



PRODUCTION MILESTONE — NNSA announced last month the production phase of the W76-1 Life Extension Program has reached the halfway mark. The Navy's Ohio-class submarine carries the W76-1 warhead, which would be launched on the Trident II D5 missile such as this one depicted here in a test launch. (Photo courtesy of the US Navy Strategic Systems Programs)

Sandia plays crucial role in W76-1 LEP

By Sue Major Holmes

With its work on the refurbished W76-1, Sandia has played a crucial support role in the Life Extension Program (LEP) to replace the W76-0 warhead.

Nick DeReu, manager of Sandia's W76-1 LEP Dept. 2222, says the Labs management and staff are integrated closely with a team from across the nuclear security enterprise (NSE) and with NNSA's Navy customer.

NNSA announced last month that it had reached the halfway point in the production phase of the W76-1 LEP. An event Oct. 23 at the Pantex Plant in Amarillo, Texas, underscored NNSA's commitment to meeting the Navy's requirements for the W76-1.

Gen. Frank G. Klotz, NNSA administrator, was on hand to thank the NSE team that helped achieve the production milestone. "The W76-1 Life Extension Program is one of several steps we must take as a nation to ensure that America's smaller nuclear arsenal remains safe, secure, and effective," he said.

"This is indeed a significant milestone for our nation and our Navy," said Vice Adm. Terry Benedict, director of the Strategic Systems Programs. "Through the Navy's continued partnership with NNSA, the team has achieved this important milestone, and I look forward to completion of W76-1

production before the decade is out."

Sandia is responsible for numerous critical components, as well as system integration for the W76-1 warhead.

Supported by many Centers

The W76-1 program remains a significant effort at Sandia, supported by organization 400 and numerous centers in divisions 1000, 2000, and 5000, Nick says. Sandia's release of updated weapon response information in July 2013 marked another significant milestone for the program.

The W76-1 LEP involves engineers and technicians from NNSA's Pantex Plant, the Y-12 National Security Complex, Savannah River Site, National Security Campus in Kansas City, Los Alamos National Laboratory, and Sandia. The first production unit of the W76-1 LEP was completed in September 2008. The program remains on track to produce and deliver warheads to the Navy in keeping with its commitment to complete production no later than the end of FY2019.



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FFRDCs take on America's biggest challenges

Federally Funded Research and Development Centers (FFRDCs) trace their origins to World War II, when new institutions were needed to address new challenges. The extraordinary science and engineering problems posed by the war called for a sustained R&D effort that combined independent and highly technical capabilities with the kind of long-term funding commitment that only the government could make.

Early precursors to today's FFRDCs included the Applied Physics Laboratory at Johns Hopkins University, the Jet Propulsion Laboratory at the California Institute of Technology, and the Radiation Lab at MIT. These facilities offered first-rate R&D capabilities from the private sector underpinned by federal funding, the very essence of the FFRDCs.

As Sandia President and Labs Director Paul Hommert notes, the iconic predecessor and model for FFRDCs was Los Alamos Scientific Laboratory, where the nation invested substantial resources to develop the atomic weapons that ended World War II.

Paul recounts that Gen. Leslie Groves, who headed the Manhattan Project, initially envisioned Los Alamos as a pure government operation. Robert Oppenheimer, tapped by Groves to lead the Los Alamos lab for the

(Continued on page 4)

Labs Director Paul Hommert signs annual stockpile assessment letter



ON MONDAY, SEPT. 29, Sandia President and Laboratories Director Paul Hommert signed Sandia's Annual Assessment letter. Each year, Sandia assesses the safety, reliability, and performance aspects of the nation's nuclear weapons stockpile for which it has responsibility. Through a series of formal presentations and discussions involving all stockpile weapon systems and support organizations, the Chief Engineer for Nuclear Weapons and the Deputy Laboratories Director for National Security Programs report on the safety, reliability, and performance status of the stockpile in the absence of nuclear testing. As required by law, the Laboratories director provides an annual summary of this assessment and related issues to the Secretary of Energy, Secretary of Defense, and the Nuclear Weapons Council. The secretaries, in turn, submit a letter to the president under their signatures detailing the state of the nation's nuclear deterrent. The directors of Los Alamos and Lawrence Livermore national laboratories complete similar letters based on the findings of their respective stockpile surveillance programs. (Photo by Norman Johnson)



A life of service

Sandian Nelson Capitan (2712) has been named a winner of the 2014 Governor's New Mexico Distinguished Public Service Award for 20 years of dedication in bringing science education to Native American kids. See story on page 12.



LM Voice survey results show progress in key areas. See page 5.

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2015 ECP campaign tops \$6 million — again 11



Eye on safety

Luis Amezcua (415) received the N.M. Safety Professional of the Year award from the American Society of Safety Engineers for two decades of safety work, including programs for workers who are not native English speakers. Story on page 8.

That's that

We did it again and – with apologies to Britney Spears – no oops about it. No happenstance to it. No random chance here. We did it by design, with intent. It's just another demonstration of Sandia's already well-established character: Once again this year, Sandians and retirees stepped up to contribute to the Employee Caring Program – the ECP – in record numbers. Although the final tally isn't in, it's clear already that we are going to blow right by the \$6 million threshold we crossed last year without slowing down and not looking back. Nancy Salem has a story on page 11 that gives all the details about this year's campaign. The money quote from the story (as we insiders say in the news business), comes from Ed Rivera, United Way of Central New Mexico's (UWCNM) President and CEO, who says Sandia's generosity inspires the entire community and drives the larger campaign. "We talk about the culture of giving that is Sandia," Rivera says. "It's infectious. It's huge."

Speaking of United Way, not only is Sandia the biggest single contributor – by far – but our people play key roles across the organization. At the very highest levels, two Sandians serve on the UWCNM Board of Directors' executive committee: Sandia Deputy Labs Director and Executive VP for Mission Support Kim Sawyer is chair of the UWCNM board and Div. 3000 acting VP Becky Krauss is UWCNM's public policy chair.

* * *

The needs in a community don't organize themselves neatly around our annual ECP drive. The less fortunate, like all of us, have needs throughout the year. If you're new to Sandia, maybe you haven't heard about a unique Sandia program we try to highlight around holiday time: our annual "Shoes for Kids" campaign. This holiday tradition started with just two Sandians. More than 58 years ago, these two scientists chose to donate money to buy new shoes for local children instead of buying each other Christmas presents. This selfless gesture has blossomed into a Labs-wide giving program that over the years has seen new shoes donated to some 14,000 kids in our community. It's a worthy and worthwhile program.

I have a little bit of insight into what a difference a decent pair of shoes can make: I spent a not-small part of my childhood in the deep South in some seriously impoverished areas. Back then it was routine for poor kids to show up to school barefoot. On warm days, the better-off kids would often take their shoes off, too, just as soon as they got out of sight of home. When it got cold they'd keep their shoes on, of course, but the poor kids would still be barefoot. That they tended to not do well in their studies should come as no surprise. Of course, it wasn't all about the shoes, but let's face it: the shoes – or lack thereof – had to be a factor.

I don't know that many (if any) of the Shoes for Kids recipients in our program are literally barefoot, but I know from having seen it first-hand that more than a few are in shoes that are so bad, so ill-fitted, so tattered, that they probably make things worse rather than better. Bottom line is that these kids need decent shoes. And we can help.

Here's how the program works: Sandia employees and retirees donate all the funds to purchase the shoes; Sandia Laboratory Federal Credit Union operates the Shoes for Kids account and accepts donations at all branches; Payless SHOESOURCE provides the shoes at a discounted price and fits each child with practical shoes. Principals, counselors, and teachers from the current year's partner schools identify 50 of the neediest students from their school to receive a pair of shoes.

Schools we're partnering with this year include, in APS, Hawthorne, Van Buren, Wherry, and the APS Clothing Bank; in the Bernalillo Public Schools system, Santa Domingo Elementary; in Los Lunas Public Schools, Tome; and in Belen, Jaramillo and La Promesa.

There are several ways to donate: in person at any SLFCU branch, via online transfer or by telephone. For specifics, see the Shoes for Kids website at <http://community.sandia.gov/shoes/>. For more about the program, contact Patty Zamora at 844-2416.

See you next time.

– Bill Murphy (MS 1468, 505-845-0845, wtmurph@sandia.gov)

It's Time

2015 Open Enrollment is now



2015 Open Enrollment for all employees (except SPA-represented) runs through Thursday, Nov. 20, at 5 p.m. MST. All benefits elections made during open enrollment are effective on Jan. 1, 2015. Benefit elections will not be accepted after 5 p.m. MST on Nov. 20.

Check out the Open Enrollment webpage at <http://tiny.sandia.gov/ah4hc> for benefit fair information, 2015 premiums, information on how to enroll, and to download a copy of the 2015 Open Enrollment Newsletter.

If you have questions regarding open enrollment, please contact HBE customer service, 505-844-HBES (4237).

