the integrity of ongoing and future investigations and the disciplinary process. We protect the reasonable privacy expectations of our people as best we can. These principles constrain what I can say to you now. However, let me now share with you some lessons that this difficult process has highlighted for me.

Breaches of all security regulations and protocols are serious business. In one case, one or more employees shared a personal computer account password with another employee, which precipitated a string of additional security breaches. Computer passwords are one important component of Sandia's layered security strategy. A security password is not just a time-taking step in how you perform your work; it is a critical security barrier. A security infrastructure is only as good as its weakest link. Not following these vital procedures violates our policies, weakens our security, and can lead to the most serious, often unforeseen, consequences downstream. Thus, never share your passwords with anyone, even people you "trust." Also, do not leave a "cache" of your passwords or safe-combinations where anyone else could have access to it. This should be obvious, but we still occasionally see such high-risk practices.

Security investigations are serious business. If an act or omission appears to you to violate security policies, it is important for you to report the problem to your management and to Sandia's internal investigators, as specified in our policies. It is equally important that you then avoid altering anything — files, removable media, paperwork, or physical items — that appear to be relevant and could later become evidence in a security investigation. There is no valid excuse for purposely modifying or destroying evidence. If you are not sure, immediately bring it to the attention of Sandia officials. Sandia cannot tolerate interference with official investigations of suspected wrongdoing.

Finally, I want you to know that our work with regards to security is not done. We continue to study the Bay report for possible additional personnel actions, organizational moves, and changes in our policies and processes. But the Bay investigation is only one part of our efforts. I announced publicly on March 20 that Dennis Miyoshi and his team would be working from within to correct some disturbing concerns about the management of Sandia's security protective force, and their work continues. We are working closely with NNSA to correct these concerns as well. The criticisms coming from some members of Congress and the GAO are likely to continue. While we will continue to listen and to evaluate concerns brought from any corner, there has also been the usual "piling-on" where some pressure groups have sought to pursue other agendas by "fanning the flames" of any problems we uncover.

Let me assure you that we will have the courage to take whatever actions are needed to ensure that we provide a level of security second to none that protects both our classified information and our real property.

One important outcome will be to assure continued public confidence and support for Sandia's unique and important missions. While this is, and has been, a trying experience for all of us, I am confident the improvements we're making will make us stronger.

A note about the accompanying message

EDITOR'S NOTE: The accompanying message was sent electronically to all Sandia employees by Sandia President and Labs Director C. Paul Robinson on June 26. It was a follow-up and clarification to several major changes in management Paul announced June 24 (see the June 27 *Lab News*) as a result of an independent investigation into security management issues as Sandia.

Those security management issues were the subject of a March 20 Sandia news conference (*Lab News*, April 4 and April 18) at which, in Paul's words at the time, "disturbing concerns" about the management of Sandia's security program and some resolutions to those concerns were disclosed.

These and other security concerns at the national labs have been the subject of a series of critical letters from Sen. Charles Grassley, R-Iowa, to DOE and NNSA officials over the past nine months, a Senate subcommittee hearing June 24, and a General Accounting Office report also released June 24.

Last week Sandia provided to local news media photocopies of the 29-page summary section of the "Bay report," the independent internal investigation Paul commissioned last August conducted by Norman Bay, a former US attorney in New Mexico and an assistant professor at the University of New Mexico School of Law. Bay was specifically tasked to investigate allegations that two Sandia employees were prevented from performing their assigned duties as investigators and retaliated against because of their past or ongoing investigative efforts at Sandia.

Bay focused on the five matters he considered most serious. From the Bay report's summary of findings: "Were any investigations obstructed, impeded, or improperly assigned? Yes. Of the five matters we examined, we find that one, the investigation of [name omitted], was clearly obstructed or impeded. We are troubled by what happened during the course of that investigation. With respect to the four remaining matters . . . we conclude that the investigations were not either obstructed, impeded, or improperly assigned. Nevertheless we are critical of some of the management decisions that were made or not made as a result of the investigations. . . . Did [name omitted] and [name omitted] suffer retaliation as result of their investigations? No. A careful review of all the evidence convinces us that they did not suffer retaliation."

To protect individuals' privacy, that public version of the Bay report summary blacks out the names (and some other identifiers) of all people named in the investigation. Plans were being made this week to post that redacted version of the Bay report on Sandia's internal web.

Let me assure you that we will have the courage to take whatever actions are needed to ensure that we provide a level of security second to none that protects both our classified information and our real property.

Management promotion

New Mexico


JOHN GRONAGER

John Gronager from Manager to Level II Manager, Proliferation Sciences Dept. 5913.

John had been Manager of the Proliferation Sciences Department within the Systems Assessment and Research Center since 1999.

He came to Sandia in 1978 as a senior technical staff member to investigate severe nuclear reactor accidents. He was project leader for Phase 1 and 2 studies of new nuclear weapons programs for DOE. In 1990, he was named Distinguished Member of the Technical Staff.

In 1992, he was promoted to Defense Program Sector Program Manager for Manufacturing and Complex-21. In 1995, he received the DOE Award of Excellence for work on the non-nuclear reconfiguration program.

In 1996, John moved to MPC&A Transportation Program Manager, responsible for security activities relative to nonproliferation activities in Russia and the NIS.

John has a BS engineering science from University of Buffalo, N.Y., and an MS and PhD in nuclear engineering, both from University of Illinois.

Sandia Employee Recognition Night 2003 honors 66 individuals, 57 teams for exceptional achievements

Annual recognition program was launched by Lockheed Martin in 1994

More than 300 Sandians — individuals, team representatives, and their guests — gathered June 28 at the Albuquerque Marriott Pyramid for the 2003 Employee Recognition Night, Sandia's annual celebration of exceptional service, leadership, technical accomplishment, and teamwork. The celebration banquet, which itself has earned a reputation for excellence and quality, is one of the ways the Labs says "thank you and congratulations" to individuals and teams selected in the annual Employee Recognition Awards process.

This year, the awards honored 66 individuals and 57 teams for such qualities as leadership, technical excellence, and exceptional service.

"Your vision and talent, your dedication and hard work comprise the foundations upon which Sandia National Laboratories is building the trust of the nation and the world to deliver solutions in these times of great complexity," said Labs President Paul Robinson in an introductory note to the Employee Recognition Night program. "I thank each of you here tonight and all of the team members many of you represent."

Each year, the gala event is built around a theme; this year it was "A Night on Broadway."

Sandia's Employee Recognition Awards program carries on a tradition that since 1994 has honored Sandians — individuals and team members — for outstanding services rendered to Sandia and the nation.

The individual recipients are pictured over the next few pages. A complete listing of team winners and team citations and the names of individual team members begins below.

New Mexico photos by Bill Doty
California photos by Bud Pelletier and Randy Wong

Individual honorees


Richard Anderson
1739


Melissa Armijo
10265


Suzette Beck
10507


Ronald Bentley
9700


Brent Blankenship
2111


Dexter Boone
14011


Charles Brusseau
5848


Bobbie Burpo
12105


Stewart Cameron
15336


Stephanie Castillo
9521

Team honorees

The 2003 Employee Recognition Awards program, continuing a trend begun several years ago year, again found divisions placing a special emphasis on team accomplishments.

The teams listed on the next five pages were deemed to have made exceptional contributions to an important program or process. A few representative teams are pictured.


THE W87 FLIGHT TEST UNIT TEAM was one of 57 teams honored in the 2003 Sandia Employee Recognition Awards program.

W87 Flight Test Unit 17 (FTU) Team

This team prepared the most sophisticated telemetry flown by Sandia for a high fidelity flight in record time supporting technology selection for the W87 JTA-4.

Levi Forman, Thomas Clark, Seung Chio, Mark Claudnic, Chris Haagen, Kurt Berger, Mike Bell, Nathan Hilton, Matt Johnson, George Schubert, Barry McLaughlin, Matthew Karlin, Don Osbourn, Steve Ikebe, Art Hayes, Tom Prast, Neal Fornaciari, Geoff Goodhart, Judy Lau, Kit Schmitz, John Gillen, Eric Chin, Scott Anderson, Matthew Johnson, shaw, Gary Kirchner, Eric Koenig, Bruce Brunett, Cheryl Lari, Steven Bunn, Robert chan, Rigoberto Ledezma, James Lund, Quenton Mckinnis, Larry Clark, Mark Meindl, Gerald Miller, Curtis Cofield, Dennis Nelson, Everitt Davis, Edward Dutra, Janet Fachner, Andrew Puryear, Micheal Fireno, Hermann Folkendt, Matthew Sena, Donald Sheaffer, James Gollnick, Douglas Stark, Judith Sylva, Kiet Tieu, Donald Hardy, Greg Valdez, Veronica Harwood, John Van Scyoc, Jonathan Van't Hof, Dale Walker, John Warmouth, Richard Jennings, Lynn Zirkle

Center for Integrated Nanotechnologies (CINT) Team

The Sandia/Los Alamos team has successfully completed several DOE milestones while defining a new standard for joint laboratory partnership and cooperation.

