WHERE THE SEA MEETS THE SHORE — Sandia researcher Michael Ross displays a mockup of a new barrier system he and his team are developing to provide a physical security barrier at the so-called land/water interface. The sensor-embedded barrier blocks unwanted penetration while still allowing tide and small wildlife full pass-through capability. The photograph here was shot in front of the 285,000-gallon ocean tank at the Albuquerque Aquarium, a facility of the Albuquerque Biological Park. See the story on page 3. (Photo by Randy Montoya)

CHANGE @SANDIA

DOE-mandated random drug testing program to begin

Starting Oct. 13, all Sandians will be subject to random drug testing per mandate of DOE Secretary Samuel Bodman. Up to 30 percent of the workforce may be tested in any year. See the story on **page 5.**

Sandia LabNews

Vol. 60, No. 16 August 15, 2008

Managed by Lockheed Martin for the National Nuclear Security Administration

Sandia National Laboratories

Interns bring enthusiasm, fresh perspective to Sandia

By Patti Koning

Summertime means longer days, warmer weather, and often, a break from the regular routine. For a number of Sandians, that break includes mentoring an intern through the Enabling Predictive Simulation Research Institute (EPSRI) [www.esc.sandia.gov/epsri]. This program, now in its second year, brings dozens of graduate students from across the country to Sandia to work on focused projects in the engineering sciences.

"The interns gain a sense of what kind of engineering and research work is happening here and they get to experience our research-oriented and collaborative environment," says Jonathan Zimmerman (8776). "The mentors get a sense of research happening outside the Laboratory in the academic community and how our work relates."

The EPSRI started last year as a joint effort between Centers 8700 and 1500 to perform cutting-edge research and development that enables the application of predictive simulation capabilities. Jonathan coordinates the EPSRI program in California, along with Scott James (8757) and James W. Foulk III (8776). The New Mexico program is coordinated by Basil Hassan (1541).

This summer, 30 interns split evenly between the California and New Mexico sites spent 10 weeks working in technical areas such as structural dynamics, solid mechanics, material mechanics, electromagnetics, electrical science, and thermal, fluid, and aero sciences.

SIX DEGREES OF NEVILLE MOODY — Jay Oswald of Northwestern University takes a look at University of Minnesota student Lucas Hale's work. Hale's advisor, Bill Gerberich, advised both Sandian Neville Moody and Washington State professor David Bahr. Also shown are Genevieve Farrar of the University of Washington (back to the camera) and John Yeager of Washington State University. (Photo by Randy Wong)

During the summer, EPSRI hosts a series of staff technical talks for the interns. "The purpose is to give the interns a flavor of how we use our engineering education to tackle the problems we face here," says Jonathan. The students present their work in a seminar at the end of their internship.

(Continued on page 3)

New lightning detection system in place at Sandia for lightning season

Tool helps keep outdoor workers safe

By Chris Burroughs

Just in time for lightning season, Sandia installed a new detection system that in real time depicts the exact location of lightning strikes.

"This is a new tool to assist with making outdoor workers — those involved in testing, maintenance, construction, and explosives — safer," says Labs' meteorologist Gina Deola (4133). She, together with Bill Wolf in the Emergency Operations Center (EOC) (4136) and Roger Smith with Explosives Safety (4122), arranged for the new system. It replaces two older detection systems, one operated out of the EOC and one used by explosives groups that was outdated and no longer supported by the manufacturer.

The older EOC system showed lightning strikes in quadrants on a computer screen; the whole quadrant would light up. The new system, an off-the-shelf application made by Vaisala, provides real-time access to cloud-to-ground lightning data from the National Lightning Detection Network. Actual locations of lightning strikes are identified with small colored lines — red for up to 10 minutes earlier and dark blue for one hour earlier.

To assist with getting outdoor workers the information, the EOC issues a lightning advisory when lightning occurs within 20 miles of Sandia or there are deteriorating weather conditions over the Labs, and a lightning warning when lightning is occurring within 10 miles of Sandia or lightning over the Labs is imminent. The advisories and warnings are issued to personnel on a weather advisory list in the EOC.

Additionally outdoor workers and those with weather-sensitive operations, who have alphanumeric pagers, have the option to be text-paged the advisory

(Continued on page 4)

New badges coming

Starting this month, all L- and Q-cleared members of the workforce at Sandia will receive an email notifying them that they've been sponsored for federal credentialing, starting with randomly selected divisions at the New Mexico site. Story on **page 5.**

Straight shootin'

Sandia WebCo designer Kay Rivers has taken up a new hobby: cowboy mounted shooting. She and her horse, Pronto, recently won a national competition conducted by the Single Action Shooting Society. Story on **page 8.**

That's that

That story in our last issue about Sandia's work on radiation detection technology prompted an email from Sandia retiree Steve Ross, who had a personal run-in with the technology and came away mightily impressed. I think you will be, too.

It seems Steve and his wife — they live in Truth or Consequences — were coming back from a trip to Las Cruces, where he had just undergone a medical procedure that required injection of a radiological material. Between Cruces and T or C there's a mandatory border patrol stop where they check you out. As Steve writes: "We had just turned off the freeway, entering the border patrol station, but still a good 100 yards or more from the actual checkpoint, when Border Patrol agents were all over us. They took control of our vehicle, totally emptied it, and held us for about 30 minutes. After lots of laughs, we finally convinced them that the radiological material was in my brain. When we told them that I was a retired Sandian, I was told that three Sandia personnel were training the agents on the use of the detection system. Pretty impressive, huh?"

Well, yeah.

* * *

Did you notice the other day that *Sandia Daily News* item about the ground beef recall affecting the employee cafeteria? Well that got me curious, so I did a Google search about the recall and ended up at the USDA's Food Safety and Inspection Service website. I'm now going to provide a reader service by *not* providing you the link to that site. If you check out the list of current recalls and the causes thereof on that website, you'll never eat again.

* * *

Have to admit I'm a bit ambivalent about the Olympics this year, as I think many Americans are. But I'm watching the Games, as much of them as I can, because I love the athletes and the competition and the chance to see some of those sports that only get highlighted every four years. And I love the *idea* of the Olympics. All of which reminds me of how much fun it was to watch the Games during the Cold War, when the Olympics brought out all of our latent nativistic impulses.