Discovering Education Choices



SCHOOL DAYS — Meredith Dyck (5644), right, speaking with a representative from a local school, organized Sandia's first Discovering Education Choices event to inform employees about the diverse educational options available for children entering grades K-12 in the Albuquerque area. Representatives from Albuquerque Public Schools and charter, private, and parochial schools participated. In a speech at the event, APS Interim Superintendent Brad Winter and Associate Superintendent Katarina Sandoval encouraged Sandia employees to also attend the APS School Choice Fair on Dec. 4 from 4-7 p.m. at the Albuquerque Convention Center (check out the APS website for more information). Sandia's Discovering Education Choices event was a partnership of the 5600 Workplace Enhancement Team and Community Involvement (3652).

Retiree deaths

Chester O. Weaver (age 95)	June 15
James N. Rogers 84	July 25
James Thompson 73	Aug. 4
Bill N. Boatman 72	Aug. 9
Lawrence P. Billmaier 93	Aug. 17
Harkey Boling 81	Sept. 6
William W. Burns 86	Sept. 6
John G. Boyes 84	Sept. 7
John M. Stomp Jr. 78	Sept. 7
William J. Denison 93	Sept. 8
Robert C. Holt 81	Sept. 11
Charles F. Maase 94	Sept. 13
Jo O. Davis 92	Sept. 16
David S. Tafoya 92	Sept. 17
Ruth A. Duggan 55	Sept. 18
Kenneth Bauhs 78	Sept. 25
James A. Beaudet 88	Sept. 28
Margaret A. Crawford 87	Sept. 29
James Lazos 69	Oct. 4
Richard K. Petersen 89	Oct. 15
Daniel Vallejos 94	Oct. 17
Carl D. Holmes 85	Oct. 20
Theodore Pfeffer 84	Oct. 24



Sandia National Laboratories

<http://www.sandia.gov/LabNews>

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Sandia demonstrates new biomass pretreatment method

Approach uses lignin, hemicellulose-derived ionic liquids

By Mike Janes

Working in support of DOE, researchers from Sandia, the Joint BioEnergy Institute (JBEI), and other collaborators have demonstrated a process for synthesizing ionic liquids (ILs) from materials derived from lignin and hemicellulose, a technique that could lead to more cost-effective processing of biomass.

Certain classes of ionic liquids, generally defined as molten salts in a liquid state at room temperature, are solvents known to be very efficient for biomass processing. But the best-performing ionic liquids have previously been both costly and petroleum-based.

"Using byproduct from biofuel production to convert into ionic liquid closes the loop and makes the process sustainable," says Seema Singh (8634). "It's also much cheaper than petroleum-based ionic liquids, and it's non-toxic."

Seema, along with co-authors Parthasarathi Ramakrishnan, Jian Shi (all 8634), Blake Simmons (8610), Anthe George (8367), and collaborators from JBEI, City University of New York, the University of Georgia, and Oak Ridge National Laboratory, published a paper on the research, "Efficient biomass pretreatment using ionic liquids derived from lignin and hemicellulose" in the *Proceedings of the National Academy of Sciences (PNAS)*. *PNAS* is one of the world's most-cited and comprehensive multidisciplinary scientific journals.

Imidazolium-based ionic liquids, Seema says, offer unique advantages compared with other thermochemical biomass pretreatment methods for the challenging job of processing raw biomass. Largely due to their low vapor pressures, high thermal stabilities, and general solvating capabilities, these imidazolium-based ILs can easily take apart biomass components and perform various functions that work to extract energy-rich materials for a variety of applications.

However, these ILs are expensive, contributing to roughly 40 percent of the cost of the raw biomass material. This has significantly delayed the broad deployment of the technology.

Fundamental discoveries lead to applied solutions

Seema says the research team arrived at its technical approach by thinking in applied terms rather than merely the fundamental science.

"Most of the other labs working with ionic liquids have been more focused on fundamental discovery, while our team is looking at both the fundamental science and the roadblocks that have prevented this technology from being more broadly applied," she says. "So we were thinking more in terms of deployment of an exciting technology for applied biofuel production, and



BLAKE SIMMONS AND SEEMA SINGH at the Joint Bioenergy Institute (JBEI).

(Photo courtesy JBEI)

that led us down this path."

The research team synthesized tertiary amine-based ILs from aromatic aldehyde derived from lignin and cellulose, then used those ILs to pretreat lignocellulosic biomass (switchgrass). The experiments conclusively demonstrated that the ILs are excellent in pretreating biomass and compare well with imidazolium-based ILs.

Seema says the team designed the ILs based on previous knowledge generated by the JBEI team, which has worked on ionic liquid pretreatment since JBEI's inception in 2007.

"We knew what makes certain ILs great solvents for biomass from our many years of research on this topic," she says. "But, still, we were pleasantly surprised with how efficient these renewable ILs turned out to be on lignocellulosic biomass."

The hope now, Seema says, is that biorefineries will take note of the research findings and see that the IL

Sandia California News

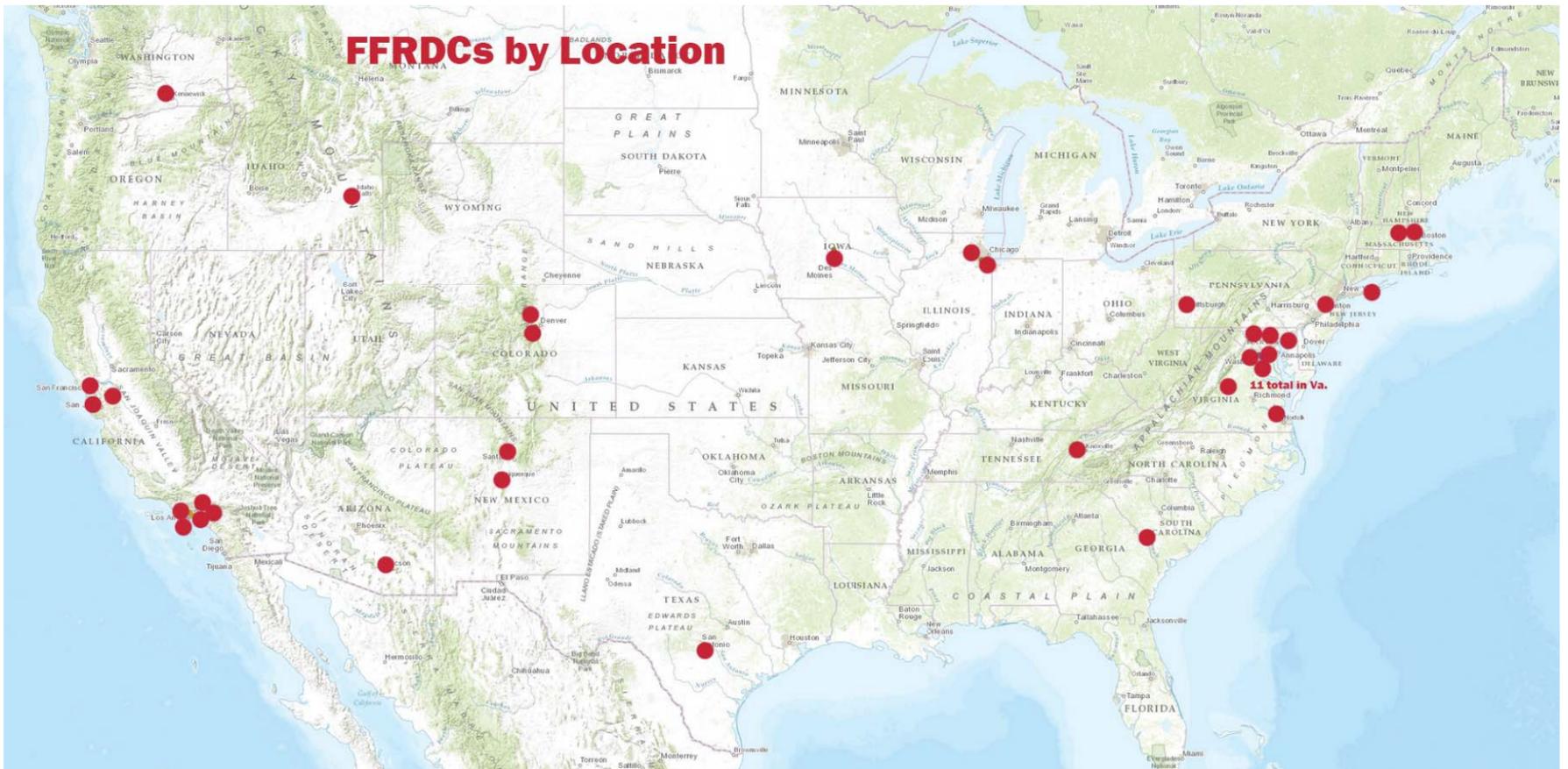
pretreatment process is an economically viable process. In addition, she says the advanced biofuel communities, including those studying ionic liquids, should be encouraged to strive, work hard, and focus on getting ILs produced at a scale large enough to drive down prices.

The next step in the research at JBEI, she says, is to show that mixtures of biomass-derived ILs work. She and her colleagues also want to demonstrate that semi-processed lignin can be used in the process. To this end, the team has started to design more ILs and mixtures of IL mixtures and will test their performance.