J. Alan Nichelason, Cecilia Anne Anderson, Frank White, J. Charles Barbour, Joel Wendt, Bruce Bunker, M. Wayne Davis, Darryl Sasaki, Heather Brown, Terry Michalske, William Hendrick, Maria Owens, George Bachand, Brad Boyce, Timothy Boyle, C. Jeffrey Brinker, Susan Brozik, Duane Dimos, Huei. Fang, David Follstaedt, Roberta Gonzales, Sean Hearne, Walter Heimer, Dale Huber, William Johns, Ronald Jones, Paul Kotula, Michael Lilly, Carol Meincke, Dorothy Meister, John Petronis, John Reno, Alton Romig, Jr., George Samara, Neal Shinn, Jerry Simmons, Michael Sinclair, William Smith, John Sullivan, Brian Swartzentruber, Jess Wilcoxon

Not pictured
Jan Nobel. 8945
George Rivera 9334

Density Functional Theory of Surfaces Team

This team's method to perform more accurate Density Functional Theory calculations has broad impact and was among the "top ten materials research accomplishments of 2002."

Thomas Mattsson, Dwight Jennison, Anne Mattsson

Double Z-Pinch Capsule Implosions Team

Compression of ICF capsules to 40 times solid density, and radiation uniformity < 3% which scales within a factor of 2 of high yield requirements.

Walter Simpson, David Wenger, John McGurn, Steven Dropinski, Rafael Aragon, Diana Schroen, Michael Cuneo, Roger Vesey, Guy Bennett, Richard Adams, Dolores Graham, Rose Mary Green, David Hanson, Drew Johnson, Keith Keller, Laurence Ruggles, Johann Seamen, Christopher Speas, Mary Tapia, Jose Torres, Mark Vargas

Royalty Sharing Ceremony Team

Through the hard work, initiative, and creativity of a high performing team, the annual NM Royalty Sharing Ceremony held December 5th was an unparalleled success.

Patricia Knighten, Kurt Wessendorf, Stephen Francis, Peter Nolan, Douglas Prout, Laureen Atencio, Pamela Duran, Sandra Smallwood, Sherry Lombana, Joanne Dodge, Stephanie Cotinola, Judith Borrowdale, Robert McInteer, Linda McNeil, Lisa Polito

Isentropic Compression Containment Team

To enable dynamic material experiments with hazardous materials, this team developed an innovative explosive closure to hermetically seal multi-megaampere pulsed power devices.

Thomas Bergstresser, Clint Hall, Michael Quinlan, Randy

(Continued on next page)

Team awards recognize achievement

THE SANDIA SOLID-STATE LIGHTING TEAM.

B61-11 Joint Test Assembly (JTA) S/N 905 Test Team

Developed geological data and coordinated efforts of over 100 people at eight locations to perform flight tests over seven months early to meet DOE requirements.

Donald Longcope, Christopher Rautman, Brent Blankenship, Kevin Eklund, Walter Wolfe, Marcey Abate, Jeanne Lewis, Elizabeth Connors, Thomas Post, Joseph Bonaguidi, Randy Clarin, Joe Dykes, Jerry Elliston, Cristina Martinez, Jay McLauchlin, James Rini, Robert Sherwood

(Continued from preceding page)

Hickman, Mark Harris, Steven Weddle, Allen Stanley, Robert Dana, Raymond Peabody, Michael Cassady, Eric Smith, Charles Field, III, Josh Mason, Martin Jinzo, Charlotte Perry, Nora Campbell-Domme, Marcus Knudson, Rodney Owenby, Stephen Coffing, Christopher Deeney, Lynnwood Dukes, III, Paul Homan, Ross Miller, Thomas Mulville, Dustin Romero, Allen Stanley, Dale vanDongen, Edward Vieth, Jeffrey Young

SnifferSTAR Development Team

The SnifferSTAR team joined with Lockheed Martin to develop a novel chemical analysis system for deployment on Unmanned Aerial Vehicles.

George Dulleck Jr., Patrick Lewis, Stuart Williams, Richard Kottenstette, Edwin Heller, Joy Byrnes, James Carnahan, Douglas Adkins

Sandia Solid-State Lighting Team

For pioneering contributions to, and for service as our nation's leading public resource in, solid-state lighting science and technology.

Jeffrey Figiel, David Tallant, Robert Kaplar, Stephen Woessner, Arthur Fischer, Jerry Simmons, Joel Wendt, Michael Coltrin, Daniel Koleske, Thomas Bauer, Jeffrey Tsao, Weng Chow, Steven Thoma, Robert Biefeld, Michael Moran, Stephen Lee, James Gee, Thomas Kerley, George Wang, Andrew Allerman, Kristine Fullmer, Lauren E. S. Rohwer, Regina Simpson, Billie Abrams, Karen Cross, Paula Provencio, Katherine H.A. Bogart, Christine Mitchell, Mary Crawford, Diane Gaylord, Jonathan Campbell, Phillip Cole, Robert Copeland, J. Randall Creighton, John Emerson, David Follstaedt, G. Ronald Hadley, Steven Kurtz, Nancy Missert, Harry Moffat, Samuel Myers, Jr., Roger Pawlowski, Andrew Salinger, Carleton Seager, Randy Shul, Karen Waldrip, Jess Wilcoxon, Alan Wright

Less-Than-Lethal Diversionary Device Development Team

We have developed a next-generation diversionary grenade that significantly improved safety without sacrificing performance.

Edward Mulligan, Kevin Fleming, Timothy Covert, Brian Ingram, Brian Melof, Michele Steyskal, Susan Fae Ann Bender, Heidi Anderson, Theresa Broyles

MC4277 Neutron Tube Ion Team

The Ion Source Team provided an improved understanding and design of the ion source using a scientifically planned and executed experimental and theoretical approach.

John Brainard, Leonard Beavis, Diane Peebles, Ronald Goeke, Bruce Bainbridge, Steven Balsley, Robert Boney, James Browning, William Conley, Michael Eatough, Paul Kotula, Paul Miller, Saundra Monroe, Gerald Smith, Lisa Walla, William Wampler

Switch Tube Group Team

This team has brought switchtubes back from minimal existence to full WR production. Now in design/production phase for seven devices to support two programs.

Ray Peter, Gordon Boettcher, Cathy Richey, Stewart Halbig, Frank Trowbridge

Heavy Bridge Project Team

The Heavy Bridge team designed, fabricated, and tested a 5000-lb penetrator in approximately six months for just over $1 million.

Merlin Decker, Christopher Rautman, Donald Longcope, Frank Whiston, Kenneth J.R. Padilla, Walter Wolfe, Brian Joseph, Joseph Jung, Joel Wirth, Dante Berry, Henry Baca, Robert Berg, Jason Bowie, Bernard Cardell, Bart Chavez, Curtis Cofield, Scott Cooper, Ernest Correa, Michael Dominguez, Joe Dykes, Rex Eastin, Robert Elliott, James Enlow, David Faucett, Jim Galli, Patricia Gray, Sam Griego, Jr., Karl Hess, James Hickerson, Jr., William Kluesner, Gerald McCorkle, Jay McLaughlin, Felipe Reyes, Judith Ripley, Tedd Rohwer, Peter Royval, Sheila Seay, Roger Smith, Meta-Ann Steele, Marilyn Taylor, Thomas Warren, Gerald Wellman, Antonio Zamora

Safety & Security (3100) Partnership with Facilities (10852) Team

Team achieved both corporate and organized goals. Results are fair, cost-effective, and provide agility to manage in today's environment and respond to unforseen contingencies.

Ernie Limon, Jr., James Smith, Victoria Gutierrez, Janet Ahrens, Nancy Aldridge, Martin Aragon, Barbara Ramczyk, Edward Sanchez, Michael Spitz

(Continued on next page)

SANDIA BIO DEFENSE INITIATIVE TESTBED TEAM.

Lorraine Clayburn
2913

Benjamin Cook
6531

Laurence Costin
6117

Clarence Drennan
3129

Linda Duffy
3335

Jeffrey Everett
12334

Ronald Farmer
6431

Gloria Fragua
9103

Martin Fuentes
12333

Lucille Garcia
2305

Marie Garcia
1010

Rose Gehrke
1701

Linda Gillen
5913

Karen Gillings
3550


Bonnie Green
8000


Michelle Griffith
14184


Adam Jimenez
2554


Wendell Jones
0011


Deepesh Kholwadwala
15222


Ann Kirk-Schweitzer
5900


Patrick Klein
8726


Dahv Kliner
8356


William Kolb
10864


Wei-Yang Lu
8725


Frank Lujan III
10016


James Lund
8233


Janice Martinez
2102


Roman Martinez
2664


Bonnie McKenzie
1822


Diane Turner Miller
5005


Gregory Neugebauer
2564


Patrick Notz
9114


Hans Oldewage
3121


Richard Olson
5742


Sheila O'Neill
10508


Beverly Ortiz
9622

Team honorees

(Continued from preceding page)

Pension Plan Change Implementation Team

This team implemented pension plan changes for retirees and active employees after the long-awaited approval and announcement of the changes.

