

IMPACT TEST — A rocket sled (entering the frame from the right side of each photo) slams into a stationary B61-12 mock weapon at the end of Sandia's 10,000-foot sled track during a suc-

cessful test last month. Tests in July and August marked the return of supersonic testing to the Rocket Sled Track. (Photo courtesy of Ed Bystrom, Dept. 1535)

# Supersonic!

## Sandia conducts first faster-than-sound sled track tests since 2008

By Sue Major Holmes

Sandia has conducted the first supersonic tests on its 10,000-foot Rocket Sled Track for the B61 modernization program since major renovations at the facility.

The two tests in late July and early August were part of a series for the B61-12 Life Extension Program that included five sled track tests this summer. The first

three were conducted on Holloman Air Force Base's sled track at slower speeds than the tests performed on Sandia's track, says test director Jason Petti (1534).

Matt Brewer (2159/6512), test engineer for the B61-12 program, says the successful Sandia sled track tests mark another achievement in the revitalization of an important capability. The B61-12 Systems Org. 2150 and Validation and Qualification Org. 1530 performed the tests to characterize impact fuze performance and

gather model validation data, with test conditions representing both the steepest impact angle and fastest velocities predicted for normal environments, he says.

The tests will lead to a similar series with two full B61-12 systems tests next fiscal year. The sled track plays an important role in overall weapon system design and qualification not only by verifying weapon performance, but also by validating system models gen-

(Continued on page 4)

**Sandia Lab News**  
Vol. 66, No. 18      September 5, 2014      Sandia National Laboratories

**Sandia honors 49 individuals, 73 teams in 2014 Employee Recognition Awards program.**  
See pages 12-14

## Forward thinking

### Women-led team plans for national labs' future

By Jennifer Awe

Note: This article first appeared on DOE's Office of Economic Impact and Diversity blog ([energy.gov/diversity](http://energy.gov/diversity)), as part of DOE's Women in STEM initiative.

DOE's 17 national laboratories employ brilliant minds, addressing the greatest science and technology issues facing our planet — from climate change and energy solutions to space exploration to national security.

Amid these are three nuclear weapons laboratories that share the critical responsibilities of ensuring the safety, security, and effectiveness of the US nuclear deterrent. Collaboration between these labs, and throughout the National Nuclear Security

(Continued on page 4)

## Workshop addresses wind power challenges



Former US Sen. Jeff Bingaman (below) and program manager for DOE's Wind and Water Power Technologies Office Jose Zayas, spoke to nearly 250 attendees at the opening session of the Wind Turbine Blade Workshop, the nation's only conference devoted to wind turbine blades. Both spoke about the future of wind energy and challenges faced by researchers, industry, and regulators. The workshop is sponsored by Sandia's Wind Energy Program.

(Photos by Randy Montoya)



**CELEBRATE**  
Hispanic Heritage Month

**Inside . . .**

- Wednesday meals, made easy . . . . . 2
- New role for electroplating facility . . . . . 3
- SUMMIT tool ready for prime time . . . . . 3
- Boost for carbon sequestration . . . . . 5
- CIO Services Expo a big success . . . . . 5
- ◀ Celebrating Hispanic heritage . . . . . 11
- Triplets earn LMCO scholarships . . . . . 16 ▶

# Family Day 2014 • Sept. 20

Special section beginning on page 6 features activities list, safety notes, gate map, and more . . . and read Ken Holley's personal account of past Family Days on page 2

## That's that

Note: Today's column is by Ken Holley and it describes past Family Day experiences for his wife, Belinda, and their two children.

When we think of attending Sandia Family Day we think of our own anticipation and the excitement of our children. As we think back to our first Family Day, the memories are a little vague. But the memories of our anticipation will never go away. Belinda started at Sandia in 1983 and I joined in 1985. She worked in Education and Training and I was in Education Outreach. Neither of us were engineers or scientists but we worked with them all the time. We were excited about the work they did.

Family Day was our opportunity to see research areas and to learn more about what the scientists and engineers did. The best thing about the Family Day was it was on a Saturday. This meant we could take our time to see and learn and not rush the kids as they explored with us. It was the weekend and hearing our kids asking "Is it time to go to see Sandia yet?" would have made you think we were going to Disneyland or Six Flags or somewhere. This event made a nice family outing.

Our first Family Day was in the early 1990s. We remember stopping in to register and then driving out to the Solar Tower. Belinda was the tour guide as I drove. It seemed like a long drive and Belinda continued to point out the tower way off in the distance. At ages 9 and 6, our children saw everything with bright eyes. The tower seemed a mile high and the mirrors went on for miles. This was really exciting for them. We must admit it was exciting for us also. I can't remember if there were cookies being baked in small aluminum solar ovens on the site or not. (Sometimes, I like to imagine this was true).



THE HOLLEY FAMILY – Ken (3555-3) and Belinda (3521) seated with Ashley and Kenneth behind them. Mid-'90s vintage photo.

Next we visited the Area 3 Rocket Sled Track. We could hardly imagine anything moving so fast. The videos inspired us and our children to think of movies we had seen and we began to talk about the rocket on the sled track being faster than a speeding bullet and train and faster than Superman. My son talked about how he wanted to fly on a plane one day going as fast as the sled track.

As parents we could not determine what the children would find interesting. We were surprised when they got excited about the military Jeeps with the weapons on top and wanted us to stop to let them look more closely at one. (We don't see these very often today). They were given a chance to look inside by the security police.

Everywhere we went, our fellow employees were ready to engage with us, talking about their work and welcoming us and our families. This remains special in my mind. Sandians were so welcoming and inclusive in their work areas. They were proud of where they worked and the jobs they did here and it made us proud of being lab employees.

We had lunch under a big tent and introduced our children to people we knew and to some Sandians we met for the first time that day.

After this first Family Day, we participated in several others. The first was the most memorable.

Family Days have always been fun and interesting. We don't participate so much anymore since the children are grown up. However, we still encourage all Sandia employees to participate and bring their families. There is always something exciting to see and learn. And our families, especially our children, are always excited to see where we work and to hear about what our company does.

– Ken Holley

## Not cooking on Wednesday supports local force readiness services



DINNER IS SERVED — Mountain View Club staff member Mark MacGibbon hands drivers their No-Cook Wednesday meals at the club's front entrance. (Photo by Randy Montoya)

By Stephanie Holinka

Regular readers of *Sandia Daily News* may have noticed the "No-Cook Wednesdays" item at the bottom of every Monday's *SDN*. Most people who already pick up Wednesday's dinner at the Mountain View's drive-through to-go line may not know that Sandia's patronage has kept alive a program intended to support Air Force families.

The No-Cook Wednesday meal service is part of KAFB's Force Support Squadron, which runs morale, welfare, and recreation programs.

Joanne Perkins, marketing specialist for the 377th Force Support Squadron, says the program was very nearly canceled before she started advertising it at Sandia.

"A few years ago, funding was cut for morale, welfare, and recreation (MWR) programs, so all of the Force Support programs had to be self-sustaining. The meals program was right on the verge of being discontinued until we began placing notices in *Sandia Daily News*," Joanne says.

The program went from serving about 40 meals on Wednesdays to serving 150, and remains consistent at that level. Joanne says the demand is even higher for popular dishes such as the pulled pork and pot roast dinners.

"Sandia's participation in our programs benefits us because it allows us to keep them going," Joanne says.

Many base services such as the Family Readiness Center and the Airman's dining facility are exclusively available for members of the military, but some services, such as recreational facilities and activities and child care are available for all DOE and DoD employees and anyone else with a badge that gives them base access.

To help clarify which activities and services are available to everyone with base access and which are exclusively for military families, Joanne attends many of the Labs' new hire orientation meetings, letting new Sandia members of the workforce know how to take advantage of the base services and activities available to them.

To see what's cooking at No-Cook Wednesday, check out *Sandia Daily News*' Monday-Wednesday editions. To order, call the Mountain View Club at 846-5165 by noon on Wednesday. Meals may be picked up Wednesday, 3:30-5:30 p.m. For more information on which activities Sandia employees are authorized to use, visit [perks.sandia.gov](http://perks.sandia.gov) or call Joanne Perkins at 846-1644.



### Sandia National Laboratories

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

Albuquerque, New Mexico 87185-1468

Livermore, California 94550-0969

Tonopah, Nevada • Nevada National Security Site

Amarillo, Texas • Carlsbad, New Mexico • Washington, D.C.