'Day in the Vineyard' retiree luncheon

More than 250 Sandia/California retirees gathered on Oct. 8 for the annual retiree luncheon. The attendees enjoyed a beautiful "Day in the Vineyard" theme, complete with grape centerpieces and pomegranate-flavored water in wine decanters. A slideshow with photos from past events played as the retirees reminisced and socialized with former co-workers. Krissy Galbraith (8500) welcomed the retirees and recognized the 20 office management assistants who volunteered their time to plan and execute the luncheon. Transportation Energy Center director Bob Hwang (8521) shared Lab accomplishments of the past year, including Livermore Valley Open Campus developments and recent organizational changes to strengthen materials science research. Community relations/economic development officer Stephanie Beasley (8521) spoke about the SHARE campaign (Sandia Helps and Reaches Everyone) and Family Science Night and encouraged the retirees to volunteer at Sandia functions. Jamie Goodale (8116) photographed the events, and those photos were later made available to the retirees.





Sandia one of 41 Federally Funded Research and Development Centers

(Continued from page 1)

project, convinced Groves that a more effective approach — and one more likely to succeed in drawing the top scientists and engineers that project demanded — would be to have an outside entity manage the lab, backed by government investment. Groves agreed and the results validated the approach.

The successes of Los Alamos and the other wartime labs offered a compelling model for FFRDCs, a structure that was formalized in the post-war era with the establishment of the RAND Corporation and several Atomic Energy Commission laboratories, including Sandia. Today there are 41 FFRDCs sponsored by agencies from across the government.

Shared characteristics

From the very beginning, FFRDCs shared several characteristics. The official FFRDC regulation states that FFRDCs:

- Meet special long-term national R&D needs of considerable complexity that cannot be met as effectively by in-house government or contractor resources;
- Have access to information beyond what is common to the normal contractual relationship;
- Cannot use special access to compete with the private sector;
- Are operated as autonomous organizations or by an identifiable separate operating unit of a parent organization;
- Are required to operate in the public interest, free from organizational conflict of interest;
- Anticipate a long-term relationships with the government;
- Provide the continuity that will attract high-quality personnel;
- Maintain currency in field(s) of expertise;
- Maintain objectivity and independence;
- Preserve familiarity with the needs of its sponsor(s);
- Provide a quick response capability.

Paul notes another key characteristic of FFRDCs: “I think it’s important to address the issue of independence. The government in effect says, ‘We’ve set you up and you’re supposed to be a technical, honest broker. We want you to give us your independent technical view, not colored by commercial or political considerations.’”

The issue of independence, Paul adds, is well-served by a model associated with the Department of Energy’s FFRDCs: They all operate under the government-owned/contractor operated (GOCO) model; the government owns the facility but it is managed by an outside entity from industry and/or academia. Sandia National Laboratories, for example, is an FFRDC. It is also a GOCO facility managed by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin, for DOE/NNSA, the sponsoring federal agency. Sandians are not federal employees or employees of Lockheed Martin; all Sandians, including executive leadership, are employees of Sandia Corporation.

Div. 6000 VP Jill Hruby, who heads Sandia’s Interna-

tional, Homeland, and Nuclear Security Program Management Unit, and acting HR and Communications Div. 3000 VP Becky Krauss recently co-championed a key FY14 milestone related to Sandia Strategic Objective No. 3: “Lead the Complex as a model 21st century government-owned- contractor-operated national laboratory.” Specifically, the milestone was: “Develop specific recommendations to advance the FFRDC governance model with NNSA.”

While DOE operates all its FFRDCs as GOCOs, some other federal agencies operate FFRDCs as COCOs (contractor owned/contractor operated) and there are also government owned and operated research entities.

Becky sees value in having several management models among the nation’s research facilities. “I think the government needs that blend of government owned/government operated, contractor owned/contractor operated, and government owned/contractor operated laboratories. We bring different expertise and different cultures to the challenges that face the nation. As a result, the government gets the benefit of diverse perspectives. It’s a blending that benefits the government and national security as a whole.”

A brilliant construction

Regarding the GOCO/FFRDC model, Jill says, “The construct is actually in my opinion rather brilliant, in

that you can have institutions that do government work with the best practices of the private sector.”

The FFRDC model is about more than just efficiency, Jill says. She sees in that model an expression of the very nature of our society.

“It says something fundamental about our country,” Jill adds. “It says something about democracy, about freedom, that the nation wants this vital work done outside the government with objectivity and independence.”

Beyond all the legal and definitional issues that describe FFRDCs, it is the importance and urgency of the mission and the service to the nation that resonates deeply at Sandia, Paul says.

“I think it’s a great privilege to be part of an FFRDC,” Paul says, “to be contributing in a laboratory that the government has said with some formalism is important to the nation, not just today, but tomorrow as well. The government has said ‘We’re not asking you to do something trivial; we’re asking you to do something challenging, something that maybe has never been done before, and we need your talent to take on that challenge.’”

“Not everybody’s going to spend their career working at an FFRDC,” Paul says, “but I really can’t think of a more rewarding place to be. The country’s going to throw problems our way — they’re going to be hard, and that’s exciting, it’s important. And it’s all done with a backdrop of public service.”

FFRDCs in action

On April 20, 2010, the *Deepwater Horizon* oil drilling rig exploded in the Gulf of Mexico. Eleven workers were killed. Tragic as that was, the problems had only just begun. Two days later, the giant rig collapsed and sank in mile-deep waters some 60 miles off the Louisiana coast. The failure of the rig led to a massive oil leak, with raw crude oil spewing into the Gulf every day.

This was an unprecedented environmental disaster. It soon became clear that the scope of the calamity was beyond the capacity of BP to address. The US government stepped in, with then-DOE Secretary Steven Chu heading a task force to take on the issue. Chu’s team included technical experts drawn from several Federally Funded Research and Development Centers — FFRDCs — including Sandia. The capabilities the FFRDCs had developed and the staffs they had assembled over the years to carry out their primary missions proved enormously useful in augmenting the oil-industry-specific knowledge of the BP technical team.

Thanks to the public/private technical collaboration, the well was successfully capped in September 2010. The agility with which the federally funded



PLATFORM SUPPLY VESSELS battle the blazing remnants of the offshore oil rig *Deepwater Horizon*. Then-DOE Secretary Steven Chu headed a task force to take on the issue. Chu’s team included technical experts drawn from several Federally Funded Research and Development Centers — FFRDCs — including Sandia. (US Coast Guard photo)

laboratories responded to the *Deepwater Horizon* crisis, the depth of their technical acumen, the flexibility to work in a multi-agency environment to address time-critical national problems — all of these factors demonstrated the value and relevance of FFRDCs.

2014 LM Voice survey results show improvement over 2012

By Tim Deshler



More than half of Sandia employees responded to this year's LM Voice survey, and responses show that Sandians have a positive view of work life at the Labs. Categories measured in the survey include Employee Experience, Ethics and Integrity, Diversity and Inclusion, and Leadership.

Participation was 56 percent this year, down slightly from 58 percent in 2012, likely due to the decreased survey window from four weeks to three. Close to 5,500 comments were received from more than 3,000 employees.

Most indices showed improvement over 2012 scores, with Ethics and Integrity remaining a core strength, and Employee Experience improving by 1.24 points on a 5-point scale.

"The results are encouraging, as overall the measures show positive improvement over the 2012 results," says Human Resources and Communications Div. 3000 acting VP Becky Krauss.

The top index, scoring a 4.3, relates to adherence to our core values, which falls in the Ethics and Integrity category. Of the 26 indices, half scored a 4.0 or better, and the lowest score was a 3.4 for "performance management and rewards."

The largest gain of the four major components was in Employee Experience, including a leap in the index for "communicate vision" within that category. "This tells us that we are doing well with articulating our vision and mission," says Becky, "and we're also being heard."

Other indices that showed statistically significant improvement included "top management" and "embeddedness" in the Ethics and Integrity category. "This is exciting because it shows our leadership is practicing what they preach," she says, "and ethics is appropriately becoming an even stronger thread in our culture."