Karen Peterson, Mary Jane Carroll, Diane Denney, Lanny Gilbertson, Debra Babb, Ann Murphy, Mary Lahusen, Leonard Chavez, Marlene Vigil, Carol Wade, Jannifer Levin, Judy Lovato, Mark Biggs, Peter Keegan, Otis Cox, Linda Stefoin

International Programs Building (IPB) Team

Innovative solution to Sandia's strategic space needs and against all odds delivering a fabulous facility on-time, on-budget; concluding with the seamless move of approximately 200 people.

Susan Caskey, David Barber, Sally Bangora, Richard Goodson, Stephanie Sustaita, Patricia Dickens, Nancy Davis, Ruby Chavez, Martin Aragon, Timothy Crawford, Delfina Esquibel, Lynn Fitzpatrick, Patrick Manke, Anisha Quiroz, Gerald Rudolfo

EnRad Satellite Payload Team

For the Completion and Delivery of the EnRad Satellite Sensor System

Mike Swanson, John Baney, Henry Apodaca, Gregory Christiansen, Danile Kral, Dean Dixon, Curtis Gibson, Peter Geib, Fred Turrietta, Stanley Piekunko, Paul Gibson, Randy Jannusch, Lewis Reif, Gerald Prudencio, Joseph Maez, Gary Whitlow, Kevin Marbach, Dennis Clingan, Matthew Brown, Georgia Weebothee, Irene Bentz, Kathleen Olsberg, John Falls, Geoffrey Torrington, Viola Baca, Delfin Bangate, Katherine Becker, Joel Blend, Larry Bruskas, Frank Chavez, Joseph Chavez, Robert Cross, Eric Disch, Terry Ellis, Stephen Garrett, Ralph Goekler, Gloria Goldtooth, Tammy Henson, Dwight Hill, Lawrence Irvin, Darlene Maldonado, Dominic Montoya, William Morgan, Allison Ogden

OALD Project Team

This team reached a significant milestone in 2002 with the successful field demonstration of an original Sandia-developed concept.

Richard Shagam, Joseph Wehlburg, James Hughes, James Gillen, Jeffery L.Green, Thomas Heine, Theodore Welton, Brian Schwaner, Donald Keener, Mark Nissen, Randolph Asbill, David Denning, Donald Vonderhaar, Robert Yawakie, Gus Rodriguez, Maryann Glen, Carter Grotbeck, James Denton, Hugh Church, Robert Varga, Robert Kaneshiro, Brad Boultinghouse, Arthur Sena, Terry Kirton, Mary Hoffman, Diane Cline, Ann Kirk-Schweitzer, Lydia Boye, Julie Ludwig, Ida Garcia, Jamie Janak, Margaret Jacobs, Charles Schmidt. Robert Edgar, Ron Woodfin, Robert Bickerstaff, Gary Phipps, Jeffrey Zirzow, Brandon Ahrens, Clinton Boye, Stefanie Brewer, Gary Brown, Walter Caldwell, Christopher Catechis, James Davidson, Dan Dunbar, Harold Eyer, Ron Forsythe, Eloy Garley, Curtis Gibson, Perry Gore, Robert Gregory, Jose L. L. Guillen, Ernest Helmer, Terry Herther, Ben Johnson, Patrick Long, Michael Oborny, Laura Owens, Ernest Salas, Jim Schaeffer, Richard Silver, Nadine Williams

Commercial Airplane Certification Process Study Team

The Commercial Airplane Certification Process Study evaluated safety-critical airplane certification, maintenance, and operation processes, and identified several improvement opportunities to enhance commercial air transportation safety.

Thomas Witkowski, Mark Ekman, Danisha Peterson, Tonimarie Dudley, Richard Perry, Paul Werner

Second Line of Defense Team

The SLD Team's efforts have dramatically improved the ability to detect and interdict nuclear smuggling across borders at over 80 international sites in FY02.

Robert Bevington, Paul Simon, Charles Massey, Stanley Fritz, Lark Lacey, Allison Cox, Roger Hartman, Lisa Terajl, Melissa Demas, Jennifer Jacobs, Richard Mackoy, Marion McDonald

SGT Sled Test Team

A head-on impact test of a Safeguards Transporter (SGT) was successfully conducted to obtain cargo-tiedown response data for assessing severe transportation accidents.

Louis Nogales, Douglas Ammerman, Edward Baynes Jr., Mark Nissen, Dale Lipke, Kenneth J.R. Padilla, Gary Chemistruck, John Ludwigsen, Robert Shields, Alan Smith, Michael Arviso, Larry Luna, David Pace, Paul Gabaldon, Loretta Humble, Norman Riggin, Neil Davie, David Smallwood, Kurt Metzinger, John Clauss, Gerald Crowder, Henry Duong, David Faucett, Jeffrey Gruda, Kenneth Gwinn, Edward Henry, L. Dwight Lambert, Marvin Larsen, Joseph Lesperance, Marvin Perdue, Leroy Perea, Thomas Reecer, Lih-Jenn Shyr, Douglas Vangoethem, Richard Wilmesherr

UNWD KAFB Installation/ Demonstration Team

Successfully installed and demonstrated Unconventional Nuclear Warfare Defense (UNWD) Testbed on KAFB in exceptionally short time, to the delight of DTRA, DSB, and Congressional staff.

Gene Kallenbach , Douglas Adams, C. Wayne Burton, Jason Stamp, David Hannum, Carlos Herrera, John Dillinger, Martin Moore, H. Timothy Cooley, David Ellis, W.N. Talley III, Mary Green, Paul Wayne, Daniel Pritchard, Lester Cano, Stephen Dupree, Arthur Heath Jr., Lyle Kruse, Howard Sanger

DOE Office of Transportation Safeguards (OTS) TRIPS Model-DOE Performance Excellence Award Team

The TRIPS modeling effort, out of Org. 6541, has been supporting DOE's Office of Transportation Safeguards for over four years.

Mark Turnquist, Dean Jones, Daniel Talso, Linda Nozick, Craig Lawton, Jennifer Bechdel, Jolene Manning, Edwin Kjeldgaard

In-Situ Chemirestor Sensor Team

Developed in-situ microchemical-sensor system that continuously monitors contaminants in soil and water. Successfully demonstrated system at three field sites in California, Nevada, and New Mexico.

Chad Davis, Michael Thomas, Clifford Ho, M. Kathleen Alan, Lucas McGrath, Robert Hughes, Dion Rivera, Jerome Wright

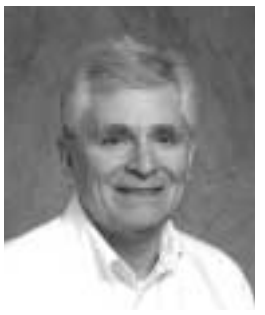
(Continued on next page)


Lada Osokina
10257


Ann Marie Parkhill
3133


Diane Peebles
1822


Dale Preece
15322


Richard Pryor
9216


Arthur Ratzel
9750

Team honorees

(Continued from preceding page)

The Nonactinide Isotopes and Sealed Sources Management Group (NISSMG) Team

The NISSMG team facilitated disposition of approximately 25% of Sandia's legacy plutonium inventory.

Frank Schelling Jr., Gary Polansky, Bryce Gilbert, Gary Bender, Warren Strong, Albert Villareal, Joseph Jones, John Longley, Earl Conway, Cynthia Kajder, Kathy Farnum, Michael Spoerner, Tracy Dunham, Laura Latoma, Howard Sanger

Expanding Your Horizons Conference Team

Community service by Sandia volunteers has been critical for 25 years to the success of conferences that encourage young women's interest in math and science.

Martha Campiotti, Dawn Skala, Kristin Hertz, April Cunningham, Teresa Porter, Karelyn Baker, Cheryl Lari, Shelly Keith, Yuk Ohashi, Bonnie Antoun, Jennifer Robles, Darcy Hughes, Linda Dibble, Louise Stark, Barbara Zaragoza

SNL Rescue Recon Team

The Rescue Recon Team is saving SNL money, reputation, and health everyday. The Team covers SNL on operations beyond their initial intended scope.

Christopher Mullaney, Troy Hamby, Marvin Garcia, Ricky Romero, Gary Baldonado, Lloyd Rantanen, Erica Lopez, James Romero, Robert Trujillo, Edward Cazzola, Dale Claycomb, Melvin Parker


SANDIA RESCUE RECON TEAM.

Smart Equipment & Systems to Improve Reliability and Safety in Future Nuclear Power Plant Operation Team

The Smart-NPP team successfully developed and applied methods and tools to build a demonstration smart equipment health monitoring system for an advanced nuclear power plant.