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

**Bill Murphy**, Editor ..... 505/845-0845

**Randy Montoya**, Photographer ..... 505/844-5605

**Mike Jones**, California site contact ..... 925/294-2447

**Michael Lanigan**, Production ..... 505/844-2297

**Contributors:** Michelle Fleming (Ads, Milepost photos, 844-4902), Neal Singer (845-7078), Patti Koning (925-294-4911), Stephanie Holinka (284-9227), Darrick Hurst (844-8009), Stephanie Hobby (844-0948), Heather Clark (844-3511), Sue Holmes (844-6362), Nancy Salem (844-2739), Tim Deshler (844-2502), Mario Alba (284-5768), Valerie Larkin (284-7879), Valerie Smith, manager (844-6167)

**Lab News fax** ..... 505/844-0645

**Classified ads** ..... 505/844-4902

Published on alternate Fridays by Internal & Digital Communications Dept. 3651, MS 1468

LOCKHEED MARTIN



### Lab News Reader Service

The *Sandia Lab News* is distributed in-house to all Sandia employees and on-site contractors and mailed to all Sandia retirees. It is also mailed to individuals in industry, government, academia, nonprofit organizations, media, and private life who request it.

#### 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.

#### Others:

To receive the *Lab News* or to change the address (except retirees), contact Michelle Fleming, Media Relations and Communications Dept. 3651, 505-844-4902, email [meflemi@sandia.gov](mailto:meflemi@sandia.gov), or Mail Stop 0165, Sandia National Laboratories, Albuquerque, NM 87185-0165.

#### Employees:

To address concerns regarding delivery of the *Lab News* to your facility, call Mail Services Team 10268-4, at 844-3796. At Sandia/California contact the Mail Room at 925-294-2427.

#### Web users:

The *Lab News* is on the external web at [www.sandia.gov/LabNews](http://www.sandia.gov/LabNews). *Lab News Interactive*, accessible on the internal web, is at: [www-irm.sandia.gov/newscenter/interactive](http://www-irm.sandia.gov/newscenter/interactive).

# Electroplating facility advancing beyond classified, NW

By Mike Janes

The classified electroplating facility at Sandia/California has, for years, been a stalwart for NW customers for its ability to rapidly and responsively perform key surface-finishing work processes on classified weapons components and sub-components. Now, the facility — housed in Bldg. 943 — is poised to grow beyond its customary capabilities, as recent investments and upgrades may soon make it an attractive contributor to the Labs' energy, homeland security, and defense businesses, and potentially new external customers.

Bldg. 943, built from the ground up and opened in 1994 as an electroplating facility, has seen little capital investment in the past 20 years. But since 2012, due to direct investments by its traditional NW sponsors, hundreds of thousands of dollars have gone into Bldg. 943's modernization, says Adam Rowen (8223), manager of the materials chemistry group. State of the art equipment, research lab quality flooring, and efficient and safe water recycling have made the facility a core capability of the nuclear weapons enterprise, he says, largely updated to meet the growing needs of the Long-Range Stand-Off project (LRSO, now known as W80-4), the B61-12, Gas Transfer Systems (GTS), Neutron Generation (NG) piece part production, and Joint Test Assembly (JTA) work.

## Meeting evolving needs

"There's a lot going on there," says Adam. "We think it's valuable for others to look at the capabilities the plating facility brings to bear, and we want to do our part to make sure we align our expertise to the constantly evolving needs of the Labs' customers."

Historically, the electroplating facility has supported the nuclear weapons stockpile through its surface finishing work, particularly during the production process for sub-assembly parts and components. Researchers, for instance, develop chemical processes for preventing corrosion of metals that will be exposed to the environment over time, or they might employ electrochemical processes to provide improved functionality.



DHEGO BANGA, left, Robert Oteri, and Karla Reyes (all 8223) observe the new sulfuric anodization line in Bldg. 943, the electroplating facility at Sandia/California. This new line has incorporated safety features such as electrical enclosures with safety interlock, emergency stop button, and temperature controls. (Photo by Dino Vournas)

Surface finishing and electroplating play an important role in keeping the stockpile in good shape, Adam says.

"There will always be some amount of surface finishing required in the production of sub-assemblies or piece parts for a component," explains Adam. "It's very similar to the way the California Polymers Lab provides conformal coating for circuit boards or pots cables before next level assembly and testing. Before fielding a telemetry module, it's a good idea to surface treat the housing to protect from corrosion."

The facility, Adam says, serves as a rallying point for the site's electrochemists and inorganic chemists.

"In terms of strengthening the materials science community here in California, the electroplating facility represents one of our core capabilities," he says. "It provides inspiration for our researchers and it also benefits our customers by providing them science-based engineering solutions."

The size of Bldg. 943, Adam says, offers flexibility for the kinds of sensitive experiments that are sometimes required. Furthermore, the options for customers have continued to dwindle, with few or no labs now performing production-scale classified electroplating.

But customers can take advantage of the facility's capabilities even more than they currently do, Adam says, though he acknowledges it's his group's job to engage those customers to help ensure they envision the possibilities.

"We can help them [customers] better understand what we can do for them and how they can benefit from surface finishing in different ways," says Adam.

For example, he says, Adam's team could use techniques such as nickel-plating to add metallization to plastic parts, giving them a new, shiny look that resembles actual machined pieces of stainless steel. "Whether the customer needs something silver, gold-plated, or something else altogether to convey something important to their own customers, we can probably do it for them," says Adam.

## Connecting the dots

Adam acknowledges an occasional disconnect between advocacy and funding.

"Customers funding fundamental science that can lead to revolutionary breakthroughs aren't necessarily the same customers who are laser-focused on qualifying a sub-component for NW stockpile use," he says. "So we need to help connect the dots for them to bring customers with specific success metrics into the same room with researchers who possess significant expertise in advancing materials performance."

Recurring investments by customers, he says, would go a long way in stabilizing the future health of the electroplating facility. That's one of the primary drivers behind an effort planned in the coming months to get the word out to managers and other potential customers at Sandia — both in California and New Mexico — about the recapitalization and capabilities of the facility.

"We'll have a big open house event, we'll do tours, give talks and presentations, and invite managers and potential customers from the site to come and check out the facility," says Adam. "People can then see, first-hand, what's possible. Need some sort of specialized coating on your launch accelerometer? Looking for a new electroplated coating that's not as environmentally taxing as chrome, but performs just as well? How about a coating on your wind turbine that allows more effective heat transfer?"

"We can help with those sorts of things, and many others."

## Sandia California News

# SUMMIT moves into exercise operations mode

By Mike Janes

In 2011, a modeling and simulation tool designed by Sandia to be used at emergency preparedness exercises was successfully piloted at the Federal Emergency Management Agency's (FEMA) National Level Exercise. The tool, known as the Standard Unified Modeling, Mapping and Integration Toolkit (SUMMIT), was developed under the direction of the Department of Homeland Security's Science and Technology directorate.

Now, three years later, SUMMIT is being transitioned to the FEMA operational environment and will soon be part of the organization's cloud network and resource base. It's also being transitioned to the California Exercise Simulation Center (CESC) and could be adopted by other state exercise programs as well.

Perhaps just as important, the tool is being expanded into the planning and response realms and is undergoing a rebranding effort — complete with a new name — to reflect its move away from the exercise arena and into planning and response.

"SUMMIT was initially focused on exercises, but there is a natural progression into FEMA's planning and response areas," says Nerayo Teclerian (8116), the SUMMIT principal investigator for Sandia.

SUMMIT's architecture links together models and provides an integrated view of complex, cascading data results. The software offers a graphical view of areas affected in an exercise scenario — such as damaged buildings — making it easier for exercise participants to comprehend what's going on in the exercise and make better decisions.

The program was designed to help a range of emergency preparedness professionals from the federal, regional,

and local levels tap into existing models to ensure consistency, accuracy, and robustness when exercise scenarios are developed and played out.

## Success leads to new applications

Exercises, says Nerayo, were an appropriate focus for SUMMIT initially, and the tool has been successfully used at various large-scale exercises, such as the Great Utah Shakeout (an earthquake exercise) and FEMA's National Level Exercise 2012 (where SUMMIT was used to look at the physical impacts of a mock cybersecurity event). Only one SUMMIT scenario was typically needed at a time, and there are essentially no time constraints with an exercise other than those imposed by those developing the exercise details.

With SUMMIT now being deployed for exercise capabilities and transitioned to FEMA's production environment (via its cloud storage network), the program sponsor knew the time was right to target a different customer set.

"With broader planning activities, higher fidelity models are necessary, as is a better understanding of the uncertainties involved in the hazard scenarios," says Zach Heath (8958), the SUMMIT software development lead. "Then, when you move into response mode, you have to have extremely precise models, lots of them, and they need to run fast."

SUMMIT, says Zach, is now poised to offer that kind of value.

"We can now handle more threat scenarios and more models than we could a few years ago," he says. SUMMIT now features a web-based software development kit that model owners can use to add models to the ecosystem, and data can be exported in various formats. In the software's earlier version, only individual simulations could be saved at one time; now, entire archives can be exported, offering a fully populated package of data and model information

for the exercise and planning communities.

"When it comes to planning and response, you've got to have robust plans," says Nerayo. SUMMIT, he says, now features (for, say, an earthquake scenario) variables from which planners can choose depending on their needs, including data on the number of citizens going to hospitals for treatment, magnitudes and physical impacts of the quake, casualties, and even "tipping points" on when medical personnel could become overwhelmed and run out of medication.