As kids, we'd get a delicious shiver of perverse pleasure in watching those old Soviet bloc teams rigidly march into the arena during opening ceremonies, grim-faced and determined, while our athletes would amble in, grinning and waving to the crowd and clearly having the time of their lives. I guess that even as kids we knew there was something terribly out of whack with a system that didn't allow their most talented young people to celebrate the very fact of being there, of being young and alive and having the world at your feet.

* * *

Thinking about Russia, I have to take note of the passing of Aleksandr Solzhenitsyn. When he was deported for all the right reasons and ended up in Vermont, he vowed he would return to a free Russia one day. Well, as Jake Barnes said at the very end of *The Sun Also Rises*, "Isn't it pretty to think so?" But Solzhenitsyn *did* go home again and spent the last 19 years of his life in his beloved Russia, a free spirit in a land that had shaken off communism. Some very unlikely and astonishing things happen in this world.

See you next time.

— Bill Murphy (505-845-0845, MS0165, wtmurph@sandia.gov)

Sandia LabNews

Sandia National Laboratories

http://www.sandia.gov/LabNews

Albuquerque, New Mexico 87185-0165
Livermore, California 94550-0969
Tonopah, Nevada • Nevada Test Site • Amarillo, Texas •
Carlsbad, New Mexico • Washington, D.C.

Sandia National Laboratories is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin company, for the US Department of Energy's National Nuclear Security Administration.

Bill Murphy, Editor 505/845-0845
Chris Burroughs, Writer 505/844-0948
Randy Montoya, Photographer 505/844-5605
Mike Janes, California site contact 925/294-2447
Michael Lanigan, Production 505/844-2297

Contributors: John German (844-5199), Neal Singer (845-7078), Stephanie Holinka (284-9227), Iris Aboytes (844-2282), Michael Padilla (284-5325), Julie Hall (284-7761), Patti Koning (925-294-4911), Michelle Fleming (Ads, Milepost photos, 844-4902), Dept. 3651 Manager: Chris Miller (844-0587)

Lab News fax 505/844-0645
Classified ads 505/844-4902

Published on alternate Fridays by Media Relations and Communications Dept. 3651, MS 0165

LOCKHEED MARTIN

Aug. 18 Tech Symposium looks at nuclear deterrent for 21st century

Speaker Clark Murdock will discuss his position that advocates for the important contributions that nuclear weapons make to US security in the Aug. 18 Technology Symposium at the Steve Schiff Auditorium (11:30 a.m.-12:45 p.m.), Murdock, a senior adviser with the Center for International and Strategic Studies in Washington, will outline his recommendations for how the DoD should organize for the nuclear mission. He will also discuss the role of nuclear weapons in both 21st century international affairs and US national security, and discuss his view that the nuclear mission has been neglected in the post-Cold War era, and suggest what actions are needed to revitalize the US nuclear deterrent.

For more information and to access streaming videos of past Tech Symposium presentations go to the internal website at http://www-irn.sandia.gov/organization/div2000/ctr2900/techsym/

Lab News Reader Service

Retirees (only): To notify of changes in address, contact Benefits Dept. 3332, Customer Service, at 505-844-4237, or Mail Stop 1021, Sandia National Laboratories, Albuquerque, NM 87185-1021.

Employees: To change the number of copies of the *Lab News* your mail stop is receiving, please call Honario Anaya, Mail Services Team 10268-4, at 505-844-3796. At Sandia/California, contact the Mail Room at 925-294-2427.

Employee death

Casey Phillips had a big heart and powerful spirit

Casey Phillips (4225) died on July 30. He was 51 years old. He was a classification analyst in Sandia's Classification Dept. since 2003. He had 28 years of service in the nuclear weapons complex, 14 years at the Kansas City Plant and another nine at BWXT, Pantex Plant.

CASEY PHILLIPS

"Casey was admired and respected across the nuclear weapons complex, says his manager Ron McIntosh. "He helped shape DOE's classification program with his contributions in the development of classification guidance. His warm, friendly smile and outgoing personality touched all who happened to cross his path. Although his illness would have sidelined most, his dedication, perseverance, and mental tenacity drove him to continue in his service to Sandia and to help ensure our nation's security."

'A gift to Sandia'

"Casey was first and foremost a family man," says his friend Chris Bell (3332). "His son Aaron and his wife Vicki were at the center of his existence. He had a big heart and even greater spirit. He loved his job and coworkers. He was a gift to Sandia."

"Casey cherished his family greatly," says John Lewis (4225). "On one of our conversations around Father's Day, he talked about one of the best gifts Aaron had given him. It goes like this: Years before he became ill, Casey asked Aaron if he regretted not having any brothers or sisters. Aaron answered he never did because Casey was more than a father; he was like a big brother because they did everything together. With misty eyes Casey said softly, 'That was the best Father's Day present I have every gotten.'" Ironically Aaron did not even know it.

For Jesus Martinez, Casey was not just a coworker but a lunch buddy and friend. "On his first visit to my house, I found him having an adult conversation with my 4-year-old grandson, Nathaniel," says Jesus. "Nathaniel was very disappointed his dog did not come to him when he called her. Casey was on his knees trying to work it out between the dog and Nathaniel."

Tuesdays to Casey meant the base bowling alley where tacos and tostadas are the special. "This was the social event of the week," says Lynn Kaczor (4225). "He would walk over for this event whether it was hot, freezing cold, or snowing. He was serious about his tacos. There, coworkers and friends would hold court."

"Come chile season, I could always count on Casey to help me set up and keep an eye on the green chile stew," says Jesus. "If I lost track of time, Casey's notification of 'I think it's ready,' meant it was time for Casey to eat."

Occasionally Casey would treat his coworkers to his version of Texas chili. "It was good," says Donna Gonzales (4225). "He was a pretty good cook."

"Casey was a wonderful friend who always made time for others," says Teresa Apodaca (4225). "His family meant the world to him. Casey's eyes would sparkle when he talked about them."