Bruce Thompson, James Campbell, Robert Cranwell, Hai Le, Barbara Meloche, Leon Chapman, Kathleen Cash, Felicia Duran, Dwight Miller, Emily Preston

IES Service Valuation Team

For exceptional service in the design and delivery of the first-ever all-IES customer valuation.

Adelina Chapman, Douglas Bloomquist, Roy Fitzgerald, Pandora Apodaca, Barbara Hoffman, Anita Shirley, L. Kent Christensen, Judith Hubbard, Timothy Knewitz, Denise Krupka, Jolyn Maheras, Judith McKinney, Edward Saucier, Susan Schear, Carl Skinrood, Michael Spitz, Peggy Stevens, Julie Walker

Be There Now: Interactive Remote Visualization Hardware Team

This team has developed a prototype hardware system that allows engineers/scientists interactive access to supercomputing visualizations generated a continent away.

Karl Gass, Lyndon Pierson, Ronald Olsberg, John Eldridge, Perry Robertson, Thomas Pratt, Thomas Tarman, Authurine Breckenridge, Jason Hamlet, Larry Lee Pucket

Nuclear Weapons Operational Plan Scorecard Web Application (NWOP SWAT) Team

The NWOP SWAT developed a robust web-based tool with improved performance that enables the NWSBU management to assess the health of the $1.25B Program.

Brian Bowen, Pamela Spicer, Manuel Ontiveros, Kay Rivers, Rita Candelaria-O'Toole, Judith McKinney, Linda Wagner, Eva Wilcox, Benita Montano, M. Edna Nolan, Linda Gillis, Elizabeth Roll, Ronald Detry, Beth Dick, Robert Evanoff, Michael Hagengruber, Esther Hernandez, Gerard Krause, Daniel Kuhnley, Sharon Mackel, Clint Matthews, Karen McGee-Ryno, Susan McRee, Frank Vigil

Earth Penetrator Geologic Characterization Team

The Earth Penetrator Geologic Characterization Team successfully implemented and completed pre- and post-test characterization of both B61-11 and heavy penetrator test sites.

Russ Keefe, David Bronowski, Christopher Rautman, Scott Cooper

Life Design Center (LCD) Implementation Team

The purpose of the LDC is to deliver programs and services that provide a balanced work-life to Sandia/CA Site Personnel.

Larry Suzuki, Alfonso Casias, Randy Hershberger, William King, Calvin White, David Turner, Barbie Finley, Daniel Dominquez Jr., Wayne Shock, Josh Mohran, Debra Menke, Stephen Leach, Stephanie Ball, Juanita Armenta, Morgan Edwinson, Kristy Sibert, Margaret Accatino, Barbara Allen, Kyong Lee-Young, Gail Bachman, James Logue, Sara Mccabe, John Beitia, Tamara Cagney, Kari Neely, Mark Cordes, Jason Reicks, Steven Costa, Thomas Santos, Diane Shimada, Martin Gresho, Nathaniel Trujillo, Angela Griffin, Renee Haynes, Tammy Watts, Alexander Hernandez, Melissa Davis, Lori Ng

Advanced High-G Test (AHGT) Team

The AHGT was successfully developed to simulate penetration environments using a captive-carry rocket sled test technique. The result is a unique, cost-effective environmental simulation.

Kurt Metzinger, Neil Davie, Robert Shields, Steven Buck, Melvin Crow, Scott Faas, David Faucett, Edward Henry, Marvin Perdue, Felipe Reyes, Edward Romero

Building 983 Refurbishment Project Team

This project made much-needed, technical and challenging upgrades and replacements to the crane/structure above Sandia's Z accelerator with minimal impacts to the line schedule.

John Marsh, Donald Bridgers, Nibby Grelle, Josef Mikulas, Steven Fattor, Paul Smith, Rick Ramirez, Greg Kirsch, Roy Gideon II, Martin Hrivnak, Christopher Knight, Bill Griffith, Richard Hendrix, Lisa Webster, Christine Cooper, James Potter, David Hendrix, Nicholas Durand, Bernard Argo, Steven Iveson, Carlos Medrano, Jared Mowrer

(Continued on next page)


Reynolds Salerno
5324


Adam Sandoval
8513


P. Randall Schunk
9114


John Scott
10862


Catharine Sifford
14402


Gerard Sleefe
2614


William Slosarik
6521


Anita St. Onge
12100


Debra Stephens
2995


Peggy Stevens
12202


Bruce Swanson
15415


Douglas Weiss
2333

(Continued from preceding page)

Modern Pit Facility (MPF) Systems Analysis Team

This team's analyses provided insights to stakeholders in the NNSA, Congress, and elsewhere which proved instrumental in achieving CD-0 for the nationally important MPF project.

William Chambers, Todd Owen, Donald Waye, Randall Watkins, John Arfman Jr., Celeste Drewien, Eric Ryder

SC2002 ASCI Tri-Lab Networking Team

This team was in charge of designing and implementing the networking infrastructure for the ASCI Tri-Lab Research Booth at SC2002.

Frank Bielecki, Wayne Butman, Dennis Bateman, Diane Eichert, Vicki Williams, Parks Fields

NATIVE AMERICAN RENEWABLE ENERGY TEAM.

Salinas Development and 2002 Gordon Bell Award Team

Sandia's massively-parallel structural dynamics simulation code, SALINAS, was one of five winners of the prestigious 2002 Gordon Bell Award, awarded at the 2002 SuperComputing Conference.

Kendall Pierson, David Day, Garth Reese, Manoj Bhardwaj, Kenneth Alvin, Timothy Walsh

Custodial Staff for Center 5900 Areas Team

For going the extra mile to always keep our areas clean and presentable for our customers and employees.

Russell McRae, Linda Flanders, Mary Ann O'Toole, Esther Armijo, Robert Pettitt

Integrated Travel Website Team

Representatives from more than 10 departments created an integrated travel website which acts as a single point of travel information for all Sandians.

Marceline Jordan, Wanda Sanderville, Bonnie Apodaca, Valorie Gilliland, Patricia Dickens, Cathy Gamblin, Roy Fitzgerald, Samantha Flores, Camille E.J. Gibson, Earl Conway, Suzette Beck, Beth Potts

High-Temperature Electronics Team

Developed the first ever non-heat-shielded temperature and pressure logging tool and demonstrated it in a 240°C geothermal well.

David Chavira, Randy Normann, Joseph Henfling

Tech Area One Secure Office Building Project Team

This team successfully designed and constructed the second IGPP office building within budget and scope and in 2/3 the normal time.

Ricardo Ortiz, Donald Chall, Patsy Rowland, Lorrett Peterson, Dennis King, Ignacio Chavez, Richard Dramer, Kenneth Kuzio, Marlene Hyde, Consuelo Otero, Christine Cooper, Paul Silva, Patrick Ortiz, Keith Carpenter, Vicente Davis, Laura Draelos, Jenny Dubbs, Gerald Gallegos, Miriam Minton, Richard Ramirez, Daniel Stephens, Orlando Vigil

Model-Based Product Acceptance Quality Product Realization Team

For creation of quality/acceptance processes for NNSA acceptance of a model-based mark quality product without the use of a traditionally required 2-D drawing.

Larry Varoz, Perry Cowen, Patricia Barthelmes, Christopher Arana, Peter Chauvet, Patricia Appel, David Peercy, Geneva Sachs, Raymond Sanchez, Lee Sharma, Sharon Ann Walker, Maria Walsh

Sandia Bio Defense Initiative Testbed Team

The SNL BDI Team achieved distinction for its contributions to the first-ever prototype of an integrated, urban bio-surveillance and response system.

Ed Hoffman, Susanna Gordon, Ricky Tam, Marion Martin, Todd West, Jerry Friesen, Michael Johnson,Tim Sa, Donna Edwards, Mike Goldsby, Donna Djordjevich, Dawn Kataoka Manley, Mark Allendorf, Lisa Rousseau, Kathleen Holt, Heidi Ammerlahn, Jeremy Barney, Kathlen Holt, David Lovato, Larry Brandt, Daniel Lucero, John Brookmann, Greg Mann, Susan Caskey, Jennifer Chan, David McCutcheon, Alan Pomplun, James Ramsey, David Ellis, John Finn, Fred Salas, Kimberly Sandoval, Richard Griffith, Marilyn Hawley, William Wilcox, Howard Hirano, Ann Yoshimura, Major Tim Harris, Alan Zelicoff, Major John Stauffenberg, Jay Spingarn

Move the National Atomic Museum Off Base Team

For exemplary teamwork to relocate the National Atomic Museum from KAFB to Old Town, following the 9/11/01 base closures, to re-open for the public.