For response personnel, SUMMIT will soon feature live data feeds, such as numbers of beds available in local hospitals, available shelters for displaced citizens, and detailed weather reports. Based on the fusion of live data with extensive libraries of pre-run scenarios, planners and responders can use statistical reasoning and inference to arrive at the most likely conclusions during scenarios, mapping the possibilities visually and helping make more sound decisions during an actual event.

The underpinning capability of SUMMIT is a platform-neutral, distributed computing framework that connects users with models, tools, and resources in a reusable manner. This approach uses a scientific process for creating, storing, and retrieving vast amounts of data.

"We want planners to have quick and easy access to all of the information they need to develop robust plans, in a way that allows them to understand the uncertainties and variabilities of the events and scenarios they are exercising," Nerayo says.

## Re-branding needed to attract new users

Though SUMMIT's end users are all under the umbrella of preparedness, planning, and emergency response, Nerayo says the software's new capabilities will require a new name and brand since the capability will be significantly advanced and because response personnel work under different auspices than exercise personnel.

He and his team, consequently, have been developing ideas for a SUMMIT refresh. "We considered SUMMIT-R [for 'response'] to differentiate from the old SUMMIT-E [for 'exercise'], but a completely new name is probably in order," he says. At press time, a number of new name possibilities had been submitted to the DHS sponsor for consideration.

"We're proud of what we've accomplished with SUMMIT these past few years, but there's still a lot more to do," says Nerayo. "Fortunately, we've got momentum on our side, and there's a great need for the product we offer."



EMERGENCY RESPONSE PERSONNEL use SUMMIT data in planning a course of action during a simulated emergency preparedness exercise.

# Women-led team plans for national labs' future

(Continued from page 1)

Administration's nuclear security enterprise, is crucial to delivering on this multifaceted mission.

One "tri-lab" team cutting across lab boundaries is led by three female engineers — from Lawrence Livermore, Los Alamos, and Sandia national laboratories. Together, Wendy Baca (Los Alamos), Sheryl Hingorani (Sandia), and Cynthia Nitta (Lawrence Livermore) lead a newly formed team that is developing plans and options for future strategy.

## Toward a cohesive vision

"Our collective perspective looks far beyond what we're doing today," says Sheryl. "We anticipate and plan for what we may need 10, 20 years down the road, even into the middle of the century."

The team works toward a cohesive vision for the future of the US nuclear deterrent from a laboratories' point of view. As Federally Funded Research and Development Centers, the labs are trusted government partners structured to meet special long-term research and development needs, to operate autonomously in the public interest, and to attract personnel with the highest level of expertise.

"At a national lab we're able to tackle huge global problems — intricate, long-term, multidisciplinary problems that no one else can," says Nitta. "I work around world-class minds, people who've had a significant impact on history . . . and they're humble and ready to help wherever it's needed."

"It's like working for Elvis," Baca adds.

"We're standing on the shoulders of giants here," Sheryl agrees. "And that sense of duty is powerful."

The team meets regularly to anticipate needs for 21st century nuclear deterrence and to help inform priorities so that the most essential activities are accomplished within the labs' available budgets. They collaborate on approaches with the entire US nuclear weapons community and advocate for collective action in the best interests of the nation.

"This team has been very valuable," says Sheryl. "It helps us better understand and explore interdependencies across the laboratories. None of us works in a vacuum."

With nearly 30 years apiece in national security roles, each of these women has dedicated her career to serving the nation in an incredibly unique niche. As leaders in the predominantly male industries of engineering and nuclear weapons, the group welcomes the challenge.

## Actions speak louder than gender

"There were so few women when I started," Nitta recalls. "That has changed over time. I've tried to learn continuously, and to be known as someone who gets things done."



CYNTHIA NITTA, left, from Lawrence Livermore National Laboratory, Wendy Baca, center, Los Alamos National Laboratory, and Sheryl Hingorani, from Sandia, lead a team that is developing plans and options for future strategy. (Photo by Stephanie Blackwell)

The women explain that throughout their careers their actions have spoken louder than gender — that if you deliver quality projects, people will want to work with you based on your merits.

Executive leadership from each lab initiated the directive for the tri-lab team, with mutual recognition for the power of a shared collective on crucial issues. The women agree that edict has been critical to the team's success.

"The team's formation wasn't about being women; it was about the skills and knowledge we have, the experience we brought to the role," says Baca. "We knew the three of us could make it work."

"We approached this with a perspective of collaboration, rather than competition," says Nitta.

They draw expertise in from a variety of areas

*"We approached this with a perspective of collaboration, rather than competition."*

across the laboratories, uniting disciplines that may otherwise rarely interact. In addition to broad expertise, diversity adds value to the team, but not necessarily gender diversity.

"It's a diversity of ideas," Nitta stresses. "It's important to have someone in the room with a different view than yours; that's some of the most valuable input I ever receive."

What advice would Sheryl, Baca, and Nitta share with women pursuing STEM careers?

"Don't get so myopic in finishing your degree that you miss opportunities along the way," says Baca. "No matter what it may feel like at the time, keep learning. I had three different majors before I became an industrial engineer."

"I had four," says Nitta.

Sheryl changed her major six times: "Although it took me longer, I was exposed to a breadth of experiences, and was able to enjoy the journey."

As they meet deadlines and milestones, the group agrees they are chiefly focused on building strong relationships and making sure the team is solid — on enjoying the journey, not just the destination.

# Sled track test

(Continued from page 1)

erated by Solid Mechanics Dept. 1554.

Jason says it's been a long process to get a sled track team put together and trained since a 2008 accident that shut down the facility after a motor ignited prematurely while employees were preparing for a test.

## Most test team members have joined in last few years

Most current Org. 1530 staff members transferred in or were hired after 2009. Separate departments had to learn to work together to coordinate activities, develop trust, and feel comfortable conducting tests at ultra-high speeds, Jason says.

Test planning emphasized safety, including procedures to ensure no one was within a defined hazard area during the tests. Several years of work also went into the firing system design for the rocket motors, with several layers of safety built in to ensure the rockets go off only when intended, Jason says.

"We've had to learn about facilities, learn how to conduct tests under the new Work Planning and Control Criteria for Safe Design and Operations with a lot more scrutiny for safety and the rigor that we go through to prove that a test is safe, that things are going to work as intended," he says.

The supersonic test on July 22 was the third sled track test since early 2013 when significant changes to

*"Having to pull the team together in a few years and get to the point where we could get these tests conducted says a lot about their professionalism, their ability to come together and work together to develop the infrastructure and the capabilities we needed to get the tests off. There are a number of people who probably doubted we could get back to this point as quickly as we have. The team takes pride in the fact that we've been able to do that and do it safely."*

— Test Director Jason Petti

sled track operations and equipment designs were implemented at the 10,000- and 2,000-foot sled tracks. "So it's a big milestone for everybody out here that we've been able to get to this point," Jason says.

The team has taken gradual steps to resume testing in supersonic conditions, Jason says. Its first two tests last year after the track resumed normal operations were below the speed of sound. Conducting tests at supersonic speeds leads to additional challenges and considerations such as the weather, since poor weather can refocus a sonic boom, increasing the sound hazard in the test area or even potentially causing the pressure wave to break windows.

## Major upgrades

At the same time the team was being reconstituted, the sled track underwent a major upgrade as part of a Test Capabilities Revitalization program. Among other

things, that work replaced the wiring systems for test control and instrumentation — some 120 miles of new wire along the track.

Renovations meant the team had to test new equipment to make sure it operated as expected, as well as ensure older equipment remained in working order. "It's been an additional challenge for the team," Jason says.

"Having to pull the team together in a few years and get to the point where we could get these tests conducted says a lot about their professionalism, their ability to come together and work together to develop the infrastructure and the capabilities we needed to get the tests off," Jason says. "There are a number of people who probably doubted we could get back to this point as quickly as we have. The team takes pride in the fact that we've been able to do that and do it safely."

# Carbon sequestration research continues under DOE contract

By Sue Major Holmes

Sandia researchers are sharing a four-year, \$12 million DOE contract that continues funding into research on the long-term geologic sequestration of carbon, considered a key element in reducing greenhouse gas emissions to the atmosphere.

The Energy Frontier Research Center (EFRC) contract from the department's Office of Science, which went into effect Aug. 1, funds research by the Center for Frontiers of Subsurface Energy Security, a joint carbon sequestration program between The University of Texas, Austin, the lead partner, and Sandia. Sandia researchers will get \$5.6 million of the total, which renews a five-year, \$7 million contract awarded in 2009. The latest award was one of 32 EFRCs chosen from more than 200 proposals.

Upcoming work focuses on three technical challenges: sustaining large storage rates for decades; increasing efficient use of pore space in the geologic formations, or reservoirs, where carbon dioxide (CO<sub>2</sub>) would be stored; and making sure it doesn't leak from the reservoir, says Sandia geochemistry researcher and assistant center director Susan Altman (6915).