"I'll be back," Casey would say to Dolores Sanchez-McGlotten (1640), his OAA for five years, "I'm going to the dump." Dolores would respond "Oh, no Casey, not the dump!

"It wasn't particularly funny," says Dolores, "but it was to Casey and me. I will always remember his strength, fortitude, compassion, and his ongoing spirit for life. He and his family never lost sight of God."

"One of his hobbies was fishing," says Bruce Green (4225). "His eyes would always light up when we started trading fishing stories. Casey and I went fishing to Fenton Lake. We had a great day with Casey out-fishing me by catching the most and the biggest. Of course the actual quantity and size is secret."

"His powerful spirit was especially evident on the last day of his life," says Chris. "Casey wanted to see Aaron get married more than anything. Casey and Vicki had planned to attend Aaron's wedding in Texas the first weekend in August."

By Tuesday, July 29, it was obvious that Casey could not make the trip. Aaron and Trista decided to bring the wedding to him. Friends and family from different parts of the country began arriving.

Magic happened! Aaron and Trista were married in Casey and Vicki's living room with Casey having a front row seat.

Casey died three hours after the wedding.

— Iris Aboytes

Sandia developing technology to secure coastal areas

By Patti Koning

Where the surf hits the sand — beaches — are places of unique physical beauty and natural recreation. Beaches figure prominently in most memories of childhood and are firmly cemented in popular culture. Think of the Beach Boys, *Beach Blanket Bingo*, or the thousands of cities with "beach" in their name.

Shifting tides mean that beaches are never quite the same from one hour to the next. This quality presents a challenge for physical security at what is referred to as the "land-water interface" or LWI.

"This hasn't been done before," says Michael Ross (6481). "Sandia has expertise in land barriers and there are mature surface barriers and active acoustic technologies for deeper water, but what's missing is the interface between the two — especially in the littoral zone [the zone where sea and shore meet]."

Michael is the principal investigator for a project to develop a solution to this problem. The idea is create something called a "defeat barrier" that will extend from the shore out as far into the sea as necessary.

The project is a collaboration with the Applied Physics Laboratory (APL) at Johns Hopkins University. Sandia provides the expertise in physical security on land, while APL has the underwater expertise.

The defeat barrier combines simple physical security — a grate-like fence — with detection technology to sense a breach. Along with the barrier, other technologies are used to detect movement under water or climbing over or under the fence, and a variety of cameras provide alarm assessment and situational awareness. The defeat barrier itself will extend from below the sea floor to above the high tide level, and the length will depend on the physical characteristics of the site.

"The littoral area is environmentally sensitive. You have to allow water and small wildlife to pass through any security system."

— Michael Ross

While the concept is relatively simple, deploying it in a marine environment throws layers of complication at the problem. The complex littoral environment, says Michael, drove the design decisions.

Any barrier for physical protection must fit into environmental constraints. The obvious solution would be a solid causeway extended into the water to the point where deeper water technologies can take over.

"The littoral area is environmentally sensitive," says Michael. "You have to allow water and small wildlife to pass through any security system. It's a challenge to create a design that meets the security requirements and is environmentally friendly."

The marine environment also presents a number of unknowns, as many of the components have never been used in salt water. The defeat barrier and other physical protection system components are being deployed at a test bed in Florida for performance measurements and to see how they handle salt water and extreme weather over the long term. Don Sheaffer (8136), an electrical engineer working on the project, says that biofouling could be an issue, if the sensors and other equipment need frequent cleaning.

"This defeat barrier must have a zero false alarm, zero nuisance alarm rate. Any failure is catastrophic," he adds. "And how do you install the defeat barrier so it is sturdy enough to withstand whatever Mother Nature might throw at it? We're going to find out."

In March, Sandia initiated video assessment testing. Using an existing pier off the Florida beach, video cameras are detecting movement in 180 different scenarios.

What happens in extreme fog? At sunrise and sunset? When the noonday sun reflects off the water? What if an intruder is dressed in black or silver? Ten-second clips showing breaches in these conditions and others will be shown to a team of 30 potential operators of the system.

The mechanics of the defeat barrier are automated — any breach would set off a sensor alarm — but the final assessment is always made by an operator monitoring video images captured from the area where the alarm was produced. The defeat barrier's effectiveness is only as good as those images.

While Michael's team is designing and testing a physical protection system specifically for one customer, the concept could be applied to any land-water interface, including fresh water and marshy areas. "We've had interest from the Department of Homeland Security and the organizers of the London 2012 Olympics," he says. "The perimeter that needs to be secured in London is not entirely on land."

Interns

(Continued from page 1)

Each student is paired with a mentor, whose technical area complements that of the student. Ideally, the project a student works on while at Sandia ties directly into his or her thesis project.

Timothy Kostka, a graduate student in mechanical engineering at the University of California, Berkeley, says Sandia is the only institute he knows of where he can do modeling and predictive research with a team of collaborators using large-scale computing resources.

"Having access to the computational power of Sandia and many great people is a unique opportunity," he says. "I'm working on really interesting stuff, not busy work, that will help me with my doctorate."

This is Timothy's second year as an EPSRI intern; he also spent two summers interning at Sandia while he was an undergraduate at Cornell University.

Another EPSRI intern is Garritt Tucker, a graduate student in computational mechanics and materials at Georgia Tech. "I've been able to see really interesting work, things I never considered for my PhD research," he says. "It's a great opportunity to see things on a grander scale."

This summer, Garritt worked with Jonathan on atomistic simulations of deformation of microstructural features, looking at different fields of stress and deformation that are specially defined at small scales. This work helps identify key physical features of nanostructured materials that are needed to construct predictive engineering-scale models.

While EPRSI is only two years old, Center 8700 has been doing an engineering sciences summer institute for the past 10 years. Such programs provide a pipeline for new hires and strengthen ties with the academic community. Jonathan estimates that at least 10 former engineering sciences interns have been hired into Sandia in as many years.

Michael Jew (8774) interned at Sandia during the summer of 2002, when he was a graduate student at UC Berkeley. "Being an intern at Sandia was really eye-opening, in a good way," he says. "I didn't expect the campus-like environment here, or all the different disciplines at such a relatively small site."