Virginia Salazar, Katheryn Diane Mastin, Daniel R.Statler, James McPhee, Tom Salazar, Taffey (Steel) Maddox, Ronald Williams, Rose Mary Eakin, Shauna Jennings, Betsy Neuhaus, Anisha Marche Quiroz, Merri Lewis, James Walther, Samuel Bono, Chelsea Buffington, Leland Byers, Keith Carpenter, Donald Carson, J. Delene Cox, Linda Cusimano, Marca De La Porte, Michael DeWitte, Sophia Garcia, Leslie Heffner, William Hill, Cynthia Kajder, Rebecca Kenny, Carter Kidd, Arlene Lucero, Patrick Manke, Kathleen McGaughey, Diane Ortiz, Jay Peterson, Darline Polonis, Kamyar Rahimian, David Rider, Michael Rios, Phillip Rivera, David Ropp, Rebecca Rosten, Susan Sackinger, Amos Sanchez, Elizabeth Sanchez, Juanita Sanchez, Shirley Sandoval, Edward Schultz, Robert Setchell, Ronald Seylar, Anthony Sparks, Moss Tallant, J. Pace VanDevender, Steven Weddle, William Williams III, Gila Yaniv, Ernest Zamora

Legal Division ASA Team

The ASAs perform a range of activities that provide efficient legal support and increase the availability of legal services to Sandia.

Joyce Detmer, Barbara Glasco, Laura Dalton

Current Stack Production Team

During 2002, the Current Stack Production Team significantly increased their delivery rate to exceed customer requirements and prevent delays to the NG production schedule.

Carlos Cisneros, David Schroeder, Johnny Moya, Tom Chavez, Warren Lubin, Johnny Rice, Roderic Nagel, Robert Gallegos, Margaret Sanchez, Angel Vega, Rita Coslow, M. Victoria Abeyta, Lisa Romero-Spencer, Scarlett Deninno, Phyllis Chavez

Division 14000 Financial Team

The Division 14000 Financial Team successfully managed all areas of funding within the division ($123M) at planned costing levels for FY02.

Anna Baca, Barbarba Jaramillo, Arba Smith, Nikki Chavez, Mary Austin, Carla Chirigos, Rebecca March, Teresa Chavez, Emily Sers, Cynthia Cordova, Mary Sanchez, Rebecca Martinez, Angela Ortiz, Denise Maestas, Rebecca Campbell, Marin Noriega, Jesus Ontiveros

MC4277 Brazed-Subassemblies Process Improvements Team

The team's efforts resulted in increased yield, reduced cycle times, lower costs, and increased customer satisfaction in Center 14400's production of war-reserve MC4277 neutron tubes.

Bernard Jacksits, J. Franklin Dempsey, Evan Dudley, Stephen Crowder, John Brainard, Louis Malizia Jr., S. Gregory Neff, Rita Casias, Robert Hatcher, David Schmale, Matthew Senkow, Ralph Chavez, Dennis Anderson, Bobby Baca, Robert Boney, Edwin Bryce, Leslie Cumiford, Mary Gachupin, Brian Gutierrez, James Williams

Exceptional service
Leadership
Technical excellence

Intelligent Mobile Land Mine (IMLM) Project Team

The IMLM Team is recognized for technical creativity in developing a mobile anti-tank landmine system enabling compliance with the 1997 Ottawa Convention banning anti-personnel mines.

J. Brian Rigdon, John Harrington, Jon Bryan, Gary Fischer, Jason Neely, Raymond Byrne, Jason Strauch, Barry Spletzer, Lemuel Harvey, Lisa Marron, Dan Schmitt, Charles Little, John Feddema, Joshua Fowler

Neutron Generator Production and Support Team

The Neutron Generator production team met MC4380A customer ship requirements while simultaneously achieving the Lockheed Martin standard for 6S.

John Hart, J. Anthony Wingate, David Lopez, Moses Jones, E. Daniel Pettiford, Robert Hill, Jay Newquist, Timothy Montoya, Muhammad El, Patrick Jaramillo, Charles Salazar, Edward Cordova, James White, Mary Uribe, Deanna Sevier, Debra King, Lisa Castillo, Gloria Gallegos, Toni Linebarger, Linda Wood, Jacqueline Scoggin, Annie Nickerson, Kent Robbins, Glenn Roubik, Libby Valdez

Target Characterization Vehicle – 1 (TCV–1) Team

The TCV-1 Team designed, built, and fielded in a five-month period a suite of new targets to collect characterization and performance data for the MDA.

Martin Imbert, Keith Danielson, Melvin Krein, Robert Brown, Brian Pardo, Kenneth Penn Jr., Bob Dubois, Johnny Ruybal, Matthew Sena, Douglas Cotter, Douglas Pastor, Jeff Morgan, Gary Ashcraft, Randal Lockhart, Daniel Talbert

Sandia Strategies of the War on Terrorism Team

For successfully developing concepts that have impacted strategic thinking at the national level and at Sandia about the long-term War on Terrorism.

Ronald Pate, James Gosler, K. Terry Stalker, Ronald Trellue, Robert Floran, Gary Jones, Basil Hassan, John Whitley, Judy Moore, Thomas Karas, Rebecca Horton, Daniel Horschel, Nancy Kay Hayden, John Russell, William Burcham, Richard Craft, Patrick Eicker, Josh Ewing, Vipin Gupta, John Hinton, Larry Hostetler, John Kane, Jason Andrew Libersky, Kenneth Ray Miller, Timothy Moy, Regan Stinnett, Maher Tadros, Jessica Turnley, Benjamin Wu

Production Procurement Team

The Production Procurement Team has worked diligently to increase value to their customers by increasing supplier's on-time delivery performance and reducing the procurement cycle time.

Leann Jojola, Joel Boyer, Cynthia Tenorio, Faye Long, Lisa Montoya

IDF-3 Real-Time Experiment Team

For demonstrating new weapon monitoring concepts that are broadly applicable to the enduring stockpile.

Mike Devay, Gary Kirchner, Beth Wichman, Dan Fonte, Jeff Jortner, Judy Lau, Christian Schultz, Yuki Ohashi, Bruce Brunett, Maulik Shah

Model Validation and System Certification Test Center Line Item Project Team

The Model Validation and System Certification Test Center project was the first Sandia Line Item Construction project to utilize a design/build acquisition strategy.

John Eisenberger, Gilbert Aldaz, Brett Locke, Edward Garavaglia, Jay Peterson, John Rathbun, Roy Gideon, Richard Elliott, Carlos Medrano, Thomas Romero, Vicki Williams, Dwayne Knirk, James Nakos, David Hendrix, Cyndi Silva, Ricardo Ortiz, Julie De La Cruz

Native American Renewable Energy Team

With a customer focus and technical assistance provided to empower tribes, the Native American Renewable Energy team has made exceptional contributions to the program's development.

Sandra Begay-Campbell, Constance Brooks, Laurence Brown, Marlene Brown, Roger Hill, Paul Klimas, Deborah Tewa, Michael Thomas, Gabriela Cisneros, Andy Rosenthal

Sandia Classified Ads

MISCELLANEOUS

HITCH/RECEIVER, Class III, 2-in. ball, for '98-'03 Dodge Ram pickup, excellent condition, $75 firm. Barreras, 246-8285.

SOFAS: Southwest-style, $160; emerald-green velour, $120; front door, 36-in., all in excellent condition. Rutten, 869-6381.

BOOK SET, *Great Books of the Western World*, w/bookcase, $100. Smith, 299-6873.

ANTENNA, Mosley Ham-Triband, 3-element Yagi, 40-ft. Rohn tower, rotor & cable, $300 OBO. Schrader, 256-7508.

VACUUM TUBES, 600, & antique tester, $75; solid-state scope, Techtronix, single channel, $50. Meikle, 299-4640.

JAPANESE OBI CLOTH, over 12 ft. long, 27-in. wide, made before 1940, beautiful, excellent condition, $400 OBO. Stamm, 255-2640.

SOLAR COLLECTORS, 3 parabolic trackers, free for removing from rooftop, gearbox gear is broken. Conrad, 299-5316.

FOLEY/BELSAW, Model 1055 Sharp, all saw grinding equipment, w/many accessories, & chain saw attachment, $1,000. Postenrieder 299-8388.

DISHWASHER, Wards, black, works well, leaks from door sometimes, $25. Lenberg, 266-8988.

DESK CHAIRS, Chairworks, leather, wheels, swivel, tilt, $60 OBO; armed chair, antique oak, great condition, $40 OBO. Franz, 867-2043.

BRAIDED RUG, rectangular, 6' x 9', brown, red, blue, almost new, $40; treadmill, $20. Palya, 881-2720.

SOUTHWEST AIRLINE TICKET, Rapid Reward, 1-way, expires 8/28, $150. Young, 821-9852.

SOUTHWEST AIRLINE VOUCHER, Rapid Reward, roundtrip, expires 8/03, $300 cash. Zamora, 899-1326.

ELECTRIC DRYER, Kenmore, 110 Heavy Duty, used 2 wks., $175; organ, needs repair, free, you haul. Maestas, 897-2009.