"We're not going to solve all these problems; they're huge," she says. "But we're doing the basic science behind them so that we can inform decisions and move forward. We want to make sure our science will have impact on those three challenges."

Marianne Walck (6900), associate director for the joint center, who also heads Sandia's Geosciences Research Foundation, says the contract renewal validates the work done by Sandia and the university in the program's first five years and positions the center to have major impact in subsurface storage research and development. "We are proud to be among the 22 EFRCs that DOE chose to continue for another four years," she says. "The technical and programmatic reviews of our proposal with UT were superb; they speak to the quality of research at both institutions."

## Multidisciplinary effort centers on studies in deep saline aquifers

The effort concentrates on deep saline reservoirs, studying problems from the atomic to the full reservoir scale in a multidisciplinary approach that brings in chemistry, microbiology, geomechanics, geo-

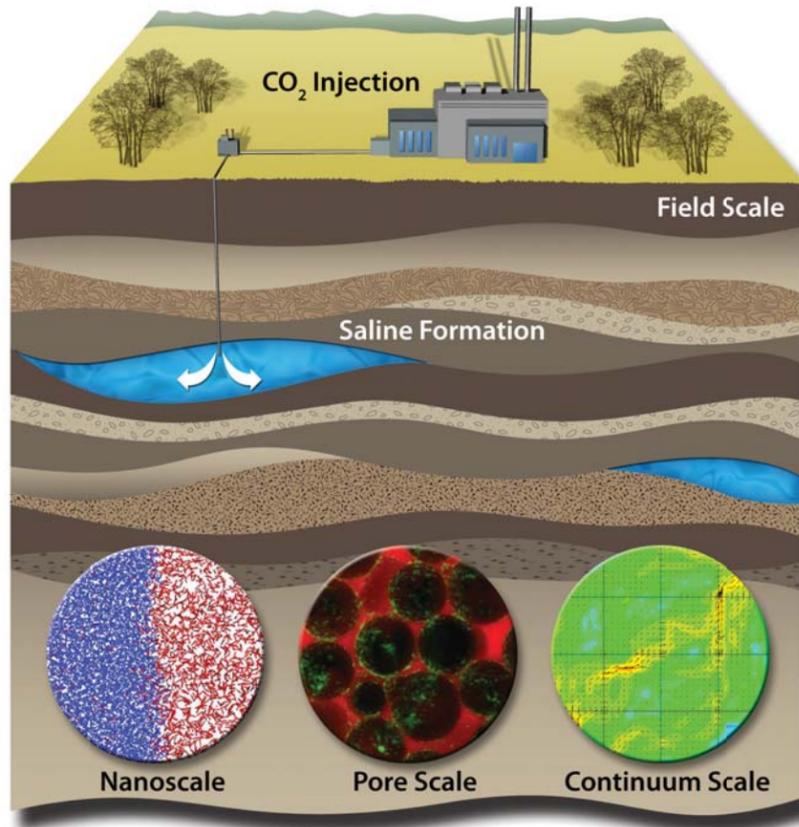
physics, and computer sciences. The team includes researchers from Sandia and The University of Texas Cockrell School of Engineering and Jackson School of Geosciences.

The program so far has published 80 papers, including the featured article in the July 17 issue of the *Journal of Physical Chemistry*, "Chemical and Hydrodynamic Mechanisms for Long-Term Geologic Carbon Storage."

The original EFRC focused on multiscale, multiphysics processes to ensure safe storage of CO<sub>2</sub> without harming the environment. Researchers now will work to integrate physics across length scales. For example, they will look at the integrity of the caprock, the low-permeability mudstone that helps keep buoyant CO<sub>2</sub> underground, Susan says. They will work at the atomic scale to see if there is significant storage space in the clay layers. They will work at the core scale to measure the caprock's mechanical properties to better understand how the rock could fracture under pressure. Then team members will integrate knowledge and measurements from the core scale to model the caprock itself — the reservoir scale — to understand how fractures develop in the reservoir.

The center also studies how CO<sub>2</sub> dissolves into resident brines over time. During injection, CO<sub>2</sub> is trapped by the caprock, which is critically important but the least secure of four trapping mechanisms. After that comes residual trapping, in which CO<sub>2</sub> bubbles are caught in pore space; solubility trapping, when CO<sub>2</sub> dissolves in the brine or other fluids underground; and finally, mineral trapping, where carbon becomes a solid, such as calcite, the most secure mechanism but the one that takes longest.

Researchers also are working in the field at northeastern New Mexico's Bravo Dome, a natural reservoir of CO<sub>2</sub> trapped underground. They're trying to calculate long-term dissolution rates at the site to understand how important solubility is to CO<sub>2</sub> trapping, Susan says.



CARBON SEQUESTRATION — The Center for Frontiers of Subsurface Energy Security is studying the basic science of carbon sequestration, the injection of carbon dioxide in the deep subsurface as a way of controlling greenhouse gas emissions to the atmosphere. This image depicts the multiscale, multidisciplinary complexity of carbon sequestration. (Graphic courtesy of Mona Aragon (6920))

# Sandia IT enthusiasts troop to CIO Services Expo

By Kelli Jennings

The Steve Schiff Auditorium filled with spirited discussions about IT — Information Technology — as people attended the CIO Services Expo on Aug. 18.

The Expo, the first IT event of its kind at Sandia in almost 20 years, attracted attendees from across Sandia's mission areas. The event highlighted some of the innovative ways IT services, under the auspices of the CIO, enables Sandia's mission work and achieves the delicate balance between securing the Labs' systems and networks and maintaining workforce productivity.

Div. 9000 VP Mike Vahle, Sandia's chief information

officer, was the featured speaker. He shared the gratification he feels when IT meets the needs of Sandia by creating value for the mission, harnessing innovation, and managing risk. He also highlighted a number of projects he's passionate about, including the Earned Value Management System (EVMS), mobile computing and applications, and architecture modernization.

Attendees had the opportunity to hear 30-minute presentations and visit exhibit booths. Some of the scheduled topics included mobility services, apps, and devices; cloud computing at Sandia; Sandia search; Enterprise Project Management; and institutional computing. The topics struck a chord with an attendee, who

commented, "The presentations were informative and the booths were particularly helpful. I had no idea of all the services available to staff at Sandia. Very useful and a great use of my time. Will save me lots of time on future projects and efforts. Do it again!"

Many thanks to personnel in Div. 9000 and the CIO's office for sponsoring the event. If you were unable to attend, videostreams are available on the "Schedule" page of the CIO Services Expo site (<http://cioexpo.sandia.gov/>). You can also provide feedback on the event and presentations or talk to IT at Sandia by going to the "Feedback" page, which is linked from the CIO Services Expo site.



BILL COOK, left, senior manager of Corporate Information Management Dept. 9530, explores the showcase assembled by members of his staff from Technical Library Dept. 9536 and Recorded Information Management Dept. 9532. (Photo by Stephanie Blackwell)



LABS DIRECTOR PAUL HOMMERT, right, and other attendees of the CIO Expo listen as representatives from Center 9500's Analytics and Information Services explain how their work in the areas of business intelligence, advanced and predictive analytics, and search technologies support mission and corporate customers. (Photo by Stephanie Blackwell)

# Family Day 2014

## Activities • Events • Demonstrations

### Executive Support Division

CNSAC Auditorium Counterintelligence Video "Game of Pawns – The Glenn Duffie Shriver Story" (video will show twice during the day and lasts for one hour) . . . . . 10 am & 1 pm

Bldg. 810 Café Lobby Spy Catcher Scavenger Hunt – Participants will use the pictures and clues on the handout to identify the New Mexico places the "Spy Gnome" has been. Prizes awarded . . . . . 9:30 am-2:30 pm

### Division 1000

Bldg. 701/1327 Optical Microscopy Demonstration – I can see the hair in the nose on Lincoln's Face! Bring your own penny. . . . . 10 am-noon

Bldg. 701/1315 Scanning Electron Microscopy (SEM) Demo – Get to know some bugs up real close. . . . . 10 am-12 pm

Bldg. 701/1305 Focused Ion Beam (FIB) Demo – Microscopic Graffiti – Let's tag Lincoln's Face! . . . . . 10 am -12 pm

Bldg. 701/2214 Breath Analysis Demo – Stop by and see if there are any molecules in your breath. . . . . 10 am – 3 pm

Bldg. 701/2307 LIBS Demonstration – Curious about *Curiosity*? See how the Mars rover tests rocks with a laser. . . 10 am – 3 pm

Bldg. 897/2082 Computer Lab Demo – View examples of how modeling and simulations can help solve materials mystery! . . . . . 10 am – 12 pm