Former Sandians who have gone on to careers in academia also continue to send their students to the program. In the program this year are graduate students of two former Sandians: Richard Regueiro, an assistant professor in the Civil, Environmental, and Architectural Engineering Department at the University of Colorado, Boulder; and Mark Horstemeyer, a mechanical engineering professor at Mississippi State University.

Neville Moody (8758) has mentored some 25 interns and postdocs over the past 15 years. This summer, he's taken under his wing John Yeager, a materials science graduate student at Washington State University. Years ago, Yeager's advisor, David Bahr, interned with Neville. (Neville's relationship with Bahr started at the University of Minnesota, where they shared an advisor.)

"It's been great to work one-on-one with Neville. The equipment here is great and I'm getting a lot more done here than I would at my university," says John.

Over the summer, John worked with Neville on a project testing flexible substrate materials. The testing method is different than the one John has been using at school; for his thesis, he'll compare the two methods. The project is part of a Laboratory Directed Research and Development project, on which Bahr is a collaborator.

"Having an intern adds a great dimension to the work environment," says Neville. "Students bring a fresh perspective and they are totally dedicated to the work, since it's often part of their PhD project."

John is partially funded by Sandia, and hopes to be back as soon as next spring after he finishes his last two classes. He'd like to extend his stay at Sandia as a postdoc after he graduates.

New Mexico and California . . .

Full Spectrum Leadership taking root at Sandia

By Chris Burroughs

For the past two years Sandia managers have been encouraged to adopt Lockheed Martin's Full Spectrum Leadership (FSL) tool to help them become better leaders.

Anna McKee, manager of Leadership, Learning, and Development Dept. 3502 has been tapped to roll out the program. She says several vice presidents have required FSL to be included in managers' Performance Management Forms (PMFs).

"Full Spectrum Leadership helps create a common leadership language and provides leadership expectations," Anna says. "It assists in guiding leaders' development of knowledge, skills, and abilities needed to be effective in delivering results and exhibiting strong leadership behaviors."

The heart of FSL is a three-tiered, horizontally integrated competency model that defines the attributes of successful first-level, middle-level, and executive leaders. It has five key imperatives, which are primary areas for leaders to follow on a daily basis, and 17 attributes mapped to those imperatives. The imperatives and attributes include:

• **Shape the future.** This involves leading through vision and values, establishing direction, leading change, and driving innovation.

• **Build effective leadership.** This involves developing enduring relationships, fostering horizontal integration, and demonstrating social insight.

• **Energize the team.** This involves building organizational talent, aligning performance for success, communicating with positive impact, and creating an inclusive environment.

• **Deliver results.** This involves delivering customer value, driving execution, and exercising business insight.

• **Model personal excellence, integrity, and accountability.** This involves leading with integrity, demonstrating a learning environment, and being accountable.

"The key imperatives are the same for all three levels of leaders," Anna says. "The difference is in depth and breadth as leaders' responsibilities increase with their respective levels."

Anna says that over the past two years Sandia has completed several FSL deliverables. Among some of the deliverables completed are:

• Certification of instructors to deliver an eight-hour course on the FSL behavior-based interviewing methodology to select managers

• Delivery of the course to two divisions, incorporation of FSL into new manager training

• Publication of a *Watercooler* article on FSL, adding an FSL component into leadership learning series

• Adding an FSL component to new employee communication boot camp

• Presenting the FSL concept to division business managers

• Having vice presidents take a 360-degree assessment to determine how much of FSL they already include in their leadership routine.

The intent is to do additional FSL roll-out activities in the coming fiscal year, which will involve further communication, training, and a toolkit.

"Most large companies have some form of a leadership competency model," Anna says. "It creates consistent terminology, culture, and outcomes. Expectations don't change for managers as they move from job to job. It helps with business results and drives better accountability and customer relations."

More information on FSL can be obtained by going to the FSL website or by searching for "full spectrum leadership" on Techweb.

Sandia CaliforniaNews

Lightning

(Continued from page 1)

METEOROLOGIST GINA DEOLA checks out software that displays lightning strikes in the Sandia area. (Photo by Chris Burroughs)

and warning information.

The lightning advisory was developed to provide advance notification of a near-term potential hazard. This advisory will give personnel time to evaluate their near-term plans and make decisions about proceeding or postponing their operations. The lightning warning indicates that personnel outdoors should follow their safety procedures immediately as the next strike could occur on Sandia, DOE, or Kirtland land.

"The package option that Sandia purchased includes the ability and rights to upload the latest lightning strike image to a website," Gina says. "Thus, for the first time all Sandia office workers, and project and program leaders with weather sensitive operations, have the option to learn the lightning status at their desks. All they have to do is go to the Sandia internal homepage and click on the lightning data image under weather. A lightning strike map, updated every two minutes, will pop up on the screen."

In the upper right-hand corner of the lightning page are three colored boxes that provide warning levels. If the left box is red, it means a lightning warning is in effect. If two boxes are colored — one red and the other yellow, a lightning advisory is in place.