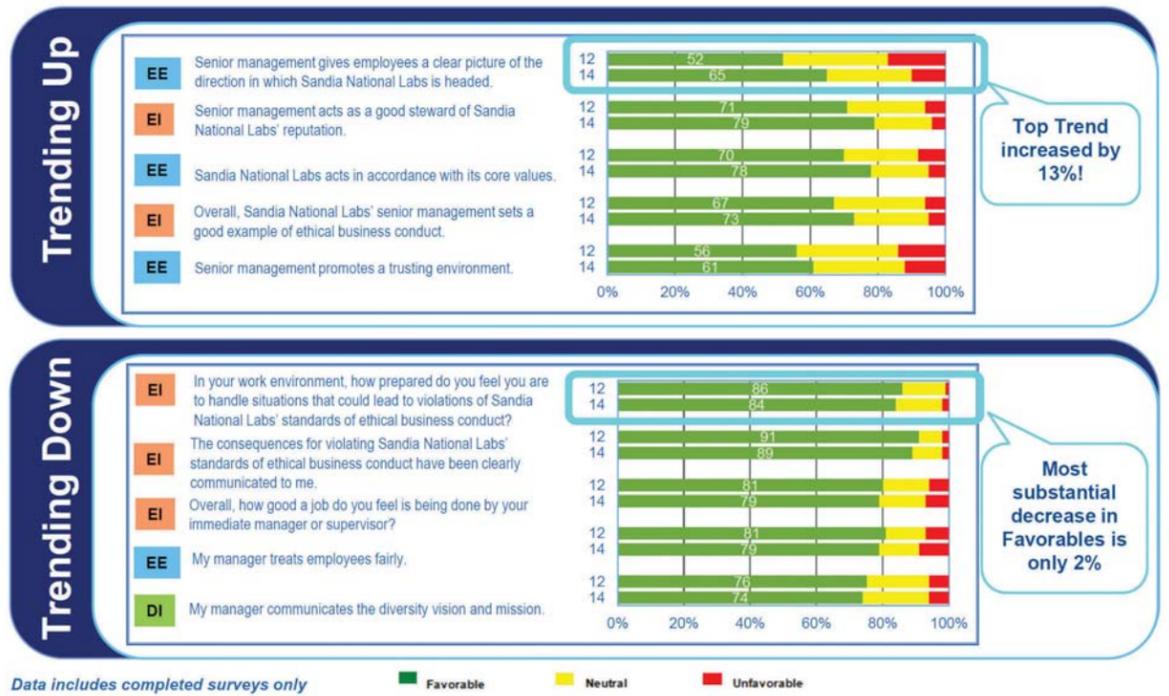
"While we saw gains in some areas, there are still opportunities for improvement in the Leadership category," Becky says. "We believe wholeheartedly in the obvious benefits of a good working relationship for each of us with our immediate manager."

Other areas identified as opportunities included several related to recognition, job growth opportunities, and performance rewards.

"The improvements we made from 2012 to 2014 were largely related to specific initiatives undertaken following the 2012 results," Becky says. "For example, the increases relating to employee understanding of Sandia's mission came about because we fell short in those measures two years ago, and we did something about it."

While leaders throughout the Labs have their organization's information and are already using what they learned from the survey to make improvements, Becky and her organization will soon be working with Sandia leadership to review the overall findings to identify and set priorities for Labs-wide actions.

Trends in Favorability

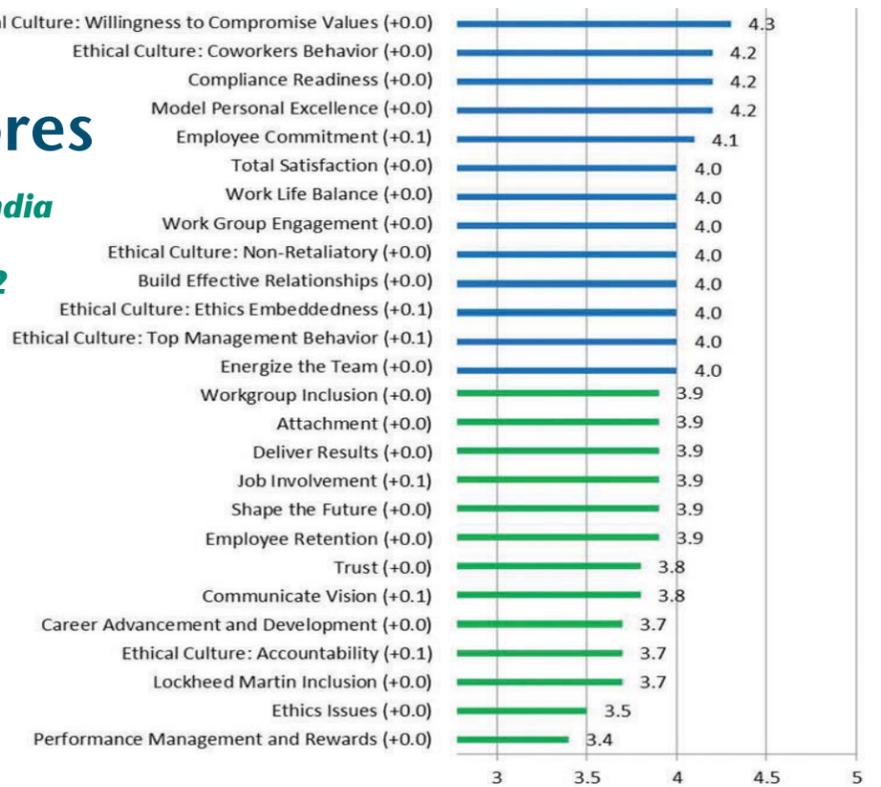


Data includes completed surveys only

Favorable Neutral Unfavorable

Index scores

2014 average Sandia Index Scores with change from 2012



Strengths & Opportunities



Data includes completed surveys only

Favorable Neutral Unfavorable

CMC

Cooperative Monitoring Center bridges technology, policy to address security issues for 20 years

Story by Heather Clark
Photos by Randy Montoya

As the Cooperative Monitoring Center celebrates its 20th anniversary this year, the principles of cooperation and the value of technology for the success of international agreements embodied by the center endure at Sandia and in minds around the globe, say those who've worked to reduce global security threats since the CMC was established in 1994.

The CMC was instituted to address critical security issues by bringing together policy and technical experts from different nations; showing participants how to use technology and confidence-building measures to solve regional and global security concerns; and creating institutions to promote security in regions around the world.

"The whole principle is that these problems can't be solved by one country alone; they require cooperation, and technical cooperation is part of that," says Arian Prenger (6800), a CMC founder and Sandia consultant.

Rodney Wilson, director of Global Security & Cooperation Center 6800, recently hosted a celebration for the CMC in Washington, D.C. "We're celebrating 20 years and I hope there's 20 years more to come," he said after the event. "There are a lot of people who really believe in the CMC and they want to contribute to the idea."

CMC created to encourage technical understanding, cooperation

After the Cold War ended, Arian became aware at chemical weapons talks in Geneva that those negotiating the treaties overpromised technology and did not fully understand its capabilities and limitations. At the same time, she observed renewed optimism, particularly in the Middle East, about resolving long-standing issues and instituting confidence-building measures. She recognized that policymakers needed to understand how technology could help.

"There were all these regions where there seemed to be political will to move toward agreements, and those agreements would be nothing if they weren't implemented — and that meant technology," Arian says.

Sandia also recognized that many of the technologies developed to address security and arms control issues during the Cold War could be applied to the Middle East, Southeast Asia, and elsewhere, says Kent Biringer, manager of International Nuclear Threat Reduction Dept. 6821.

NNSA's predecessor provided seed money for a half dozen researchers in a portable building to get CMC started. Later, CMC moved to what is now the Sandia Science & Technology Park. Its current home is in the Center for Global Security and Cooperation in the research park.



INTERNATIONAL COOPERATION — Kent Biringer (6821), manager of International Nuclear Threat Reduction, shows visiting scholars from Pakistan and India a model of a nuclear missile at the Cooperative Monitoring Center (CMC). The two men were investigating missile transparency between their countries during a 1998 visit to the CMC, which celebrated its 20th anniversary this fall.

Visitors to the CMC can use conference rooms for training, offices for research, and the CMC's Technology, Training, and Display area for a hands-on look at technologies, Rodney says.

In the early 1990s, the CMC established trust between researchers in the US and the former Soviet Union to facilitate lab-to-lab efforts on arms control verification, defense conversion, and the protection of nuclear and hazardous materials formerly controlled by a centralized Soviet Union.

During that same period, the CMC also worked with the Chinese on arms control and nonproliferation. Today, a specialized academy, the China Center of Excellence, is being established to train Chinese working in the civilian nuclear sector to promote nuclear security across the Asia-Pacific region. The center is a joint effort of the Chinese

Atomic Energy Authority and DOE/NNSA.

CMC succeeds in idea exchanges between scholars

Over the years, ideas exchanged between visiting scholars, particularly those from countries where tensions exist, enabled them to develop proposals for their governments together, Arian says.

Scholars visiting Sandia from opposing countries might never have had contact with citizens from the other side, Kent says. "They'd come together and they might start discussing battles they had been in between the countries and realized that they might have been shooting at each other previously," he says. "And now, they are here collaborating." From those strained beginnings, long-term friendships and collaboration formed, he says.



THE GOVERNOR TOURS — New Mexico Gov. Susana Martinez, accompanied by Sandia President and Laboratories Director Paul Hommert, left, and others, visits the Cooperative Monitoring Center to get a first-hand look at Sandia-developed national security technologies.



THE CMC'S WORK HAS PROVIDED ENTRE for Sandians to travel in and work with other countries to help build trust and confidence between long-time adversaries. As a direct results of the CMC's work, members of Global Security and Cooperation Center 6800 traveled to about 90 countries in FY14.

Those program participants and Sandia's early work in certain parts of the world provided entre for other Sandians to build on those connections. Rodney says members of his organization traveled to about 90 countries in FY14, visits he thinks came about as a direct result of the CMC's work.

An early example of CMC's success was the cooperation it fostered between Jordan and Israel in 2004 that led to explosives detection portals at the Allenby Bridge on the border with Jordan, Kent says. The technology allowed people and goods to move more rapidly across the border with fewer invasive searches, reducing tensions along the border, he and Rodney say.