Bldg. 983 Z machine tours . . . . . Noon-3 pm

### Division 2000

Steve Schiff Lobby B61-12 Life Extension Program: Continuous looping of video footage/PowerPoint, B61-12 brochure, actual size cardboard cut-outs of B61-12 and F-35, B61-12 cookies. . . . . 9 am-3 pm

Bldg. 827/155 Temperature Lab demos. . . . . 9-11 am

Bldg. 827/120 Length Mass Force (LMF) Lab demos – These will run every 20 minutes starting at 9:05 a.m. Last demo begins at 11:05. . . . . 9-11 am

### Division 3000

Hardin Field Project Heart Start – Bring the whole family to learn compression only CPR and what to do in an emergency. 30 minute sessions, with the following start times: 10:30, 11, 11:30, noon, 12:30, 1, and 1:30. . . 10:30 am- 2 pm

Hardin Field Virgin Pulse – What's New and Cool Tools: stop by and learn about new ways to track your daily activity and fitness as well as the much requested online food tracker. . . . . 10:30 am-2 pm

Hardin Field Health Management Clinic – The HMC can help you manage conditions like metabolic syndrome, pre-diabetes, diabetes, high cholesterol, high blood pressure, obesity, and depression. Come by for information on our clinic and Health Action Plans. We will have food science experiments for kids, and recipe ideas for school days and getting kids involved in creating their own healthy foods. . . 10:30 am -2 pm

Hardin Field United Health Care – Learn how your spouse/same gender domestic partner can earn 5000 HealthMiles by participating in a designated Health Action Plan. Wellness and prevention programs in addition to the healthy pregnancy and disease management program are now offered by UHC. . . . . 10:30 am-2 pm

Hardin Field Blue Cross Blue Shield – Learn how your spouse/same gender domestic partner can earn 5000 HealthMiles by participating in a designated Health Action Plan. Wellness and prevention programs in addition to the healthy pregnancy and disease management program are offered by BCBS. . . . . 10:30 am-2 pm

Hardin Field Expectant Parents – Learn about on site services for expectant parents. . . . . 10:30 am-2 pm

Hardin Field Savings and Income Plan – Fidelity – A Fidelity representative will be available to provide information on the savings and income plan – 401K. . . . . 10:30 am-2 pm

Hardin Field Inspiring the Next Generation of Scientists & Engineers – Enjoy a variety of family-friendly science and engineering activities. Meet the UNM Formula SAE student design team and see their Formula-style race car. . . . . 9 am -3 pm

Steve Schiff Lobby Creative Services Green Screen – Come take a video with selected backgrounds. The file will be sent to you via email. . . . . 9 am – 3 pm

Steve Schiff Lobby Creative Services Photo Studio – Take a photo with your cell phone on our fun backgrounds! . . 9 am – 3 pm

Steve Schiff Auditorium Creative Services – Videos about Sandia – Come watch videos about the work we do at Sandia. . . 9 am -3 pm

Steve Schiff Lobby Recruiting – Information for you about why "Sandia is a great place to work" . . . . . 9 pm – 3 pm

Hardin Field SERP Activities Display – information about

Hardin Field

Hardin Field

### Division 4000

Hardin Field, Schiff Courtyard, Thunderbird Café & TA-IV Café

Parking lot E. of Bldg. 825  
Hardin Field

Bldg. 6650, Area III  
Hardin Field

### Division 5000

Bldg. 894, Rm 204

### Division 6000

International Programs Bldg 10600

### Division 8000

Robotic Vehicle Range

### Division 9000

Bldg. 880/D Aisle

Bldg. 880 A1N  
Bldg. 804, Rm 100  
(unattended display)

Steve Schiff Lobby

Bldg. 880, Rm. X10

VIEWS Corridor,  
Bldg. 898/1423

### Division 10000

Hardin Field

### Other Hardin field activities

Hardin Field  
Hardin Field

resources available through the SERP office . . . . . 9 am-3 pm

National Museum of Nuclear Science & History  
The Museum will offer a BOGO coupon at its information booth. . . . . 9 am-3 pm

Defined Fitness – SERP will host Defined Fitness, which will provide a Parisi class and a Zumba class. Come prepared to MOVE IT! . . . . . TBD

Zero Waste Lunch! presented by  
Materials Sustainability & Pollution Prevention . . . . 11 am-1 pm

Classic Car Show . . . . . 9 am-3 pm

Non-point Source Pollution Model:  
Learn how pollutants affect a watershed in this interactive activity hosted by Sandia's Stormwater Team. . . . . 9 am -3 pm

Pro Force firearms simulator (hands on). . . . . 9 am -3 pm

Pro Force firearms display. . . . . 9 am -3 pm

Engineers are problem solvers! We will have computerized puzzles and questions for the kids to solve and answer. . . . . 10 am -2 pm

Guided Tours of International Biological Threat Reduction Training Laboratory: Learn about biosafety and biosecurity. How do biological safety cabinets work? See examples of personal protective equipment, test proper hand-washing technique, learn a little about how laboratories protect assets (biosecurity), and other safe laboratory work practices. . . 10 -11 am; Noon-1 pm

Sandia's Intelligent Systems, Robotics, and Cybernetics group will host a variety of robotic demonstrations and displays at the Robotic Vehicle Range. . . . . 9 am-12 pm

Computing and Communications Museum:  
See the very early Mac to ASCI Red (the world's first supercomputer to exceed one trillion operations in a second), to phones that most have never seen before, to punch cards. . . . . 9 am-3 pm

High performance computing video presentation . . 10 am-2 pm

Corporate Archives & History Exhibit –  
Corporate Archives & History Program will have an unattended exhibit on Project Plowshare (a government-sponsored program to develop peaceful uses for nuclear weapons) and fact sheets about Sandia's achievements. . . . . 9 am-3 pm

Technical Library handouts on science websites, library careers, and fun games and puzzles. . . . . 9 am-3 pm

Information Security Using Encryption –  
This presentation demonstrates how information is secured using encryption. . . . . 9 am-noon & 1-3 pm

VIZ Team presents 2-D & 3-D demos of computational simulations – Formal presentation from 1-1:45 p.m. Fluid Mechanics: From Fighter Aircraft to Wind Turbines. Sandia uses modeling, simulation, and visualization in many ways. The dynamics of fluid flow, which includes air flow, pose critical problems for engineers. In this presentation, a Sandia aerospace engineer will explore several applications of computational fluid mechanics, from energy beauty of fluid flow through visualization. . . . 1-1:45 pm

Division 10000 Passport – All Family Day visitors are encouraged to grab a "Passport" at the Div. 10K table at Hardin Field or at other various "passport stamping" locations around the laboratory. Participants can collect "passport stamps" throughout the day and redeem their passport at the Div. 10K table at Hardin Field for an exclusive 2014 Family Day souvenir. . . . . 9 am-3 pm



# Family Day 2014

## Family Day 2014 will sport more exhibits, activities

The rapidly approaching Sept. 20 Family Day 2014 brings with it a new opportunity for about 30 percent of the Labs — a chance to bring family members and guests of all ages to a day of varied activities, learning opportunities, and hopefully vivid and positive memories.

That's because about 3,500 folks now a part of the Labs' Albuquerque-based workforce weren't on roll when the most recent Family Day occurred in 2009.

The 2014 event should have something to offer everyone.

For example, complimentary sack lunches with several heart-healthy menu options will be available. There will be three wraps — ham, turkey, or veggie — along with baked chips, fresh fruit, and bottled water.

Lunch will be available at Hardin Field, the Steve Schiff Courtyard, the Thunderbird Café, and the TA-IV Café. The serving hours for all are 11 a.m.-1 p.m.

More activities are planned than in 2009. For example, here's what's new for 2014 from just Div. 1000 and all in Bldg. 701:

- An optical microscopy demo, which lets visitors see tiny features on a penny. 10 a.m.-noon.
- Using a scanning electron microscope to see some bugs up close. 10 a.m.-noon.
- A breath analysis demo that just might reveal that you've got molecules in your breath. 10 a.m.-3 p.m.
- Getting to see how the Mars rover tests rocks with a laser at the LIBS (Laser Ionization Break-down Spectroscopy) demo. 10 a.m.-3 p.m.

Every division will host activities available to all attendees. While the full list is available on the activities page of the Family Day 2014 web site (<http://familyday.sandia.gov>), here are some more activities that might catch your eye.

From 10 a.m.-2 p.m. workers from Div. 5000 will help young visitors solve computerized puzzles. The goal is to show how engineers are problem solvers. This can be found in Bldg. 894/Rm. 204

from 10 a.m.-2 p.m. Div. 5000 is having homeland security displays and demos in the Bldg. 810 lobby. And there will be a Center for Cyber Defenders demo in MO 303 (the corner of H and 18th St.). Both will be available for the entire Family Day 2014. There also will be a tour of the antenna and radar cross-section measurement facility (Bldg. 9972) from 1 p.m.-3 p.m.