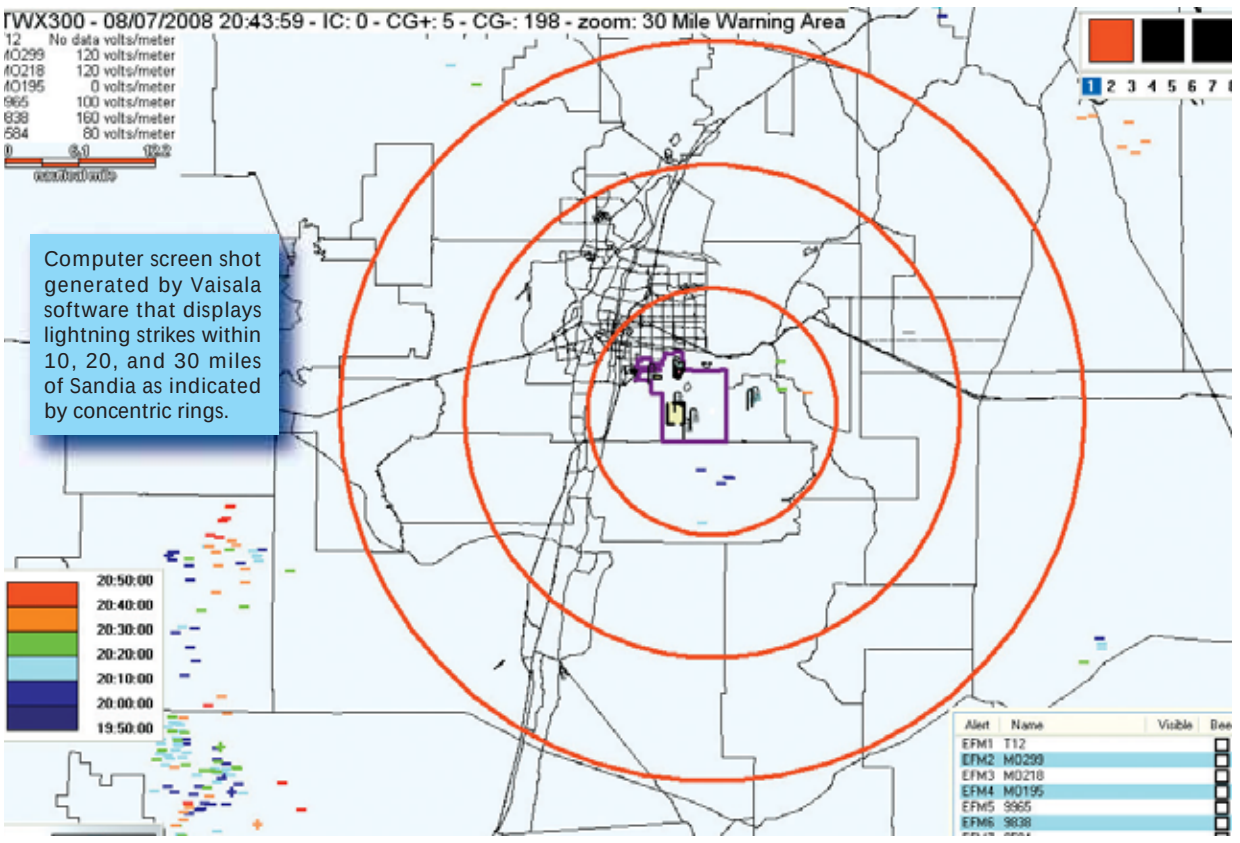
The URL for the lightning page is http://lsimaging.sandia.gov/lightning.htm.

Measuring the potential gradient

The new system also measures the atmospheric potential gradient — the potential for static discharge at seven sensor sites (called electric field mills) placed around Sandia. There are occasions when a storm develops over Sandia, in which case there are no lightning strikes to follow. The electric field mills are used to identify the potential for the first strike of lightning. Another application of potential gradient is to monitor the atmospheric conditions for the potential of other static discharges.

From an explosives safety standpoint, if the potential gradient goes to +1,700 volts per meter, all explosives operations are suggested to be placed in a safe mode or shut down. If the potential gradient reaches +2,000 volts per meter there is a chance for a static discharge. And of course, the ultimate static discharge is lightning, Gina says.

For more information on the lightning page or be added to the pager list, contact Gina at 505-844-4340 or radeola@sandia.gov. She requests that only people who have weather-sensitive operations be placed on the paging list due to the capabilities and limitations of the paging system. The focus of the paging system is to warn the people in the field since they generally don't have a computer available to them.



Computer screen shot generated by Vaisala software that displays lightning strikes within 10, 20, and 30 miles of Sandia as indicated by concentric rings.

Becky Krauss, Les Shephard to cochair new Sandia Corporate Diversity Council

Sandia's diversity mission is to ensure a high-performing and inclusive work environment that respects individuals and capitalizes on differences and similarities to achieve maximum productivity at all levels. With that mission in mind, Sandia is increasing the focus on diversity by reforming a corporate-wide Diversity Council to provide senior leadership engagement on diversity and workforce issues and develop corporate strategies for making progress toward Sandia's diversity goals.

Sandia President and Labs Director Tom Hunter has often stated that a diverse workforce and inclusive environment are critical to advancing the Labs' national security mission in these changing times. "We all must understand that diversity and inclusion are key elements of our world-class workforce strategy and critical to our future success as a lab," he says.

The current Corporate Diversity Team was formed in 1992. Its continued success has resulted in Sandia receiving numerous national diversity awards and recognition. The most current are highlighted in the July 4 and July 18 issues of the *Lab News*.

The new council will be cochaired by Div. 10000 VP Becky Krauss and Div. 6000 VP Les Shephard. It will include two additional executive members of management: John Slipke, VP of Human Resources and Communications, and the director of Public Relations & Communications Center 3600, currently Mike DeWitte, acting. At-large members will include directors selected from a cross-section of divisions. Each will serve a two-year term.

One of the first tasks of the new council will be to define what success looks like for Sandia's diversity initiatives, how to measure progress, and to set goals and expectations. Les and Becky say that ultimately what Sandia is trying to do is to create an environment where growth, trust, and collaboration are valued. They say a diverse and inclusive work environment is an imperative if the Labs is to remain a world-class organization in the future. They add that Sandia also wants to ensure that the Diversity Council's goals, actions, and initiatives are integrated with Sandia's business objectives.

The Corporate Diversity Council will address diversity and workforce issues in partnership with division and Labs' leadership. The Corporate Council will also work with the Division Diversity Councils to implement Labs-wide diversity strategies.

Four Sandians earn advanced degrees from Air Force Institute of Technology

MASTERS OF SCIENCE — A proud Div. 5000 VP Jerry McDowell, right, offers congratulatory remarks during festivities marking the graduation of four Sandians from the Air Force Institute of Technology with master of science degrees in systems engineering, with a specialty in space systems. The four are, from left, Martha Charles-Vickers, Jeffrey Alexander, Talbot Smith, and Michael Vickers. Also present at the graduation ceremony at the Mountain View Club on Kirtland Air Force Base were officials from the Air Force Institute of Technology. (Photo by Randy Montoya)

Sandia licensing pros earn Certified Licensing Professional credential

Nine people from Sandia have earned the Certified Licensing Professional™ (CLP) credential, which recognizes intellectual property professionals who have demonstrated dedication to higher standards of practice within the licensing industry. The nine include six from Sandia/New Mexico and three from Sandia/California.