SAW, Craftsman, 10-in. radial arm, w/stand, new, never used, $450. Jordan, 299-4004.

BACKPACK, Trailwise, external frame, blue, main compartment 4,200 cu. in. capacity, 4 side pouches, tent & bag straps, used twice, $25. Klarer, 344-0612.

COFFEE TABLE, 1-in. beveled edge glass top, solid wood pedestal, w/brass trim, 44-in. diameter, $160. Barnard, 856-1952.

ENGINE, '89, 2.2L TBI, 5-spd. manual transmission from Plymouth Horizon, complete, was running when pulled, $250 OBO. Mulhall, 892-2131.

SUNGLASSES, Ray Ban Aviator, wrap-around, wire-rimmed, glass lenses, hard case, brand new, $25. Dwyer, 271-1328.

COCKER SPANIEL PUPPIES, AKC registered, 2 black males, $275 ea.; 2 chocolate males, $450 ea.; 1 black female, $300, 1st shots. Tapia, 550-1015.

LOFT BED, oak, Autumn Wood, $350; Epson 2000P Archival ink printer, 13 x 19 prints, $280. Davies, 298-8928.

BED LINER, All-Star, fits '95 Toyota pickup, may fit new Toyota, good condition, free. Torres, 440-6288.

BASKETBALL HOOP, portable, w/2 balls, very good condition, $80 OBO; UMAX SCSI scanner, $50 OBO. Poulter, 291-0607.

BLACK LAB MIX, adult, good companion, suitable for family w/older children, needs good home. Manginell, 298-6188.

APPLIANCE CART, 3-tier/elec., $15; glass table, w/4 chrome/fabric chairs, $120; Jaguar luggage, $30; oak/cane bench, $35; miniblinds. Lucero, 292-1955.

FIREWOOD, free; trashcans; microbiology supplies; fireplace insert, 32" x 20" x 19", $100. Alexander, 291-8028.

CHAIR & ROLLING OTTOMAN, family room, forest green, Flexsteel, excellent condition, $300. Dobranich, 298-4547.

PERSIAN RUGS, 2, hand-knit, 5' x 9', Naeen design, wool on cotton foundation, w/silk highlights, appraised at $2,200, asking $1,899 ea. Mohagheghi, 271-0724.

GO-KART, 5-hp., used very little, $500 OBO; foosball table, $150 OBO; aquarium, 50-gal., complete, $200 OBO; ping-pong table, $100 OBO. Campbell, 891-7655.

OVERSTUFFED CHAIRS, 2, mauve/plum/blue plaid, $50 OBO. Kemme, 821-6156.

PROJECTION TV, 40-in., Mitsubishi, $150. Weagley, 821-4263.

GOLF CLUB, Tour Edge UltraLite driver, graphite shaft, used twice, $75. Wells, 292-0179.

SOUTHWEST AIRLINE VOUCHER, expires 1/04, $295. Smith, 220-1116.

GARDEN WINDOW, 3' x 3'; translucent glass sliding window, 2' x 3'; misc. aluminum screens; used, all good, $50. Hunter, 294-2877.

WATER LILIES, tropical, night blooming, red & white, $15 ea.; water hyacinths, $2 ea. McDonald, 833-0332.

CONTEMPORARY SOFA, excellent condition, $225; coffee table, 2 end tables, solid wood, $60 ea. OBO. Hassan, 822-9544.

PICKUP SHELL, 4' x 8', aluminum, w/sliding front window, & dark curved side windows, $100 OBO. Conrad, 298-9729.

MARCH GYM, $35; K2 bike, full suspension, $500; Saris roof bike rack, $115; '68 Camaro wheels/caps, $200. McCrory, 220-8326.

TWIN BED, black metal frame, mattress & box spring, new, $125. Sargent, 323-9530.

GRILL, Char-Broil Precision Flame 8000, $75; horse tack & supplies. Smith, 890-5388.

ALTO SAXOPHONE, Yamaha, w/case, very good condition, $450. Ghanbari, 883-3891.

COMPACT FLASH MEMORY CARDS: 16MB, $15; 32MB, $25; 900MHz, wireless headphones, rechargeable, 2 pair, $45 ea. or $80 both. Cocain, 281-2282.

LAPTOP, PowerBook G4 Titanium, 400MHz, 1GB RAM, 10GB HD, OS X, Airport, external CD-RW, keyboard, mouse, $1,599. Rider, 710-3557.

GLASS END TABLE; dining table, w/6 chairs; 2 bar stools; dormitory refrigerator; entertainment center, 36" x 55" x 17", oak. Hickox, 299-0772.

OFFICE DESK, L-shape right, all oak, w/hutch, $300 OBO. Crown, 856-9779.

SOUTHWEST AIRLINE TICKET, roundtrip, expires 6/04, $325. Epperson, 271-9880.

EXERCISE BICYCLE, recumbent, almost new, w/instruction manual, assembled, $65 OBO. Jensen, 892-8761.

FOUR-POSTER BED, king-size, w/mattress & canopy, nightstands, dresser, bureau w/mirror, $1,200 OBO; office desk, $600 OBO. Childers, 980-8227 or 275-8855.

INK CARTRIDGES, Epson, black: 8 @ $5/ea., 30 @ $2/ea., color: 12 @ $3/ea. compatible w/Stylus Color 480SX(U)/580, Stylus C40UX(SX) & C20UX(SX). Veltkamp 271-0325.

OFFICIAL BALLOON FIESTA ITEMS: posters, cards, coins, plates, programs, call for prices. Keiss, 299-6610.

ORGAN, Kimball M75 Temptation, Spanish pecan finish, 2 44-note manuals, Leslie speaker, numerous features, $1,200. Kobs, 281-1102.

SOFA SLEEPER, queen, matching recliner, good condition, $250 OBO. Gallegos, 804-3758.

WATERBED, queen-size, w/headboard & drawers, good condition, needs new liner, free, you haul. Streit, 858-1839.

INFANT CAR SEAT, Fisher Price; Century youth car seat; Cosco high chair, Sealy crib mattress. Mounho, 299-0883.

COMPUTER DESK, 9 mos. old, Office Max, excellent condition, $100; wicker rocking chair, w/off-white cushion, $75. Smith, 259-9441, leave message.

GEAR SET, 4.10 ring & pinion, for Dana 60 differential, $150. Ritchey, 298-4311.

UTILITY OR MOTORCYCLE TRAILER, 4' x 8', $90. Jones, 843-9645.

ETHERNET HUBS, 10B-T, w/AC adapters, great for home LAN, 8-port, $15, 4-port, $10. Ennis, 301-6228.

EVENFLO ULTRASAUCER, $30; Graco 6-spd. swing, $30; jumpster, $15; Rainbow vacuum, $200; infant clothes. Radloff, 899-5286.

AIR CONDITIONER, 1 room, portable, white, Westinghouse, refrigerated. Reynolds, 299-7204.

FURNITURE: couch, loveseat, chair, $500; 5-pc. bedroom set, $400; kitchen set, $300; patio set, $200, very nice. Stanojevic, 875-1969.

NUBIAN GOATS, 12 wks. old, 2 doelings, 1 wether, for pets or dairy only, $30 ea. Heald, 281-7885.

SWAMP COOLER, portable, freestanding, 22" x 22", free. Madrid, 459-5087.

ELECTRIC STOVE, Kenmore, white, apartment-size, hardly used, excellent condition, sells for $450+, asking $275 OBO. Messex, 899-5033.

DINING TABLE, 42-in. round, oak, w/leaf & 4 swivel chairs, $200; double Craftsmatic adjustable bed, $1,450. Campbell, 294-6000.

OAK COFFEE TABLE, 60" x 24", heavily built, beveled glass top, shelf below, excellent condition, $55. Mendel, 299-6785.

How to submit classified ads

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

- **E-MAIL: Michelle Fleming (classads@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 Michelle at 844-4902. 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 (If you include a web or e-mail address, it will count as two or three words, depending on length of the address.)
2. Include organization and full name with the ad submission.
3. Submit 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**

TRANSPORTATION

'91 GEO METRO HATCHBACK, 3-cyl., 4-spd., 4-dr., looks ugly but runs, $200 OBO. Carroll, 401-0988.

'90 DODGE COLT VISTA WAGON, AT, PS, PB, AC, seats 7, 99K miles, exceptional condition, must see, $1,500. Roeschke, 238-0362.

'92 FORD RANGER XLT, 4L V6, LB w/cover, 80K miles, $2,500 OBO; '84 Chevy G20 conversion van, 71K miles, like new, $3,000 OBO. Shaut, 286-1235.

'90 VW GOLF, 4-dr., AT, AC, new tires, battery, starter, complete exhaust system, $1,250. Rudys, 281-5692 or 239-8248.

FORD CLUB VAN, 460 V8, 15-passenger, blue book $1,815, asking $900 OBO. Self, 296-4137.