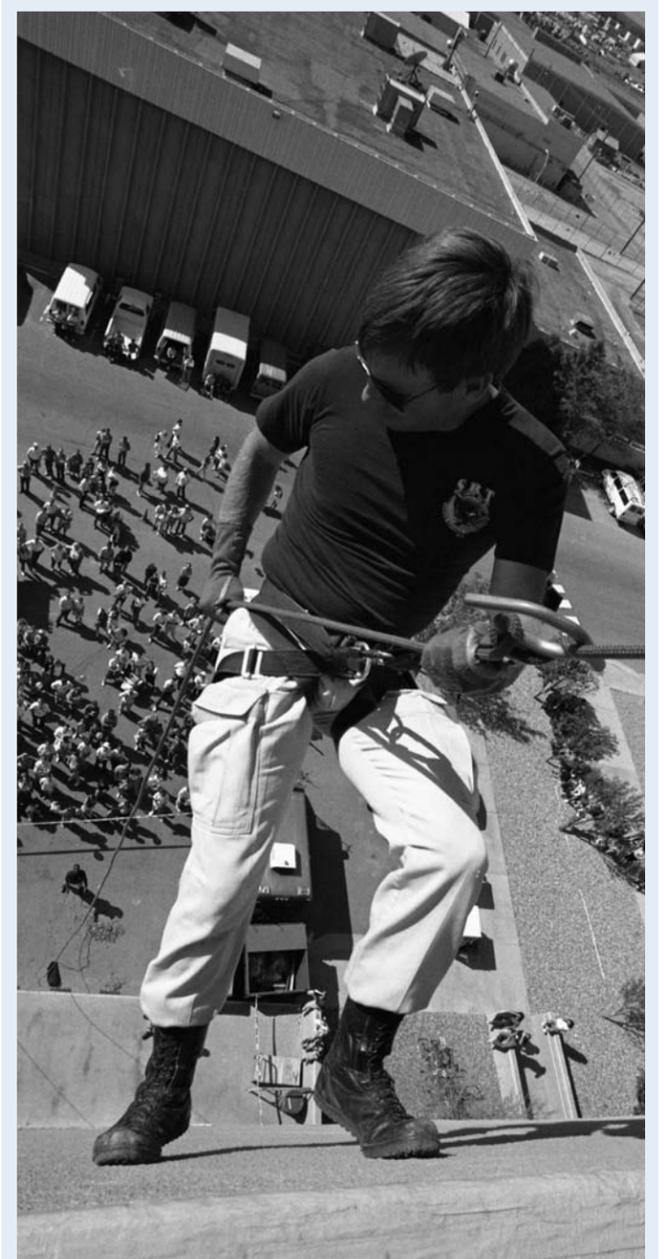
Div. 6000 staff will offer guided tours of the International Biological Threat Reduction Lab where visitors will learn about some of Sandia's biosafety and biosecurity efforts. The meeting point for this activity is the first floor of the International Programs Building 10600. As of press time those tours will be available from 10 a.m.-11 a.m. and noon-1 p.m. Div. 6000 also is offering self-paced tours of the Solar Tower from 11 a.m.-3 p.m., and the always-popular Robotics Vehicle Range demo with moving robots, static displays, a video, and a tour. That's from 10 a.m.-noon.

Among several Div. 9000 offerings will be the Computing & Network Services Center's non-technical talks and visualization movies in the JCEL Visualization Lab. That's Bldg. 899, Rm. 1702. The Labs' Recorded Information Management organization, a part of Div. 9000, will have a Labs history exhibit, which will include films about Sandia, its work, and important highlights of its history. That's in Bldg. 894/111A from 9 a.m.-3 p.m.

Div. 3000 has a fresh set of Hardin Field attractions designed to entertain event comers of all ages.

Project Heart Start, for example, will offer seven 30-minute sessions throughout much of the day during which all family members will get to learn compression-only CPR and other things to do in an emergency. Dr. Barry Ramo, the widely known Albuquerque heart doctor, is scheduled to be present. The first of those sessions will begin at 10:30 a.m. and the final at 1:30 p.m.

And throughout the day on Hardin Field the Sandia Employee Recreational Program (SERP) in concert with the local Defined Fitness gyms will provide Parisi and Zumba classes.



LOTS OF FAMILY DAY 1991 visitors got a show — a security officer demonstrating how to repel a wall. (Photo by Randy Montoya)

## Family Day to include 'zero waste lunch'

### Lunches to be offered at 4 locations

There will be something really green at Family Day 2014 that is another first for this periodic event.

The Labs' Materials Sustainability and Pollution Prevention team (4144) and food contractor Sodexo have come up with a plan to turn this Family Day into a zero waste lunch event.

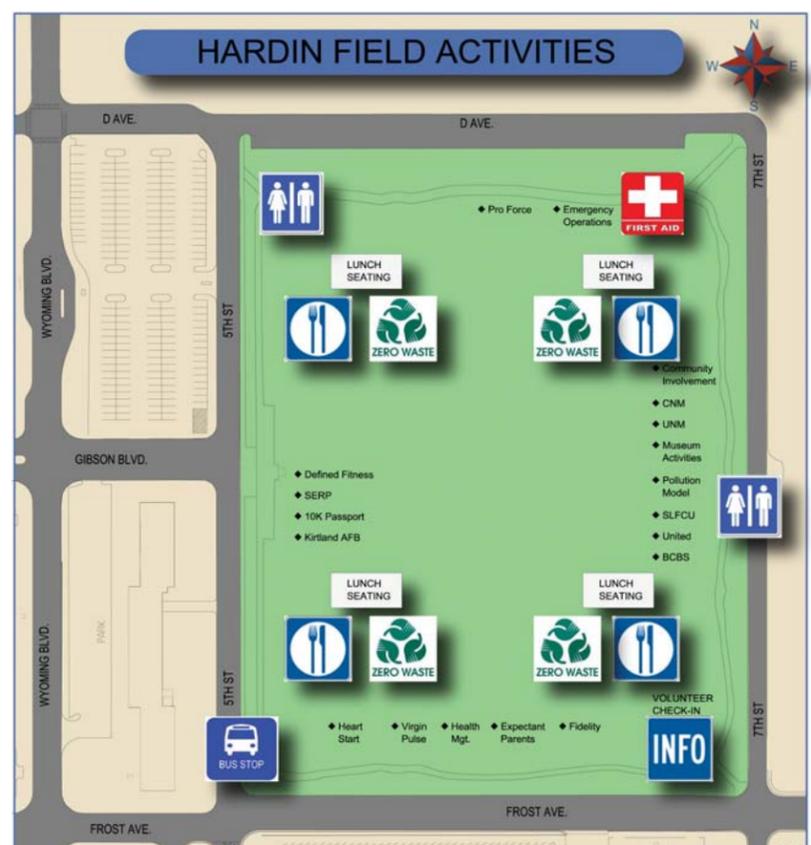
One key to achieving this goal will be the presence of green rolling compost collection carts that are being dispatched to the Hardin Field and Steve Schiff Courtyard and popup event recycle bins, reports Sam McCord (4144).

"We're planning to have a cadre of helpers — let's call them 'zero waste specialists' for the day — who will be at the zero waste stations to teach and guide folks to use the proper containers."

Sam also points out that the plan is to recycle or compost all the lunch wrappings and food containers.

"Although our group is prepared to make this zero waste goal, we appreciate all the support we can get from hosts and guests at Family Day. Zero waste is a journey," Sam says.

The lunches also will be available at the Thunderbird and TA-IV cafés, and zero waste is the goal there, too. Those facilities already have proper recycling and composting bins and associated signs, so no special preparations are required. Sam just asks you to please heed the signs' instructions.



# Family Days past bring back vivid, varied memories

It doesn't take long to find Sandians who have vivid memories of past Family Days. (Also see Ken Holley's *That's That* essay on page 2.)

Dick Spalding (5791) is one. In fact, he's been hanging around Sandia in some capacity or another for all except the first Family Day back in 1959. He arrived here shortly thereafter as a Purdue electrical engineering student with a summer job. Dick became a staff member three years later.

"My wife Shirley recalls daughter Michelle's first Family Day," Dick says. About 5 years old then, Michelle is now 52. "I think she was a bit too young to get much from the displays and activities. The lone exception," he recalls, "was evidently the punch and cookies setup in the Sandia cafeteria, which in those days was in the middle of TA-1.

"When I arrived home from work the first time following that Family Day, she asked, 'Daddy, did you have punch and cookies today?'"

By the way, Dick has been at the Labs in some capacity or another during the tenures of 10 of Sandia's 13 presidents.

Bruce Fetzter (3600) has one particularly clear memory of Family Day 1999 and how the Labs' dedication to STEM — Science, Technology, Engineering, and Math, a theme of this year's event as well

— has had an influence on his family.

"I attended this event with my daughter Jennifer, who is now pursuing a biomedical engineering degree," Bruce recalls. "She was 13 at the time and was fascinated by some of the technical demonstrations. That Family Day provided a great venue for her to get a sense of the breadth of science and engineering work, and at some level, helped to shape her academic decisions to pursue an advanced technical degree."