The New Mexico recipients are Brent Burdick, Nathan Golden, Kevin Murphy, and Paul Smith (all 1031), Bruce Winchell (1200, also Technology Ventures Corp.) of Sandia and Glenn Baird of Sandia Staffing Alliance, LLC, a contractor to Sandia. They practice out of Albuquerque and are the only licensing/legal professionals in New Mexico earning the CLP credential in its inaugural year.

Also receiving the honor are Kurt Olsen (11600), Craig Smith, and Laura Santos (both 8529) in California.

Sandia typically executes 100 commercial licenses and receives $3 million to $4 million of licensing revenue annually.

The CLP designation distinguishes licensing professionals who have demonstrated their experience and proficiency in licensing and the commercialization of intellectual property. The CLP credential is an initiative of the Licensing Executives Society, an organization with members in both the United States and Canada. It is considered to be the leader in the licensing field and is steadfastly dedicated to the professional development of its constituents, says Craig Tyner, manager of Sandia's Licensing and Intellectual Property Management Dept 1031.

More information on the CLP certification program can be found at www.licensingcertification.org or by calling 703-836-3106. — *Chris Burroughs*

Federal credential badges come to Sandia

New badges more secure, counterfeit-resistant; required for L- and Q-cleared individuals

By Stephanie Holinka

Starting this month, all L- and Q-cleared members of the workforce at Sandia will receive an email notifying them that they've been sponsored for federal credentialing, starting with randomly selected divisions at the New Mexico site.

"The new badges will provide access to facilities and security areas throughout the federal government," says Samantha Flores, manager of personnel security (4233). Samantha says the badges also have enhanced security features that make them more resistant to tampering, counterfeiting, theft, and terrorist exploitation.

Lisa Kaneshiro (42331), badge office team leader, says it takes two badge office appointments and approximately three to four weeks to complete the entire process and to receive your new badge.

Those security features include a smart chip that stores a personal identification number (PIN) and two embedded authenticators (digital certificates, fingerprints) for functions such as authenticating the credential holder, providing digital signatures, and encrypting email. In the future, Samantha says, the new badges will control access to computers.

The new credential comes via the USAccess Program launched in response to Homeland Security Presidential Directive 12 (HSPD-12). That program is a government-wide initiative to issue common, federal identification credentials to all federal employees and contractors.

Lisa Kaneshiro (42331), badge office team leader, says it takes two badge office appointments and approximately three to four weeks to complete the entire process and to receive your new badge. The sidebar at right explains the process in greater detail.

If requested, personnel security staff will conduct information sessions for divisions selected for sponsoring, Lisa says. Contact personnel security at HSPD-12sponsor@sandia.gov.

THIS BADGE IMAGE, approved for illustration purposes, is shown here smaller than actual size.

WITH A WARM SMILE, Sharon Lawson (4233-1) helps a Sandian with his new federal credential badge. (Photo by Randy Montoya)

Federal credentialing process at Sandia:

Generally, employees go through the following process:

- **Review data on the "sponsored HSPD" email that states you have been sponsored.** The name that appears in the email is based on the official DOE clearance record.
- **Gather identity information.** Your DOE badge can serve as one form of identification.
- **Create an account** at the GSA Online Scheduling System at http://ln.sandia.gov/gsa-online.
- **Schedule an enrollment appointment** via the GSA Online Scheduling System. To schedule an appointment, sponsored person selects "enrollment" and "Any Workstation," and then selects the date and time for an appointment for initial enrollment. DOE is the sponsoring agency. Sponsored individual will receive email confirmation of the date/time.
- **Bring two forms of identification to the appointment.** The USAccess website lists acceptable identification types: http://www.fedidcard.gov/viewdoc.aspx?id=109.

During the first appointment, the following information will be collected:

- An official digital photo.
- Official digital index fingerprints (to be loaded electronically onto the new federal credential).
- Two other forms of digital fingerprints for the files.

In two to three weeks the new badge will arrive at the badge office. Employees will receive another email notifying them to make a second appointment through the GSA website.

- **Make follow-up appointment at badge office.**

During the second appointment, employees will:

- Validate their identity with two forms of id (A current DOE security badge and/or driver's license will suffice.)
- Have a new badge enrolled in Sandia's access-control system
- Surrender their old DOE standard badge
- Activate their new badge by enrolling in the Sandia security system and be activated into the federal credentialing system

The Badge Office - HSPD-12 website has additional information and a more detailed description of the entire process (http://www-irn.sandia.gov/security/program/badgeoffice/hspd12).

New DOE-mandated random drug testing requirement takes effect at Sandia beginning Oct. 13

If you are called: the process

Verbal notifications will be made to randomly selected, cleared employees and contractors during duty hours. A selected person must report to a designated collection site the day they are notified.

The verbal notification will include directions to the nearest collection site.

You will receive a verbal notification while on duty via telephone. Once verbal notification is made, no excuses will be accepted for failure to report to the collection site before close of the business day. For workforce members who do not work at a Sandia location where there is a collection center, information on where to report will be given at the time of notification. Members of the workforce shall report within 24 hours of notification.

Drugs screened for include marijuana, cocaine, opiates, phencyclidine, and amphetamines. Some prescription medications fall in these categories; confirmation that a person has illegally used prescription medications will result in positive test results as well.

Urine specimens will be sent to a federally certified private laboratory for assay.

Failure to report to an approved collection center on the day of notification or refusal to provide a specimen will result in measures equal to those for a positive drug test.

If a lab result indicates the presence of drugs in a specimen, those results will be provided to the Medical Review Officer (MRO). The MRO will seek information about the results, including the use of prescription medications.

The MRO will determine whether a result is reported as either positive or negative.

The immediate consequences of an MRO-confirmed positive drug test include the worker's badge being confiscated and the person being removed from his or her TDP (testing designated position) duties. Other disciplinary actions, following due-process procedures, may include termination.