The CMC also helped start a companion facility, the Middle East Scientific Institute for Security (MESIS), in Amman, Jordan. The institute focuses on the technical aspects of regional security and provides a training facility that has been used by a number of US agencies, Kent says.

Sometimes CMC's cooperative efforts, while valuable in their own right, serve as precursors to national security agreements. An example was a project that encouraged Israel and Pakistan to share meteorological data in 1998-

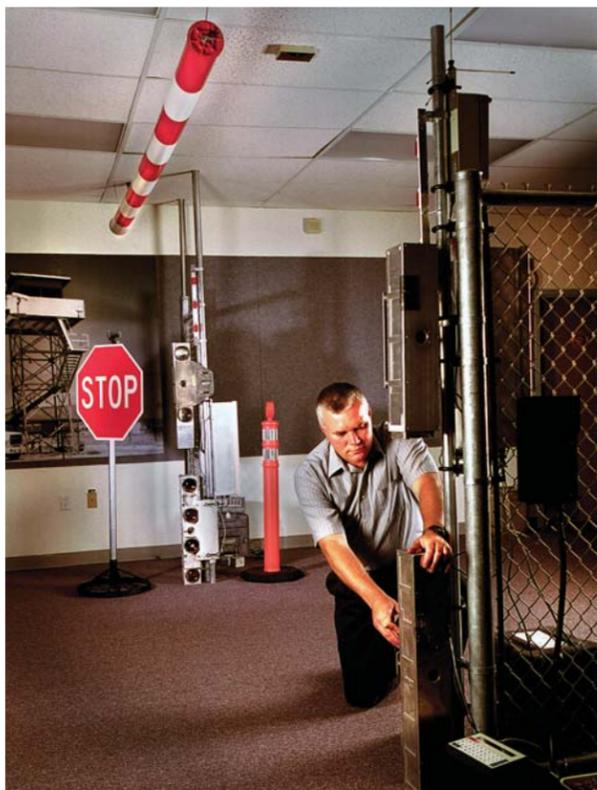
99, Arian says. The objectives were to teach the process of exchanging data, meeting to discuss it, and the importance of transparency, which are important principles for arms control or other political agreements, she says.

Unfortunately, the progress made by the meteorological exchange was interrupted by renewed Israeli-Palestinian violence in 2000.

"That whole habit of cooperation might translate into other things, but you have to have an ongoing political process for that capability to flow into," she says.

In the future, organizers hope the CMC principles will multiply the effectiveness of Sandia's programs to reduce nuclear, radiological, chemical, and biological threats worldwide.

"As I look to the future, I can't imagine that we can sustain an agreement in Ukraine, Iran, or even Gaza unless there's some cooperative technical engagement, allowing us to share information, collect data, and build trust between those countries," Rodney says. "Simply having a diplomatic agreement might not be enough."



THE VALUE OF TECHNOLOGY for the success of international agreements is one of the principles embodied in the CMC.



RUSSIAN VISITOR — Kurchatov Institute President Evgeny P. Velikhov, right, makes a point to, from left, Kent Biringer, then-Div. 6000 VP Bob Eagan, and Larry Walker during a 2002 visit to Sandia's Cooperative Monitoring Center.



NATIONAL SECURITY PROBLEMS can't be solved by one country alone; they often require cooperative technical engagement to share information, collect data, and build trust between countries.

Timeline

1994 – Sandia opens the Cooperative Monitoring Center (CMC) and hosts its first foreign visitors from the Middle East before the year is out.

1997 – Visiting Scholars Program begins to encourage scholars from areas of regional conflict to cooperatively study specific security issues.

1998 – CMC hosts the Eighth Annual International Arms Control Conference attended by about 180 internationally known experts from the United Nations, NATO, and 40 countries.

2003 – Middle East Scientific Institute for Security (MESIS), in Amman, Jordan, opens.

2011 – CMC founder Arian Pregenzer awarded the Joseph A. Burton Forum Award by the American Physical Society for her contributions to the CMC's success.

State safety award goes to Sandia engineer



THE AMERICAN SOCIETY OF SAFETY ENGINEERS has named Luis Amezcua as the 2014 New Mexico Safety Professional of the Year for two decades of safety work, including programs to ensure the safety of workers who are not native English speakers.

(Photo by Randy Montoya)

By Heather Clark

Luis Amezcua (415), a surveillance assessment engineer at Sandia, began his safety career in Mexico helping improve safety standards in the construction industry. His career has followed an interesting trajectory.

Luis received the New Mexico Safety Professional of the Year award from the American Society of Safety Engineers (ASSE) for two decades of safety work, including programs to ensure the safety of workers who are not native English speakers.

His previous safety work at Sandia included managing programs to implement safety procedures for defense projects and providing safety guidance and training on proper ventilation, fire protection, lighting, and other measures for construction sites and offices.

Luis grew up in Juarez, Mexico, where he earned a bachelor's degree in civil engineering and a master's in environmental engineering from the Universidad Autónoma. A construction site scaffold accident at the beginning of his professional career resulted in two

broken ankles and two years of rehabilitation after three surgeries.

Luis learned English and moved to the United States during his rehabilitation. He joined Sandia in 2005. He earned a master's degree in Occupational Safety Management from what is now the University of Central Missouri, and a doctorate in Organization, Information, and Learning Sciences from the University of New Mexico (UNM) in 2013. His dissertation was about the relationships among language, culture, safety, and training construction workers in New Mexico.

In 2010, Luis was appointed president of the New Mexico chapter of the ASSE.

"I have overcome many obstacles through dedication, hard work, and always striving to better myself," Luis says. "From my perspective, this award provided a sense of closure to my formal education, my hard work, and my passion for worker safety."

In her endorsement letter for the award, Luis' manager, Jennifer Franklin (415), recognized how his skills as a safety professional helped him in his current position assessing the safety, security, and reliability of nuclear weapons components and reviewing proce-

dures to ensure that weapons surveillance operations are conducted correctly and safely.

"Luis has a passion for safety education and recognizes the importance of creating a rich, safety-based learning culture in the workplace," she wrote. "Luis has a genuine concern for the well-being of those around him and it shows through his behavior, work pursuits, and passions."

As a safety engineer at Sandia, Luis produced presentations on bicycle, electrical, lighting, machine shop, and office safety and on office ergonomics and personal protective equipment. He still gets calls from employees about his office safety presentation, which covers outlet safety, lighting problems and other hazards, fire prevention, and other topics.

Luis has presented Spanish-language workshops for general contractors in New Mexico about the Occupational Safety and Health Administration's guidance on relocating safety hazards, applying engineered controls to remaining hazards and effectively educating workers. He also works with Hispanic freshmen at UNM to motivate them to stay in school and obtain their degrees.

November is IPOC parking lot safety month

Paul Graham (10503), left, and Evelyn Serna (10510) greet members of the workforce in the Innovation Parkway Office Center (IPOC) east parking lot one afternoon during the first week of November with friendly reminders to drive and walk safely. In response to several observed incidents of speeding and near-misses in the parking lot, IPOC's Evacuation, Emergency, and Safety team designated November as IPOC Parking Lot and Traffic Safety Awareness month. During the month, volunteers from organizations throughout IPOC have been a visible presence in the building's parking lots to encourage safe driving and pedestrian behaviors. There have also been building-wide communications and speakers addressing safety-related issues.

The IPOC safety campaign is intended to make sure that IPOC residents don't become part of a surprising statistic: Nationwide, one in five motor vehicle accidents takes place in a parking lot, and 14 percent of all auto insurance claims involve parking lot collisions. Pedestrians are also often struck by vehicles moving in and out from parking spaces. Tragically, about 200 people (drivers and pedestrians) are killed each year in work-related parking lot accidents.

"Workplace safety very much includes being safe before you ever get to your office or lab," says Center 3600 Director Bruce Fetzner, who is leading the IPOC parking lot safety campaign. "I'd like to thank all the volunteers for helping get out our message and all IPOC residents for taking this issue seriously. Working together, paying attention, and following posted speed limits, we can all get home safely every night and back to work in the morning."

(Photo by Randy Montoya)



Employee death

A void that can never be filled: Shantelle Williams' capacity for love and laughter were boundless

When Shantelle walked in a room, it was like someone turned the lights on. And when she left, her laughter echoing down the hall, the afterglow lingered.

Shantelle Williams (9543), the remarkable, multi-talented young woman whose one-time manager considered her “a manager’s dream” and a rising star in Sandia’s IT organization, willing to take on any job and do it well, died suddenly last month at age 28 after encountering some physical difficulties during the final weeks of her life.

The passing of this young Los Alamos native and University of New Mexico graduate touched deep chords of emotion among her friends and colleagues. Perhaps a comment from colleague Andy Benjamin



SHANTELE WILLIAMS during a 2009 trip to Las Vegas, Nev.

(9516) speaks for everyone: “Meeting her meant liking her,” he says.

An unforgettable, joyful woman

“Being Shantelle’s friend was effortless,” says Tara Camacho Lopez (3655). “I always looked forward to being around her because I knew we were going to have a great laugh.”