'95 DODGE NEON, 4-dr. sedan, new transmission, & AC comp., 108K miles, well kept, runs well, $1,800. Tessler, 797-3807.

'86 ACURA INTEGRA LS, 1.6L, 5-spd., 5-dr., PD, PW, AC, 108K miles, fair condition, runs great, $990. Vargo, 294-8226.

'84 GMC RALLY STX VAN, 5.0L, V8, new transmission, front/rear AC, 12-passenger, 157K miles, good condition, see at KAFB car lot, $3,000 OBO. Schoof, 828-2510.

'88 VW VANAGON, 4-spd. manual, 7-passenger, good engine, tires & inside, body fair, 85K miles, $1,750 OBO. Horton, 883-7504.

'99 CHEVY CAMARO SS CONVERTIBLE, white/white top, fully loaded, new tires, 1 owner, excellent condition. Carr, 890-0075.

'00 FORD EXPLORER, 4x4, cruise, luggage rack, power accessories, CD, step bar, tan, 51K miles, $14,000. Hartwig, 797-8406.

'92 TAURUS, 3.8L, V6, AT, AC, PL, PW, power seat, cruise, tilt, gray, records, excellent condition, $1,850. Cheng, 730-7808.

'89 VOLVO 240DL, sedan, 5-spd., AM/FM/CD, cold AC, new tires, white, 162K miles, runs great, $2,450 OBO. Martinez, 610-9174.

'89 MAZDA MX-6, manual, all power, AC, sunroof, AM/FM/CD, CC, Viper alarm, 150K miles, very dependable, $2,000. Valdez, 459-0748.

'00 TACOMA SR5, ext. cab, V6, 5-spd., silver, brush guard, alarm, custom wheels, 38K miles. Marshall, 304-4231.

'01 MUSTANG GT CONVERTIBLE, AC, all power, leather, chrome rims, 19K miles, new condition, paid $42,000, asking, $19,000. Lucas, 899-6904.

'98 HONDA ACCORD EX, 2-dr., V6, AC, power everything, CC, AM/FM/CD, dual front air bags, ABS, leather, $10,500 OBO. Sickles, 299-9650.

'00 TOYOTA CAMRY LE, tan, 50K miles, good condition, $12,000. Lambert, 899-8817, ask for Linda, after 6 p.m.

'93 FORD F-250 TURBO DIESEL XLT, ext. cab, AM/FM/CD, great condition, $7,000 OBO. O'Neill, 385-1456.

'97 OLDSMOBILE ACHIEVA SL, 4-dr., fully loaded, security system, 38K miles, excellent condition, $6,500. Hale, 298-1545.

'86 FORD F150 XL, Supercab, 4x4, 351 V8, AT, AC, CC, white, camper shell, 100K miles, good condition, $3,000. Lukens, 286-6482.

'99 PLYMOUTH BREEZE, Expresso Model, 2.4L, AT, 42.5K miles, excellent condition, $4,995. Abeyta, 463-5529.

'02 HONDA ACCORD SE COUPE, AT, PW, PL, CD, sunroof, security, 21K miles, $16,700. Zamora, 899-1326, ask for Paul.

'00 CHEVY MALIBU, loaded, low mileage, $11,000 OBO. Ulivarri, 281-1897, ask for Kris.

'96 PONTIAC TRANSPORT SE, V6, AT, PW, PL, power sliding door, front/rear AC, seats 7, red/tan, 37K miles, great condition, $6,200. Funkhouser, 857-9245.

'94 FORD RANGER XL, Supercab, 2WD, 4-cyl., 5-spd., 87K miles, good condition, $3,900 OBO. McBride, 298-2273.

'72 FORD MUSTANG MACH 1, good body, no rust, needs restoration, lots of extra engine parts, $6,000. Pierce, 872-0521.

'92 FORD MUSTANG LX, 5.0L, AT, PD, PL, CD, alarm, 88K miles, excellent condition, $6,000 OBO. Allen, 293-0834.

'90 NISSAN 300ZX, 2+2, AT, CD, new tires, suspension & timing belt, 140K miles, blue book $6,000, asking $4,950. Rebolledo, 573-2042.

'85 CHRYSLER 5TH AVENUE, loaded, garaged, 38K miles, $4,500; '95 Cadillac DeVille, loaded, garaged, 78,210 miles, $9,500. Salazar, 281-6825.

RECREATIONAL

BOAT, 16-ft., 50-hp. engine, w/trailer, needs work, you move it. Barnett, 281-9056, call between 2 and 4 p.m.

FISHING BOAT, 15-ft., aluminum, 3-hp Mercury, 20-hp. Evenrude, anchors, oars, lights. Sharp, 299-3889.

'96 SEARAY 175, Bowrider, I/O, Bimini top, innertube included, $7,500; '99 Chevy K2500 crew cab. Carter, 830-1067.

'85 SUZUKI GS550L, tires like new, runs great, $700 OBO. Noble, 856-0955.

'96 PLAYMORE 5TH WHEEL, 30-ft., new tires & battery last year, clean, NADA $18,000 OBO. Rebarchik, 299-1385.

'99 MOTORHOME, 35-ft., loaded, many extras, 3-yr. warranty, 16K miles, will negotiate. Plut, 864-4308.

'73 HOLIDAY RAMBLER, 29-ft. travel trailer, excellent condition, $4,500. Dominguez, 877-0643 or 573-3384, ask for Tom.

'95 POLARIS JETSKI, seats 3, w/trailer, plus extras, excellent condition, $3,500. Walters, 857-9767.

'79 COACHMAN CLASS C RV, 22-ft., Chevy chassis, 350, interior redone, 38K miles, $7,500. Gutierrez, 239-7059.

'86 PACE ARROW ELEGANZA, 31-ft., 454 Chevy, 2 AC, 6Kw Onan Steer-Safe, 45K miles, $10,500. Stixrud, 298-0478.

'00 GEORGIE BOY MOTORHOME, 33-ft., fully loaded, 18-ft. awning, selling because of health, paid $70,000, asking $46,500. Tennant, 275-8014.

'89 ALJO 5TH WHEEL TRAVEL TRAILER, stove, AC, full bath, sleeps 6, very good condition, $5,900. Turnbull, 842-5130.

BIKES: girl's Schwinn 10-spd., $40; girl's Nishiki 10-spd., $60; boy's Peugeot 10-spd., $50, all 3 $125. Luna, 884-5023.

'95 ROCKWOOD POPUP TRAILER, sleeps 8, hot water heater, refrigerator, shower, awning, heater, like new, $4,000. Blankenship, 296-9580.

'89 5TH WHEEL TRAILER, 32-ft., brown/white, $8,300 OBO. Chapman, 802-380-6154.

REAL ESTATE

JAMES MOUNTAIN CABIN, power, water, sewer, furnished, 35 acres on Las Valas, sleeps 10, $625,000. Elliott, 299-2782.

2-BDR. HOME, 1 bath, 2 yrs. old, 885 sq. ft., large lot, San Jose community, $75,000. Lovato-Teague, 298-1576.

4-BDR. CUSTOM HOME, 2-1/2 baths, .89 acre, views of east/west, over-sized garage, near Cottonwood Mall, $245,000. Eidemiller, 897-2914.

3-BDR. HOME, 2 baths, 2-story, large kitchen, backyard shed, front/back landscaping, excellent condition, near Unser/98th, $124,000. Armijo, 836-2558.

3-BDR. TOWNHOME, 2-1/4 baths, 2-car garage, 1,340 sq. ft., beautiful home, Ladera area, $111,500, only $600 down. Butler, 401-0617.

4-BDR. HOME or 3-bdr. + office, 2-car garage, 1,553 sq. ft., Paradise Hills, $134,900. Urrea, 890-7902, ask for David.

4/5-BDR. HOME, 3 mos. old, 3,364 sq. ft., 3-car garage, RV parking, Rio Rancho/Enchanted Hills, $269,900. Thomas, 294-2960.

10+ ACRES, San Pedro Creek Estates, breathtaking 360° views, 4 mountain ranges, Santa Fe lights, spectacular. Bendure, 281-7441.

3-BDR. HOME, 1-3/4 baths, 1,600 sq. ft., double garage, workshop, totally remodeled, NE, $129,900. Wronosky, 296-7265.

3-BDR. HOME, 1-3/4 baths, 2-car garage, pitch roof, new appliances, backyard auto sprinklers, Osuna/Moon. Carson, 822-0142.

3-BDR. HOME, 2 baths, 2-car garage, 2-story, ~1,800 sq. ft., 5 yrs. old, east of Los Lunas, $129,000, slightly negotiable. Johnson, 865-0994.

1.482 ACRES, Daniel Circle, in NW valley, water, electricity, sewer. Jones, 925-443-4051.

3-BDR. HOME, 2-baths, 2-car garage, FP, sky lights, landscaping & more, corner lot, immaculate, 702 Marigot Court NW, $124,900. Bardwell, 269-3717.