The past Family Day memory for Mike Pendley (5632) definitely is family related but with a different slant.

"Back in 1992 I was thinking about making a change," he begins. "I'd been at Sandia in Livermore for 21 years and was thinking about moving to the Albuquerque site. I didn't quite know how to socialize that idea with my wife.

"Sandia/Albuquerque was holding a Family Day in the fall of that year, so I suggested we take a vacation and attend the event so my wife and young children could see what Sandia was doing here.

"We came. We all had a good time. It was only a few months later that a position came open in Albuquerque. And that's how the Pendley family moved to New Mexico. My job here is very fun. I just don't have a desire to retire," Mike says.

## For Family Day 2014, it's have fun, think safety

Family Day 2014 is a time for fun — getting a rare chance to see where Mom or Granddad or some other relative works — and a time for learning, particularly about the vast contributions to the world that the Labs' science, technology, engineering, and math efforts make.

It's also a time when everyone should be safe.

Sid Gutierrez, director of Environment, Safety, and Health (4100), shares his thoughts on this. "For the Sept. 20 Family Day 2014, Sandia will open its doors to welcome the children, spouses, other relatives, and some friends of our workforce. For some families, this will be its first opportunity to see where we work every day. For some of our children, it might be the visit that inspires a new love of math, science, or engineering that will lead them back to Sandia. For all of us, Family Day is a great way to share our passion for what we do.

"And we want this day to conclude," he says, "as it did in 2009, with no safety-related incidents at all. So, let's not let our guards down."

"Family Day is a great event and we want everyone to have a wonderful time," Family Day Safety Officer Whitney Faust (4122) says. "The Family Day Safety Committee is planning for a safe day, trying to anticipate possible problem areas and eliminate unsafe conditions. You can do your part by talking to your guests about safety before their visit, and by paying attention to your surroundings and reporting any unsafe behavior or condition that day."

Here is a selection of ES&H-related highlights taken from the Family Day 2014 website (<http://familyday.sandia.gov>):

- Hosts are responsible for guests.
- Always keep your guests/host in sight.
- Ensure areas are safe for guests and free of hazards. Hazards include, but are not limited to, tools and equipment, sharps, electrical, chemicals, ionizing radiation, lasers, radiation, and pressurized gas systems.
- Communicate and observe any special safety precautions specific to your work areas.
- No running, especially in buildings and stairways. Use handrails.
- Do not climb ladders.
- Stay on pathways. No shortcuts.
- Adhere to all special safety requirements (such as safety glasses) in designated areas.
- Do not operate equipment (including EZ-Go carts) or participate in any hazardous activities while on Sandia-controlled premises.
- Do not cross any posted barriers.
- Stay out of construction areas.
- Dress for weather (e.g. umbrella, sunglasses, sunscreen) and bring water.
- If necessary, make arrangements for handicap Access and strollers, etc. (Steve James — 505-284-2267 — can help).
- Bring any necessary medications.
- Be aware of native little creatures (rodents/snakes/spiders/bees/wasps, etc.)
- Supervise children at all times.
- Don't take visitors to external test areas such as off-road (non-paved) areas and several open test grounds.



ATTENDEES of Sandia's first Family Day in 1959. Check out those wardrobe choices.

## Important Family Day do's and don'ts

Committing a number of important do's and don'ts to memory will help Family Day run as smoothly as possible.

This applies not only to hosts but also to guests.

Here is a listing of keys to a successful day:

- For Family Day 2014 there is no guest age minimum or maximum. That means infants, toddlers, and grandparents are welcome. That's a key distinction between this event and the annual Take Our Daughters and Sons to Work Day.
- Bring plenty of water, dress for the weather, and wear appropriate, closed-toe walking shoes and sunscreen.
- Supervise children at all times.
- Always maintain visual contact with your guests.
- You can escort a maximum of eight guests (including infants and young children) at one time.
- Family Day 2014 begins at 9 a.m. and concludes at 3 p.m. That means all hosts and their guests must head toward their vehicles for departure no later than 3 p.m.



FAMILY DAY 1981 attendees check out parachutes and what's attached to them.

## Catch a ride

Family Day shuttle bus route and schedule

Two shuttle buses will be available to carry Family Day goers around Area 1 and down to Area 4.

STOP 1 – Southwest corner of Hardin Field (Frost Ave. and 5th Street).  
STOP 2 – On H Avenue directly in front of Tech Area 1, Gate 1, and just south of Building 800.

STOP 3 – The west side of Schiff Auditorium, Building 825.

STOP 4 – In Tech Area 4, in the parking lot directly west of Building 960.

STOP 5 – In the parking lot south of Building 898, west of Gate 29.

STOP 6 – Turn on K Street, stop on the northside of street across from Bldg. 701.

Buses — Return to STOP 1 by driving non-stop around the east side of

### Bus 1 and Bus 2 Leave Bus Stops At:

Hardin Field: 9:15, 9:30, 10:15, 10:30, 11:15, 11:30, 12:15, 12:30, 1:15, 1:30, 2:15, 2:30 (final pick-up)

Gate 1: 9:25, 9:40, 10:25, 10:40, 11:25, 11:40, 12:25, 12:40, 1:25, 1:40, 2:25, 2:40 (final pick-up)

Schiff: 9:35, 9:50, 10:35, 10:50, 11:35, 11:50, 12:35, 12:50, 1:35, 1:50, 2:35, 2:50 (final pick-up)

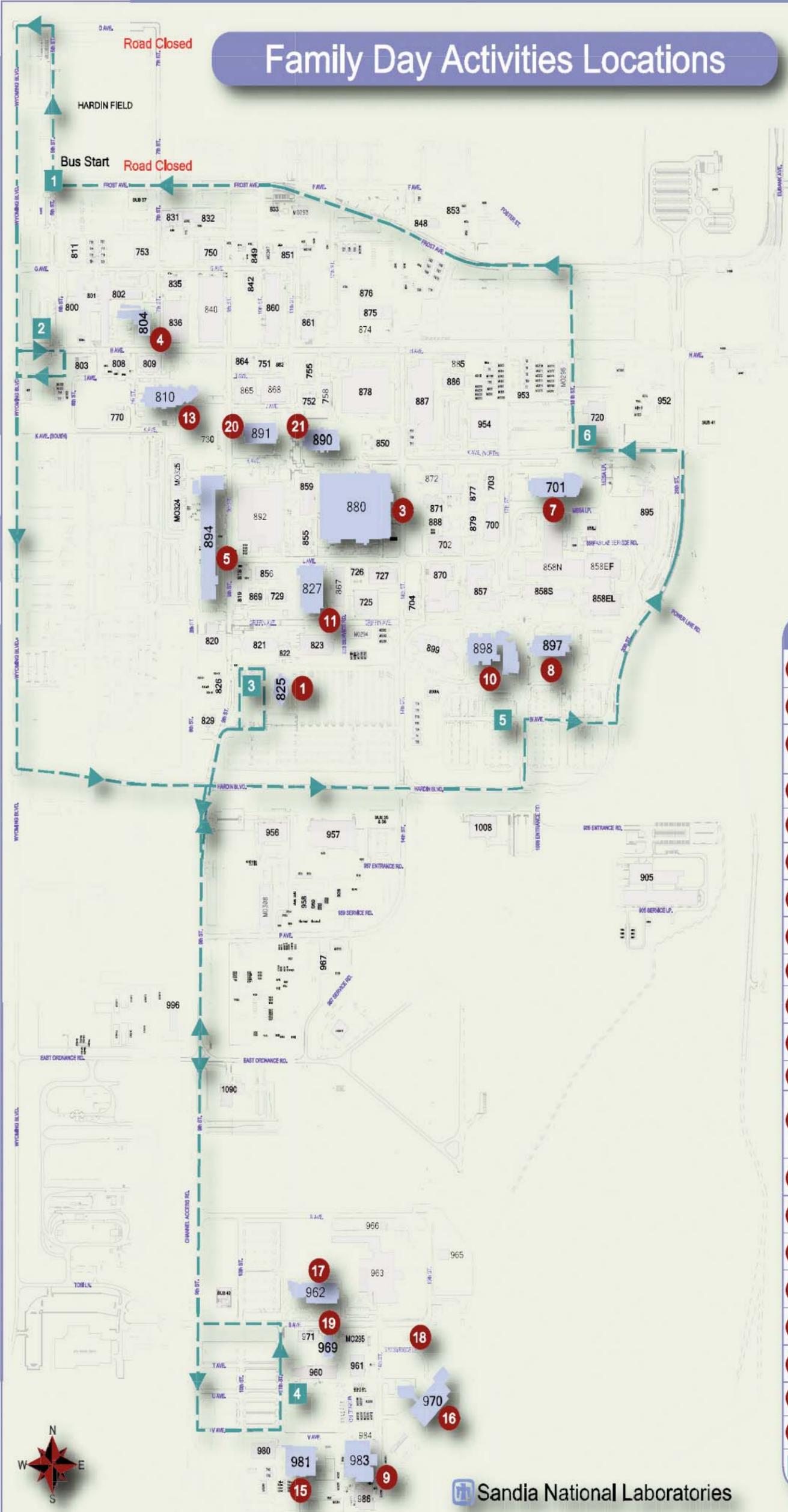
Area 4: 9:45, 10:00, 10:45, 11:00, 11:45, 12:00, 12:45, 1:00, 1:45, 2:00, 2:45, 2:55 (final pick-up)

Gate 29: 9:55, 10:10, 10:55, 11:10, 11:55, 12:10, 12:55, 1:10, 1:55, 2:10, 2:55, 3:05 (final pick-up)

Bldg. 701: 10:05, 10:20, 11:05, 11:20, 12:05, 12:20, 1:05, 1:20, 2:05, 2:20, 3:05, 3:15 (final pick-up)

All times are approximate!