A subcontractor whose result is confirmed as positive will be removed from the performance of the Sandia contract immediately.

Per 10 CFR 707 Section 707.14 action pursuant to a determination of illegal drug use, an individual who has been notified of a positive test result may request a retest of the same sample at the same or another certified laboratory. The individual shall bear the costs of transportation and/or testing of the specimen. Sandia will inform employees of their right to request a retest under the provisions of this paragraph.

Beginning Oct. 13, all Sandia employees will be subject to new drug testing requirements set forth by Secretary of Energy Samuel Bodman.

On Sept. 14, 2007, Bodman issued a determination that all Sandia and contractor personnel holding a DOE Q or L clearance occupy positions designated for drug testing. This means that they are subject to random as well as for-cause drug testing. As part of this requirement, Bodman has required that 30 percent of all employees be randomly tested each year.

As part of this requirement, Bodman has required that 30 percent of all employees be randomly tested each year.

Additionally, all applicants for these positions (including those that do not require clearances, such as truck drivers) will be tested before final selection into the position or, for current contractor employees, before security clearance is granted.

NNSA will withhold issuing a new clearance until the application for the clearance is supported by a "negative" federal drug screening test performed in accordance with Department of Health and Human Services guidelines. For more information go to: http://www-irn.sandia.gov/HR/HR_Service_Changes/change_pages/drug_testing.html.

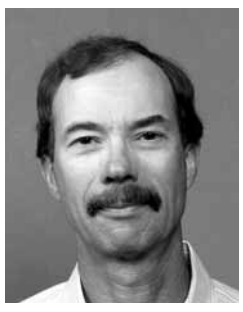
— Neal Singer

Mileposts

New Mexico photos by Michelle Fleming
California photos by Randy Wong


Dean Mitchell
30 6418


Fred Sexton
30 1211


John Wolfe
30 5936


Wes Baca
25 2547


Dennis Bateman
25 9338


Eric Chael
25 5713


Diane Peebles
25 1112


Keith Bauer
20 6324


Brian Behling
20 4826


Sabine Boruff
20 9547


Gregory Conrad
20 5631


Eric Klamerus
20 5431


Timothy Miller
20 1534


Brett Remund
20 2810


Eric Thulin
20 9512


Duane Vermeire
20 2994


Joel Wendt
20 1725


Patrick Brady
15 6310


Basil Hassan
15 1541


Michael Johnson
15 8960


M. Kathryn Knowles
15 6780


Kurt Kunzler
15 2666


Sidney Lee
15 10543


David Moore
15 2713


Michael Ulrickson
15 1658

Truman Fellowship applications sought

President Harry S. Truman Fellowship
in National Security Science and Engineering

Sandia is accepting applications for the Truman Fellowship, a three-year appointment allowing recipients to pursue independent research that supports Sandia's national security mission. Candidates are expected to have solved a major scientific or engineering problem or have provided a new approach or insight to a major problem, as evidenced by a recognized impact in their field. Candidates must be able to obtain a security clearance and be seeking their first national laboratory appointment. They must have been awarded a PhD (with strong academic standing) within three years of the time of application or will have completed requirements by commencement of appointment (October 2009). Applications are due Dec. 5, 2008. For information, go to www.sandia.gov/employment/special-prog/truman. Questions about the application process to Roberta Rivera (3555) at rjriver@sandia.gov; for technical contact questions, email Yolanda Moreno (1012) at ymoreno@sandia.gov.

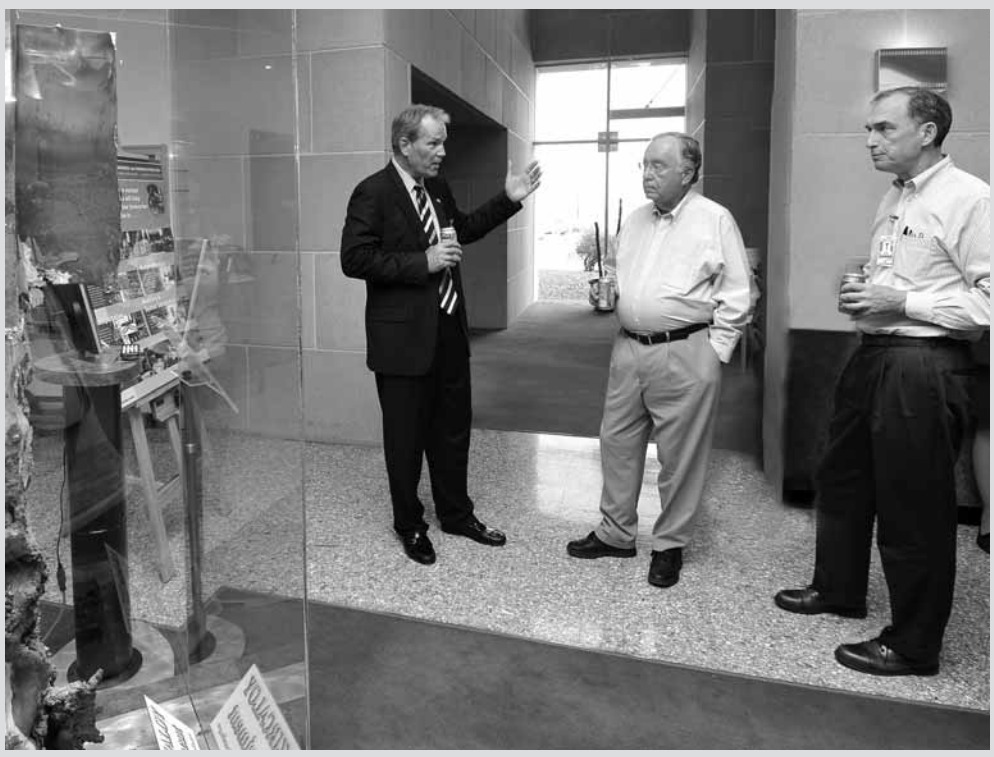
Recent Retirees


Tony Chavez
25 6833


Carol Skinner
21 2956


Linda Ristvet
17 5259

House leaders visit Sandia for overview on Labs' capabilities, mission work



DURING A DAY-LONG TOUR and briefings at Sandia, Rep. Peter Visclosky, D-Ind., right, and Rep. David Hobson, R-Ohio, center, talk with Div. 6000 VP Les Shephard about Sandia's work in energy technologies and nonproliferation issues. Visclosky is chairman of the House Committee on Appropriations Subcommittee on Energy and Water Development and Hobson is the ranking member of the same subcommittee. In addition to hearing about the Labs' energy and nonproliferation work, the lawmakers heard briefings on weapons surety issues, received an overview of Sandia's science, technology, and engineering foundations; toured the new MESA facility and the Z accelerator facility; and heard about the scope of work the Labs is doing in the area of homeland security. (Photo by Randy Montoya)