Shantelle, whom one friend described as “an exceptionally vibrant young lady,” left a lasting mark on those who knew her; one aspect in particular of her personality — that unforgettable laughter — recurs again and again in their recollections.

“No matter what was going on she always knew how to lighten the mood and had a very infectious laugh,” says David Mozley (9543).

Margaret Box (9548) uses similar words: “Her warm spirit and infectious laugh won my heart. I knew instantly that she was a special person. We became friends immediately.”

Says Dublin Gonzales (9546): “Shantelle was an amazing person! She was full of life and energy. She had an infectious laugh and was always smiling.”

Tara says, “Shantelle brought her beautiful smile and

infectious laugh to our Homeland Security work group as a student intern in 2009.”

Other similar comments: “I will never forget her cheerful laugh. That was always the way I knew she was coming down the hallway.” . . . “When I think of Shantelle, the first things that come to mind are her contagious laughter and her independent personality.”

Shantelle always tried to find the bright side of things and helped her friends do the same. Says Danielle Sedillo-Cafferty (9311), “There were several times when she would help me be more optimistic or try to put a positive spin on negative situations. In return, I would always find something to say or do that would dissolve her into a fit of laughter.”

A serious, determined side

You might think that a person so free-spirited and lighthearted as Shantelle lacks a serious side, but that was decidedly not the case with her. Shantelle had a determined streak that showed itself in some very tangible ways.

For example, in addition to earning three advanced degrees, she also earned her real estate license by the time she was in her early 20s. As Tara notes, “She must have learned the subject well because she was the youngest person I’ve ever known to own her own home.” At the time of her death, she was within a year of having that home completely bought and paid for, decades sooner than most homeowners attain that important milestone.

Shantelle dove into her work with the same energy she brought to everything. She was the very embodiment of the idea of being “all in.”

Says her first manager, Duane Garrison (9546), “As one of Sandia’s new Information Technology professionals, Shantelle distinguished herself as a highly capable, dedicated, and hardworking employee who her colleagues truly enjoyed working with. Her technical and leadership skills made her a tremendous asset to Sandia. We are grateful for the time she was part of our organization.”

Renee Mueller (9546) worked with Shantelle both as a customer and

colleague. She remembers Shantelle as “a spunky gal,” someone who “wasn’t afraid of a challenge and was willing to work on anything you gave her.”

Shantelle was one of those people for whom the phrase “the complete package” was almost an understatement. Accomplished at work, beloved by her friends, someone you just wanted to be around, she was also a passionate competitor in mixed martial arts, softball, and skiing. And more than one friend remembers how much she loved fast cars, especially the new Camaro SS she drove with such joy.

She was sweet of disposition, kind-hearted to a fault; there wasn’t a mean bone in her body. Recalls Duane, “From the day I hired her just two-and-a-half years ago right up until the last time I spoke with her when she left work on the day before her death, I never heard Shantelle utter a negative word about anyone and never heard her complain about anything.”

People flocked to her

Michael Scott Vigil (10678) recalls that “Shantelle could communicate and make friends with everyone! People would always flock to her because of her friendly chats. I met many people just because I sat next to her!”



SHANTELE WILLIAMS

If you were in a tough spot, Shantelle was always the first one to offer a helping hand. Angela Rivas (1932) recounts an incident in which Shantelle’s “unsurpassed kindness and compassion” were on full display. In this incident, Angela says, “Shantelle didn’t even hesitate to help. . . . I am confident that there are dozens upon dozens of similar stories where she stepped in to help people regardless of what needed to be done.”

Shantelle’s laughter and smiles might make it easy to overlook how brave she was. She lived her life with optimistic good cheer, never letting major physical setbacks get her down.

About a year after she was hired at Sandia she injured her knee so seriously playing softball that she had to undergo knee replacement surgery. While still recovering from that ordeal she encountered a severe chemical reaction to a plant she touched, then using the same hand, rubbed her eye. This almost caused permanent blindness in that eye but after several months of treatment she started to regain partial sight. She had almost fully regained her eyesight in that eye when she died.

“She had many trials that she went through while I knew her. She faced them all head-on and with a smile,” says David. Cindy Fulcher (9546) remembers her the same way: “Even when Shantelle was navigating through an extremely difficult situation, nearly losing eyesight in one eye, she returned to work with that same joyful laugh and with gratitude for the support of her friends and co-workers.”

A contagiously positive attitude

Ana Lopez (9543) considered Shantelle “an inspiration” for the strength and courage she showed in adversity. “She was able to overcome challenges that would set back any other human being,” Ana says. “She pulled through many major obstacles with a contagiously positive attitude.”

Renee remembers, too, Shantelle’s boundless interest in and enthusiasm for the world around her. “She had a very curious mind and was always wanting to learn new things,” Renee says. “We would often have discussions about our pets and cars, or the wonders of God’s creation.”

For someone of such irrepressible energy and enthusiasm, Shantelle had an introspective and contemplative side. “She was a quiet and reserved person who preferred to let her accomplishments speak for her and let others acknowledge her contributions and successes,” Duane says. “She was not one to brag about herself or put herself above others.”

Len Buchholz (2727) got to know Shantelle when she participated in a lunchtime Bible study group. “She had an inner beauty that was very special,” Len recalls. “She always was interested in others and seemed to minimize talk about herself.”

Shantelle’s love for people was reflected in her love for all living things. Shantelle, Dublin says, “had a soft spot for animals and donated time and money to rescue and save the ones in need.”

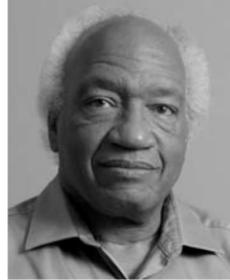
And Tara remembers the time Shantelle traveled with her to Colorado to help Tara’s family choose a new puppy. “For Shantelle it was an easy trip,” Tara says, “because she loved to travel and she loved animals even more, especially her two dogs, her parrot and, yes, her tarantula. She was part of my family and we will never forget the fun we all had together.”

Shantelle died too young, but she lived two lifetimes in her 28 years. She touched and inspired and changed lives every single day.

Says Andy Benjamin, “Her sudden passing leaves a void that will never be filled — because the angels don’t make enough Shantelles.” — Bill Murphy

Mileposts

New Mexico photos by Michelle Fleming
California photos by Dino Vournas



George Moore
35 2726

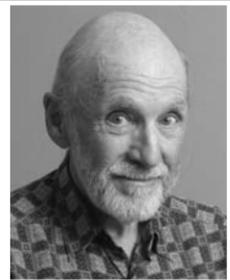


Paul Apodaca
30 10261

Recent Retirees



Meg Luther
44 163



Peter Feibelman
40 1100



Carol Bonney
30 4236



Angela Campos
30 9524



Todd Owen
30 2135



Priscilla Altsisi
25 9538



George Cordova
36 10261



John Patterson
26 5964



Deborah Nunez
25 3332



Jim Ang
25 1422



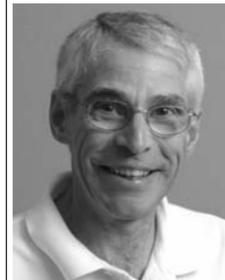
Irene Bentz
25 5786



Stephen Conrad
25 6921



Jay Dike
25 8259



Art Hale
23 500



Carole Lojek
20 427



Pamela Zitzka
11 1718



Jef Duncan
25 5632



Jay Hammond
25 2952



Dorothy Stermer
25 5522



Jerry Strother
25 5965



Doug Vrueling
25 8512



Tom Weber
25 6831



Gilbert Aldaz
20 4820



Bill Bohnhoff
20 1341



Karen Devine
20 1426



Bill Kitsos
20 4853



Kurt Larson
20 5563



Mike Valley
20 5955



David Wisler
20 4022



Carlos Jove-Colon
15 6222



Steven Owen
15 1543



Greg Peake
15 1766

Retirement
Retiring and not seen in the Lab News pictures:
LaDonna Jarrell (9524), 16 years.



Richard Plass
15 2952



Betty Roush
15 5546

CREATIVE SERVICES

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Be the first in your organization to display the only calendar made just for Sandia National Laboratories. Creative Services has designed a unique calendar featuring the work we do and highlighting important dates.

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To place your order go to:
creative.sandia.gov

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

MISCELLANEOUS

SHOPSMITH, w/band saw, table saw, jointer, sanding disc, documentation & accessories, lightly used, \$400. Trever, 294-7364.

TIMESHARE, Orlando, 2-bdr., sleeps 6-8, 7 days lodging before Feb. 10, \$750 OBO. Wipperman, 505-850-0310, ask for Sherri.

CHRISTMAS BAZAAR, Nov. 29, 9 a.m.-5 p.m., Nov. 30, 10 a.m.-4 p.m., Cowboy Hall, 1040 Arena Road, Bosque Farms. Cordova, 869-1122.

ACOUSTIC GUITAR, Yamaha, FG730S, hard-shell case, guitar stand, electronic tuner, all in great condition, \$200. Turner, 239-7318.

FURNITURE, 4-pc., leather couch, loveseat, chair & ottoman, light brown, great condition, \$1,100. Willis, 505-833-1603 or 505-967-9170.