3-BDR. TOWNHOME, 2 baths, 2812 Sunbird NW, $119,000. Hatcher, 839-4726.

FOOTHILLS HOME, views, close to Sandia, 3,200 sq. ft., huge garage, all electric, efficient, $269,000. Caruthers, 296-5953.

3-BDR. HOME, separate office, near base/UNM, pool, fireplaces, wood floors, 1,480 sq. ft., charming, $144,000. Davis, 254-1349.

WANTED

GOOD HOME, aquatic turtles, 4, healthy red-ear sliders. Davenport, 281-9080.

ROCK TUMBLER, for classroom demonstration, Shandiin Child Development Center. Giersch, 899-6005.

GOOD HOME, convict cichlids, gray w/black stripes. Leisker, 293-3075.

BANJO, struggling biologist birdwatcher daughter desires to purchase, it will have a good home. Borgman, 299-6010.

EXERCISE VIDEOS, interested in whatever's available. Wilcox, 884-0217, dwilcox@byu.edu.

PAPER CUTTER, Guillotine-type, 15-in. or longer. Lewis, 881-3137.

CONTRACTORS TRANSIT, for vertical & horizontal angles. Fink, 286-1858.

WORK WANTED

HOUSE/PET SITTING, college student, available until Sept. 22. Roehrig, 281-2695, ask for Jessica.

LOST & FOUND

LOST: sterling silver bracelet, hook & eye clasp, snake-like links. Lopez, 844-1279.

Congratulations

Katelyn Shewnack (10015) and Brian Mileshosky (2955), married in Rio Rancho on June 21.

To Robyn and Craig (6541) Lawton, a daughter, Elizabeth Josephine, June 15.

To Janice and Andrew (6541) Kazensky, a daughter, Onica Danielle, June 25.

Sandia helps 310 state businesses in NMSBA program

Sandia assisted 310 small businesses throughout New Mexico in 2002, helping to solve pressing technical problems ranging from how to detect and extract oil from the ground more efficiently to developing better packaging to prevent fragile ceramic tiles from breaking during shipping.

The Labs provided the assistance under a program that went into effect in mid-2000 after its approval by the New Mexico Legislature. The New Mexico Small Business Assistance (NMSBA) program allows Sandia to give up to $5,000 a year worth of technical advice and assistance to small businesses in the Albuquerque/Rio Rancho area, and up to $10,000 a year worth of help to small businesses outside that area.

"We are excited to see the program grow each year; in fact we were oversubscribed last year. We are especially happy to help small businesses that would find if difficult, if not impossible, to find help solving difficult technical problems," says Lenny Martinez (14000), VP for Manufacturing Systems, Science & Technology, and the NMSBA program director. "And this assistance, in turn, is helping small businesses grow, increasing the businesses' capability to support not only the labs, but to become suppliers to companies outside New Mexico. And, it is generating additional employment opportunities for New Mexico."

What makes the program unique is that the state does not allocate money for the program. Instead, in exchange for helping small businesses, the state "forgives" Sandia a portion of the gross receipts taxes it pays each year. During 2002, Sandia received $1.67 million in tax credit, 77 percent of which went to small businesses in rural New Mexico and 23 percent to small businesses in Bernalillo County. Sandia is the state's single biggest gross receipts taxpayer at an estimated $62 million for FY03.

There are few requirements for small-business participation — mainly that companies must be bona fide for-profit New Mexico small businesses (500 or fewer employees), and Sandia can help only when such help isn't available for a reasonable cost through private sources.

Success stories

A few examples:

Providence Technologies Inc. of Roswell, which leads a consortium of small New Mexico oil producers, sought assistance in locating hard-to-find oil deposits using seismic modeling. Marianne Walck, Manager of Geophysical Technology Dept. 6116, led Sandia's effort. Her department focuses on solving problems in fossil energy, hazardous and nuclear waste management and restoration, defense, nonproliferation, and energy-related basic research. Sandia was able to provide $40,000 in assistance in 2002 since the consortium consisted of multiple companies, and that amount is growing this year as the project continues.

"When people think of oil companies they often think of the Shells and Exxons, but there are many small independent companies out there that are left out in the cold," Marianne says. "We are helping the small independents, which helps the domestic energy supply. This is also good because we're helping New Mexico at the same time."

El Kabode Tile of Las Cruces makes custom handmade ceramic tiles using old-world methods that they then ship throughout the country. Each tile is usually part of a larger pattern and therefore unique. If any tile breaks during shipping, the entire pattern is spoiled. David Szklarz of Materials Mechanics Dept. 9123 helped oversee a series of stress tests and container-design analyses that led to the design of a custom container. The container consists of foam-lined interior walls. Each tile was then wrapped with bubble shrink wrap and then the tiles were placed on end in the container like a loaf of bread.

"This turned out to be both effective and user-friendly," David says. "It wasn't a highly engineered operation, but it did solve the problem, and our work helped let the community know that Sandia has a community partnership with outside industry."

Results

Results of the 2001 NMSBA program show for each dollar spent on an assistance project, 98 cents was recovered by the state through taxes within the first year. Over a one-year period, 44 jobs were retained and 68 new jobs were created. The results also showed that participating New Mexico small businesses reported a total of $3,380,000 of increased revenue and a $1,703,500 decrease in operating costs, and participating small businesses spent $2,147,500 to expand operations and $828,600 on local goods and services.

More information on the NMSBA program is available from Mariann Johnston in Sandia's Regional & Small Business Partnering Dept. 1302, 284-9548, mjohns@sandia.gov.

'Teacher's Camp' encourages materials careers

HIGH SCHOOL TEACHERS, from left, Donna Ortiz of Villanueva, N.M., and Kelly Weiler of Hatch, N.M., learn about materials science with Karen Knavish of Tempe, Ariz. Steve Kaestner of Albuquerque's Jefferson Middle School works in the background.

How can college materials departments attract more students? One way is to help high school teachers learn more about materials, and then teach that knowledge in an interesting manner, says Sandian Bruce Kelley (6245), who helped materialize an innovative, week-long Teacher's Camp on materials in Albuquerque in June.

At the Albuquerque Teachers Camp, the organizers and sponsoring organizations — Sandia under the leadership of Al Romig (VP 1000), Lockheed Martin, and ASM International, the Materials Information Society — provided funds for meals and housing. Eldorado High School contributed access for participants to its science education facility, the state's newest. Participants provided their own transportation to and from the camp.

About half of the 30 available slots were filled by Albuquerque-area teachers, with the other half from outlying areas in New Mexico and others from throughout the southwestern US.

Said Al, "Sandia supports workshops like these because they offer us leverage. Each teacher over a career touches thousands of students. The energy and passion these teachers already had was remarkable. Our goal was to enhance this — to help teachers take science and wrap it up in something students can touch in everyday life, and to help students see the materials components in sports, cars, airplanes, electronics, and biomaterials." He described the workshop as "a smashing success."

Bruce anticipates increased participation for next year's session.

ASM International, The Materials Information Society provides information and data on metals, engineered materials, and processes. Al is a past president of the 36,000-member group, which is headquartered near Cleveland, Ohio.

— Neal Singer

Feedback

***Q:** Why do we keep receiving new sensitive property (computers) without property numbers? Who is responsible for applying property numbers? After the recent problems at Los Alamos National Laboratory, I would think that Sandia would not want to rely on the recipient to request a property number (checks and balances are important). Most end users wouldn't even realize an s-number hadn't been applied. I have taken the time to check into the Business Rules and find there is no mention of who is responsible for applying said property tags to newly acquired property. I have been a Sandian for many years, and it has only been during the last few that we've consistently been delivered new property from receiving without tags. So what's the deal?*

A: Tagging property, and thereby gaining administrative control of the asset, is the first, critical step in property management. In terms of volume, Sandia has a good system of identifying property upon receipt and of partnering with JIT vendors to apply property tags appropriately — last year more than 8,000 property items were properly added to the fixed assets database.

However, we are aware from field sampling and recent customer feedback that an increasing number of items are slipping through the system unidentified and untagged, thereby causing costly rework to both the line and to property management workers. While the second line of defense is to have the owner request a missed number after receipt of the item, we realize that this is not the preferred solution. The preferred solution is having the item tagged correctly to begin with.

To mitigate the risk of trackable assets not being properly identified, the Procurement and Logistics Center is reviewing the major acquisition methods used in Sandia's supply chain (JIT, PO, Procurement Card, etc.). Through the IES High Leverage Project (Integrated Management of Property) there are teams looking at solutions more preferable to line customers. Some of the solutions will be systematic changes; some will be application of technological tools. We are also clarifying our guidance to the line regarding property responsibilities and resources.

I encourage you to contact David De Polo, Property Manager and Project Lead for the Integrated Management of Property, at 844-6991 with further input regarding tagging issues.

— Dave Palmer (10200)