Ridin' 'n Shootin'

Kay Rivers wins first place in Old West style national competition

By Chris Burroughs

For Kay Rivers (8944-1) the Old West comes alive on weekends when she combines her love of horses with shooting in one of the fastest-growing equestrian sports, cowboy mounted shooting.

She dresses in authentic-looking 19th-century clothes — boots, shirts, pants or split skirts, and hat — and rides her horse, Pronto, while firing replica 45-caliber revolvers at balloon targets.

"It's a natural for me," the WebCo designer says. "The horse component is clear; I've always loved horses. And the shooting requires reactive athletic ability. I was automatically drawn to the sport."

SANDIAN KAY RIVERS with husband Donny MacDougall and daughter Arriana.

After two years participating in her new passion, Kay recently won a mid-level women's cowboy mounted shooting world championship. The event was sponsored by the Single Action Shooting Society (SASS) and held at Founders Ranch headquarters near Edgewood. Kay competed against five other women in her division and, for her efforts, won a belt buckle.

Cowboy mounted shooting blends the disciplines of horsemanship and shooting. Participants ride their horses around one of 98 different courses as fast as possible and use the revolvers to fire at 10 balloon targets placed on traffic cones. The hammers on the revolvers have to be cocked each time before they are fired.

The revolvers are loaded with five cartridges (blanks) packed with black powder only, and the competitors have to be agile enough to holster one gun and reach for the other without losing speed or focus. (The shooters fire no actual bullets; balloons are popped by the flash from the black powder.)

"This requires lots of practice," Kay says. "It's important to improve our course management skills and memorize how to get the gun back in the holster quickly without looking at it. You also need steady hands and a good aim. Safely handling our firearms is a very important aspect of this sport. Even though we only shoot blanks they can still cause serious harm. Ear and eye protection is vital; we use earplugs for our horses too."

Being able to deftly handle the old-fashioned revolvers is only one component of the sport. The other is being able to manage the horse. Kay says cowboy mounted shooting is "80 percent horse and 20 percent shooting skill."

"You and your horse form a team," she says. "The horses don't learn the patterns; they have to quickly and smoothly respond to the rider's cues as we guide them through."

KAY RIVERS participates in her new passion, cowboy mounted shooting. Here she rides her well-trained horse, Pronto. (Photos courtesy of Mr. Quigley Photography)

Sharing her love of the sport is Kay's Los Lunas veterinarian husband, Donny MacDougall. Together they founded a local cowboy mounted shooting club — The Rio Grande Rustlers — which currently has some 37 members.

The pair also share Pronto, their well-trained horse that won third place "Performance Horse" at the same SASS world championship contest where both Kay and Donny took first place in their divisions.

"The Performance Horse award was based on 'raw' time. Only two horses beat him, and those horses did not carry two riders to world championships as Pronto did," Kay says. "He is an amazingly athletic horse."

While the challenge and athletics of the sport are invigorating, Kay really enjoys the camaraderie and fellowship of the people they meet and compete with.

"Everyone is having fun and shares a genuine desire to see their competitors do well. The people are terrific models of horsemanship and sportsmanship combined," Kay says.

Favorite Old Photo

"This is a photo of my great-grandfather, John Jay Romig," writes Sandia Executive VP Al Romig. "He was born in 1876 in Catasauqua, Pa., (about 60 miles north of Philadelphia, very close to Allentown/Bethlehem, Pa.) He was a pattern maker, eventually the 'chief pattern maker' — that's the real title — at Bethlehem Steel Corp. in Bethlehem, Pa., the nation's second largest steel maker. This is a company photo taken 100 years ago this month (note date, Aug. 25, 1908). He is standing with the pattern for a large steel pipe elbow. Once completed the pattern is used to create the cavity in a sand mold to cast the steel pipe. This section of pipe was likely destined for a chemical plant or water system. I guess the interest in materials (metals) runs generations deep! [Al is a Fellow of TMS, The Metals, Minerals and Materials Society, and a Fellow and former president of ASM International, formerly American Society for Metals]. My great-grandfather died in 1929, so I never met him."

Hydrogen road tour to stop at SS&TP

The Hydrogen Tour — consisting of 11 hydrogen-powered vehicles from major automakers, including BMW, GM, Honda, Toyota, and others — will be at the Sandia Science & Technology Park Wednesday, Aug. 20, 2-4 p.m. The tour, organized by the California Fuel Cell Partnership, National Hydrogen Association, DOE, and the US Department of Transportation, is spending 13 days traveling coast-to-coast from Portland, Maine, to Los Angeles, Calif.

There are 33 planned stops along the tour, each about two hours, in 18 states and the District of Columbia. Each stop provides the media, invited VIPs, and the general public with a hands-on experience and an opportunity to drive some of the cars.

Several of the hydrogen-fueled cars will be displayed in the parking lot of the Ktech building at Eubank Boulevard and Gibson Avenue SE, and some will be available for short test drives. Sandians and the public are invited to come and check out these prototypes of future transportation.

The Hydrogen Tour is intended to demonstrate progress and commitment toward commercially viable, emission-free hydrogen vehicles. Tour organizers say passenger vehicles and transit buses powered by hydrogen will help promote America's energy independence, reduce greenhouse gas emissions, and improve air quality while preserving safety and American jobs.

If you have questions, contact Jim Clinch at 505-844-1017 or jpclinc@sandia.gov.