BAHAMAS CRUISE/SOUTH FLORIDA VACATION, for 2, 6 days/7 nights, free car & meals, \$623. Passell, 550-5752.

LARGE HANDBAG, Louis Vuitton Speedy 40, \$350. Maestas, 505-400-3222.

OXYGEN ACETYLENE TORCH, w/tank, gauges, other accessories, \$450 firm. Herrera, 833-5035.

WASHER & DRYER, Maytag Neptune HE, front loading, both in excellent condition, \$800 OBO. Atchison, 505-235-5651.

TRAVELING TO MUNICH?, would like to send Christmas gift to son & his family. Canaris, 505-264-5299.

POPEJOY TICKETS, orchestra: Chicago, 2, Jan. 18, 1 p.m., \$45 ea.; Sleeping Beauty, 2, Jan. 29, 7:30 p.m., \$44 ea. Hallatt, 505-332-2786.

BATHTUB, Kohler, cast iron, chocolate, rarely used, perfect condition, \$200. Vigil, 505-366-9503.

LEATHER COUCH, TEMA, 80"W x 36"D x 32"H, taupe, excellent condition, \$300. Carroll, 292-5436.

HOME THEATER SYSTEM, Sony HT-5500D, Dolby 5.1 surround sound, 100-W channel, w/5-disc DVD player, \$50. Milesosky, 463-9468.

ELLIPTICAL, Octane Q37, rarely used, mint condition, paid >\$3,000, asking, \$1,200. Provoost, 639-9965.

AUTOMATIC BREAD MAKER, Breadman Ultimate Plus, model TR2500BC, good condition, \$35. Dinge, 505-818-8933.

PING PONG & FOOSBALL TABLES, sold as set, w/all accessories, good condition, free delivery, \$200. Baker, 239-9455.

TIMESHARE/RESORT RENTAL, Wyndham, Pagosa, Taos, Vegas, Durango, for the holidays & more, \$100-\$200/per night, call for availability. Faculjak, 823-9686.

RADIAL TIRE CHAINS, fit tires sizes 195/R14, 195/R15, ER70/15, good condition, \$15. Kepler, 291-3448, glenkepler@gmail.com.

UPRIGHT PIANO, 1912 Weber, former player, tuned, w/bench, good condition. Thibeau, 505-239-8696.

SEWING MACHINES, Bernina 710, latest model, 2 yrs. old, \$3,250; Brother Inovis 40, like new, \$350. Seager, 244-0097.

MICROWAVE & GAS RANGE, Amana, \$100 ea.; Maytag dishwasher, almond, \$50, bunk beds, full/twin, \$150. Woods, 217-4750.

TIMESHARE/CONDO RENTAL, 1-2-bdrs., \$100-\$200/night, call for availability; 2-drawer filing cabinet, \$20; new 18-gauge nailer/stapler, \$20. Garcia, 280-5815.

KING BED, oak headboard, Simmons Beautyrest pillow-top mattress, springs & frame, excellent condition, \$600; Christmas decorations, \$50. Drebing, 293-3335.

MITRE BOX, Rockwell International 34-010, 9-inch. blade, works great, \$50. Milesosky, 463-9469.

How to submit classified ads
DEADLINE: Friday noon before week of publication unless changed by holiday. Submit by one of these methods:
 • EMAIL: Michelle Fleming (classads@sandia.gov)
 • FAX: 844-0645
 • MAIL: MS 1468 (Dept. 3651)
 • INTERNAL WEB: On internal web homepage, click on News Center, then on Lab News link, 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 Sandia members of the workforce, retired Sandians, and DOE employees.
10. Housing listed for sale is available without regard to race, creed, color, or national origin.
11. Work Wanted ads limited to student-aged children of employees.
12. We reserve the right not to publish any ad that may be considered offensive or in bad taste.

TRANSPORTATION

'09 HONDA CIVIC, silver, 4-dr., newly purchased quality tires, runs great, \$12,000 OBO. Padilla, 505-515-9059.

'42 RARE DODGE D22 2-DR. SEDAN, project car, build record, manual, title, Craigslist 4746573482, \$6,500 OBO. Ozmun, 505-250-5698.

'70 VW BEETLE, red, rebuilt engine, new headliner, seat covers, carpets, switches, brakes, chrome powder coated black, \$5,000. Flores, 681-7081.

'03 TOYOTA SOLARA COUPE, 2-dr., V6, AT, red, sun roof, 95K miles, great condition, \$4,750 OBO. Lavin, 505-553-9587.

'06 CHEVROLET EQUINOX, black, leather heated seats, sun roof, 84K miles, clean, new tires, \$9,000 OBO. Zipperian, 286-1721.

'00 VW PASSAT GXL, standard transmission, power, leather, white, 1 owner, well maintained, 106K miles, \$3,000. Groom, 288-1852.

'04 FORD F150 XLT, 4WD, 130K miles, overall good condition, noisy transmission, NADA is \$6,000, -\$2,000 (transmission), asking \$4,000. DeChant, 917-6587, call or text.

'87 CUTLASS CRUISER, V6, all power, heater, AC, 120K miles, great condition, \$2,100 OBO. Morgan, 505-452-6137.

RECREATION

'08 SEVILLE 35C 5TH WHEEL, washer, dryer, fireplace, 52-in. TV, AirRide pinbox, double pane windows, http://kaysrv.com/08-seville-35c.aspx, \$37,900. McRee, 505-898-5030.

'11 BMW F650GS, complete hard cases & driving lights, <4,500 miles, \$8,500. Ryan, 505-934-0684.

'10 COLEMAN COBALT POP UP CAMPER, 8-ft., 1,300-lb. dry, furnace, stove, extras, great condition, \$5,500. Vaughan, 291-9857.

'95 GT TIMBERLINE MOUNTAIN BIKE, 22-in. frame, candy apple green, excellent condition, ridden <50 miles, \$200. Schmidt, 877-7953.

FREE TO GOOD HOME — 1974 Lido 14 sailboat. Recently demasted but fully repairable; hull sound; parts widely available. Sailed frequently at Cochiti. Trailer in good shape. Must go by Nov. 16. Murphy, 505-294-1778.

REAL ESTATE

3-BDR. HOME, 2-1/2 baths, 1,410-sq. ft., electric chair lift, corner lot, Longford Village, \$149,500. Wright, 332-0773.

3-BDR. HOME, 1-3/4 baths, 1,289-sq. ft., brick exterior, hardwood floors, updated kitchen/baths, minutes to KAFB/UNM, Gibson/San Pedro, MLS#827075, \$133,000. Keese, 459-5593.

1-BDR. CONDO, updated, gated building, private, laundry & exercise facilities available, Nob Hill area, \$74,900. Moreno, 238-0494.

4-BDR. HOME, 3 baths, 4,280-sq. ft., swimming pool, Four Hills, http://albuquerque.craigslist.org/fo/4746762279.html, \$419,900, \$429,900 w/realtor. Ramos, 972-951-0290.

WANTED

DAY BED, good condition, with or without mattress. Kajder, 228-0381.

ROOMMATE(S), 5 mins. From SNL, no pets, \$475/mo., w/utilities & WiFi. Guillen, 505-385-8189.

RAW MEAT - Need room for this year's hunt? I'll take the old stuff for my dogs. Beggs, 414-2757.

HOUSEMATE, 2nd master bdr., Volterra neighborhood, \$400 mo., not including utilities. Delgado, 505-440-8599.

LOST AND FOUND

FOUND: charm w/inscription of Alexa's Angel, in ladies restroom, Bldg. 880, corner of D/X aisles. McRee, 844-8958.



People power: ECP changes focus and crosses the finish line

By Nancy Salem

The focus of Sandia's Employee Caring Program (ECP) shifted this year from dollars to people, and in the end employees came through on both fronts.

ECP, which raises funds for the United Way of Central New Mexico (UWCNM), ran Oct. 6-24 and featured events including a nonprofit agency fair, book sales, leadership activities, presentations, ice cream socials, pizza parties, head shaving, wig wearing, hair coloring, cake baking, and even a dunk tank.

On the heels of a long series of record-breaking fundraising years, the 2014 goals put participation up front:

- Increase participation rates in every division to greater than 75 percent.
- Continue to engage newer employees (<5 years) in Sandia's culture of giving, with greater than 65 percent participation.
- Increase contributions to the Community Fund by 10 percent.
- Exceed \$6 million in total contributions.

"We really wanted to work this year on increasing participation," says campaign chairman Grant Heffelfinger, director of Physical, Chemical, and Nano Sciences Center 1100. Sandia came through, pushing participation to 77.3 percent overall, up 2.3 percent from last year, and 68.6 percent for new employees, up 4.6 percent. "I was really hoping we could get more than three-fourths of the lab to participate and was delighted to see the 2.3 percent increase overall and especially the 4.6 percent increase for new employees," Grant says.

As of mid-November, employees had pledged \$5.4 million, up 5.3 percent from the same point last year. Retiree donations are still coming in, and the projected campaign total is more than \$6.2 million, which would



ALBUQUERQUE'S PB&J FAMILY SERVICES is one of the agencies supported by the United Way of Central New Mexico's Community Fund. PB&J helps at-risk children grow and develop to their full potential. (Photo courtesy of United Way of Central New Mexico)

set a record. Community Fund donation results will be available in December and final campaign numbers in February.

Pam Catanach (3652), the Community Involvement specialist who coordinates the ECP, says the 83 campaign representatives in centers and divisions worked tirelessly to answer questions and encourage participation. "Sandia's ECP representatives are the heart and soul of the campaign," she says. "They bring it to life and drive the success. It gives me such joy to see them learn more about our community and share that information with their fellow Sandians."

Grant says the ECP representatives, management, and members of the workforce delivered phenomenal results. "The depth of Sandians' commitment to helping those less fortunate and giving back to the commu-

nity is extraordinary," he says. "We are a major force in improving lives in our area."

Sandia employees and retirees in 2013 increased donations by 8.2 percent over the previous year, giving \$6,050,426 to the charitable organization. The total eclipsed the goal of \$5.75 million and set a record. The retiree share was \$809,128.

Grant described the 2014 campaign as a true test of Sandians' hearts. "The ECP has seen some strong campaigns in recent years and we wanted to shift the focus a bit," he says. "Sandians showed what they are made of and continued our rich history of helping people in need."

Ed Rivera, UWCNM's president and CEO, says Sandia's generosity inspires the entire community and drives the larger campaign. "We talk about the culture of giving that is Sandia," Rivera says. "It's infectious. It's huge."

"We thank you for that from the bottom of our hearts and from all those who benefit from what you do. Sandians are thoughtful people who are informed about the challenges in our community. You give money and time so generously. You change lives."

A bond for life

Sandian earns prestigious public service award for bringing science to Native American kids

By Nancy Salem

Nelson Capitan grew up strong on the Navajo Reservation. As a teenager he explored the forests and rivers of the Chuska Mountains where his ancestors farmed, hunted, fished, and found building materials for generations. "During the summer I would be out there the whole day with my friends and come back all brown, dirty, sandblasted," he says.

After school he worked in the town of Tohatchi painting, pulling weeds, fixing roads, and doing odd jobs. "I always felt attached to the land and to the community. It made me strong in many ways," Nelson (2712-2) says. "I have a connection to the reservation."

Nelson kept that bond when he left Tohatchi for college and later a job at Sandia. As a member of the Labs' American Indian Outreach Committee (AIOC) he has worked tirelessly for more than 20 years to support science education on reservations and pueblos and encourage fathers to be more involved in their children's lives.

"I've been doing it so long I really didn't think anyone noticed," Nelson says. But the work made a difference, and Nelson was named a winner of the 2014 Governor's New Mexico Distinguished Public Service Award. He will be honored at a gala banquet Dec. 2 at the Marriott Pyramid in Albuquerque. The program developed by Albert Rosenthal, director emeritus in public administration at the University of New Mexico, has recognized exceptional service by individuals for more than 44 years.

"I feel fortunate getting the award," Nelson says. "I hope I can set an example. Volunteer work is out there and needed. It has been very rewarding to me. I hope more people can be involved in the schools and communities."

A mother who taught values and culture

Nelson's family is from Naschitti on the Navajo Reservation, but he grew up in nearby Tohatchi. His father left home when Nelson and his brother were little. "We were raised by my mom," he says. "A lot of



NELSON CAPITAN (2712-2) STARTED HIS SANDIA CAREER in environmental restoration and moved to the active ceramic trades in Neutron Tube Manufacturing. "I like the lab work," he says. (Photo by Randy Montoya)

who I am came from her. She gave us a sense of hard work and connection to our native ways. She taught us family and belief in our cultural heritage. She taught us respect for our grandparents."

Nelson attended Tohatchi schools through high school. He played football and basketball, ran track, and was vice president of his senior high class. He considered joining the Navy after graduating but a teacher suggested he first do a year of college. In the fall of 1986, Nelson enrolled in environmental studies at New Mexico Highlands University in Las Vegas and never looked back.

"In college I saw the big picture of what my future could be," he says. He transferred to the Albuquerque Technical-Vocational Institute, now Central New Mexico Community College, and later the University of New Mexico, earning an associate's degree in environmental technologies and a Bachelor of Arts in biology with a minor in geology.

Sandia had a summer employment program for Native Americans, and Nelson joined in 1992. "I've stayed with Sandia ever since in more ways than one," he says.

Nelson did work-study, internships, and onsite contracting in Sandia's Environmental Restoration project. He became a full-time employee in December 2001 working in active ceramics. He transferred four years ago to the Neutron Tube Manufacturing group. "I like the lab work," he says. "I'm with great people."

Science and fatherhood

Nelson lives in Laguna Pueblo with his wife and children. He joined the AIOC in the early '90s as a Sandia intern and became more involved over the years. One focus has been science fairs. Nelson recruits Sandia researchers to go to pueblos and reservations to help students with science projects. "We want more kids to interact with professionals from Sandia," he says. "It's good for them. The scientists are great role

models. They spend quality time with the students." Hundreds of students participate every year.

Nelson also cofounded the Laguna Fathership Program, which encourages mostly young dads to be more involved with their kids. "We give them tools," Nelson says. "When a father and mother split up, hopefully there is common ground where they can come together for the sake of their children and be there for them in the best way."

Nelson speaks from the experience of his father leaving the family. As an adult he crossed paths with his dad on the reservation and brought him back into the lives of his children. "It wasn't just for me. I wanted my kids to know their grandfather," he says. "It was a struggle for me at times to resolve those feelings, but we are supposed to forgive, and I had to learn that, too."

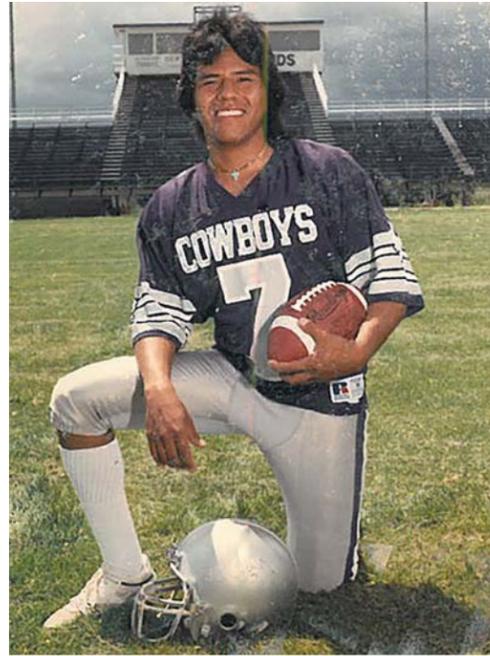
Nelson also is the Laguna-Acoma co-chair of the Indian Parent Advisory Committee in the Cibola County School District, and works with young people through his church.

His message to Native American youth is to be diligent in school, take time to read, study the scientific method, and think higher education. "I tell them not to stop, to keep going, and don't get off track," he says. "I encourage them to think

about careers early because that's what young people off the reservation are doing."

It's a message his own kids took to heart. Nelson has a UNM-graduate daughter doing a fellowship in public health in Washington, D.C., a son studying mechanical engineering at New Mexico State University, and a son in high school. "I pass on to my kids the values, faith, perseverance, and the lessons of past generations," he says.

He says those lessons keep him connected to his home and people. "I think back to my childhood in the mountains, and those are the days I miss, growing up in Tohatchi," he says. "I learned to love nature and the land and to accept what life gives me."



NELSON CAPITAN WAS A FOOTBALL WALK-ON as a freshman at New Mexico Highlands University. He played high school football in Tohatchi and continues to play league basketball. "I was a jock in school," he says. "I like being active."

Native American Heritage Month 2014



AMERICAN
INDIAN
OUTREACH
COMMITTEE

In honor of Native American Heritage Month in November, Sandia's American Indian Outreach Committee is sponsoring several events with an open invitation to all. Come celebrate with us!

Wednesday, Nov. 19 – Bldg. 810/Auditorium, 11:30 a.m.-12:30 p.m.

- **Diversity Cinema:** The Northwestern Shoshone - Where have all the Shoshone gone? In 1863, in less than a day, approximately 500 Northwestern Shoshone were slaughtered while camping by the Bear River. Today they fight a new battle—one to keep their traditional cultural practices and language alive.

Monday, Nov. 24 – 823/Breezeway, 11:30 a.m.-12:30 p.m.

- **Women's Talking Circle:** "What I've Left Unsaid" – An article by Michel Martin on balancing career and family as a woman of color.

CLOSING CEREMONIES

Tuesday, Nov. 25 – Steve Schiff Auditorium, 11 a.m.-1 p.m.

- **The Origination/Meaning of the Pow-Wow:** Join Casey Church as he presents the origination and the meaning of the Pow-Wow. Casey's presentation will be followed by Red Road Crossing drum group.
- **Native American Food Tasting Event** – There is no charge, however, AIOC will collect canned goods and non-perishable food items for the American Indian Center.

For more information, contact: Judy Jojola at 284-2893, jajojol@sandia.gov, Aaron Niese at 844-8365, adniese@sandia.gov, or Marie Capitan, 284-3171, fmcapit@sandia.gov