# Family Day Activities Locations



**SANDIA SCIENCE AND TECHNOLOGY PARK**

**ROBOTIC VEHICLE TEST RANGE**

**ARMORY**

## LEGEND

- 1** Bldg. 825 - Steve Schiff - 3000  
B61-12, Recruiting, Green Screen, Photo Studio  
Videos about Sandia, Technical Library & Car Show
- 2** Bldg. 6650 - Tech Area III - 4000  
Firearms Simulator
- 3** Bldg. 880 - 9000 & 5500  
High Performance Computing Video, Computing & Comm. Video, Information Security using Encryption  
Cloud Computing Video Presentation
- 4** Bldg. 804 - 9000  
Corporate Archives & History Exhibit
- 5** Bldg. 894 - 5600  
Engineers are Problem Solvers
- 6** Bldg. IPB - Science Technology Park - 6000  
Guided Tours of International Biological Threat  
Reduction Training Laboratory
- 7** Bldg. 701 - PETL - 6000  
Optical & Scanning Microscopy (SEM), Focused Ion  
Beam, Breath Analysis & LIBS Demonstrations
- 8** Bldg. 897 - 1000  
Computer Lab Demonstration
- 9** Bldg. 983 - Tech Area IV - 1000  
Z Facility Tours
- 10** Bldg. 898 - WIF - 9000  
VIZ Team 2D & 3D Computational Simulations  
Demonstrations & VIEWS Corridor
- 11** Bldg. 827 - 2000  
Temperature Lab & Length Mass Force Demonstrations
- 12** Robotic Vehicle Test Range - 8000
- 13** Bldg. 810 - CNSAC - 0099  
Counterintelligence "Game of Pawns - The Glenn  
Duffie Shrver Story" & Spy Catcher Scavenger Hunt  
National Security Technology Exhibit  
Harvester Pod Demonstration
- 14** Bldg. CERL - 1400  
Tracer Fire, Human Performance, Visualization Labs  
Demonstrations
- 15** Bldg. 981 - 1300  
Saturn Demonstration
- 16** Bldg. 970 - 1300  
HERMES III/RITS 6 Velwing Deck Demonstration
- 17** Bldg. 962 - 5400  
Center 5400 Displays
- 18** Tech Area IV - 5500  
Area IV Antenna Demonstration
- 19** Bldg. 969 - 5500  
Space Program History Presentation
- 20** Bldg. 891 - 5500  
Panther Eyetracking: Finding the Needle in the Haystack
- 21** Bldg. 890 - 5700  
Flight Hardware Display
- X** Bust Stop Locations

## Get to know your Family Day 2014 web site

“Lunch” field if you want a meal while at Family Day and remember to pick up your lunch at the location you selected during registration.

If you want to work as a Family Day volunteer, click on the **Volunteer** tab.

The **Base Access** tab offers several very important items. Be aware of the Kirtland Air Force Base (KAFB) gates that will be operating on Family Day. They are Gibson and Eubank gates, with normal operational hours, and the Sandia Contractor Gate, 8 a.m.-4 p.m. The Wyoming Gate will be closed. That tab also lists gate-access must-do's: Bring your DBIDS-qualifying Sandia badge; if

any guests are age 18 and older make sure they have a valid form of identification; although the escort limit is eight people, you will be allowed to bring only the maximum you can safely fit into your vehicle — every occupant must be in a seat belt.

The **Security** tab offers some helpful reminders. Two examples:

- Access to KAFB is contingent on DoD's Force Protection Condition. If it is raised to higher than Alpha (very unlikely) Family Day 2014 could be postponed.
- Closed areas will be off-limits, and no classified operations are to be conducted in areas accessible during Family Day 2014.

By clicking the **Activities** tab you find ways to check out what's happening for the day. There is a listing organized by Division and Hardin Field, along with a timeline, which makes it easy to see when activities start and stop, since not all will be open for the entire Family Day.

By opening up the **Maps** tab you'll find downloadable PDF-format maps of some remote sites that plan activities. For example, many long-tenured Sandians probably haven't even been to the Robotic Vehicle Range, which will be open for Family Day 2014.

The **Frequently Asked Questions** tab is being updated regularly and provides helpful topic information. For example, it's there you'll learn that strollers and wheelchairs can be brought into limited or property protected areas. It states: Employees who currently have access to a bypass gate can bring strollers or wheelchairs through that gate. A Security Police Officer also will be posted at the Gate 10 bypass in Area I to check IDs.

Your attendance at Family Day 2014 on Sept. 20 will be difficult to pull off smoothly without spending some quality time on the event's website — <http://familyday.sandia.gov>.

To start, registration is required on that site. Registration for foreign national workforce members and family has closed but the deadline for all others is Sept. 12.

To sign yourself up along with family and guests click the **Registration** tab on the orange band at the top of the website. That will take you to a SharePoint file, with various pull-down screens. Type in your Sandia login ID where directed and go from there. Don't forget to complete the

The Family Day 2014 web site (<http://familyday.sandia.gov>) is being updated periodically so take a look at it from time to time. For example, activities not mentioned in today's *Lab News* are still being added to the day's agenda and the Frequently Asked Questions section is modified when necessary.

## Yes, it's possible to edit your registration

One of the more frequently asked questions Family Day planners are getting is a simple, but important one — “Can I change my registration information once it is submitted?”

The answer is “yes,” and here's how to do it.

- Access your confirmation email that came from the SharePoint Admin.
- Once that emailed confirmation is open, select “edit,” which takes you to the SharePoint site.
- Next select “edit item” on the upper left-hand corner of the page and make your changes.

You will receive another confirmation letter.

Remember to make any changes before the registration cut-off date of Sept. 12.



JAKE DEUEL, manager of R&D Science and Engineering Dept. 6532, explains the workings of a robotic vehicle to his family during their visit on Family Day 2009. (Photo by Randy Montoya)



COMMUNITY RELATIONS staffers prepare for Family Day 1964. The long-since dismantled Sphere of Science stood at the corner of Frost Ave. and 12th Ave. on Kirtland AF Base, which is just a bit east of the current Bldg. 833.

## Hints, reminders for a smooth day

Here are a number of tips and reminders offered in hopes of making your Family Day 2014 experience to be as smooth running as possible.

- Unlike past Family Days, there will be no need to stop at a sign-in/registration table before your party begins its rounds. That's because all that begins and ends by completing the registration page on the Family Day 2014 website (<http://familyday.sandia.gov>).
- You'll need your DBIDS-qualifying Sandia badge when entering Kirtland Air Force Base, and if any of your guests are 18 years of age or over they'll need a valid form of picture ID such as a driver's license.
- Family Day begins at 9 a.m. and ends at 3 p.m. Hosts and their guests should plan to go to their vehicles and depart promptly at 3 p.m.
- However, not all activities, demos and the like will be open for business during the entire six-hour long event so pay attention to the activities listing on page 6 and on the Family Day web site.
- The event is a popular one. The most recent versions have brought crowds averaging 12,500 attendees. As it will be a busy day, consider arriving early (from 9-11 a.m.), be prepared to be outdoors (e.g., walking shoes, sun screen, water, etc.), and as we change our routines on this day please remember to keep security and safety foremost.

## Family Day Car, Truck & Motorcycle show



Hey, got a cool car, truck, or motorcycle? We want it for the Family Day Car, Truck, & Motorcycle show. The display will take place in the Bldg. 823 parking lot just east of the Steve Schiff Auditorium. The show is open to all classic, restored, special interest, hot rods, customs, muscle cars, sport cars, tuners, race cars, trucks, and motorcycles. Free goody bag to the first 75 vehicle owners. Please RSVP by Sept. 15 as space is limited. Set-up time on Sept. 20 is from 6-8:30 a.m. This will be enforced as vehicles cannot move once there are spectators. The show will end at 3 p.m. Dust off all those cool rides and cruise them out to Family Day 2014. Information: Matt Torres, [mjtorre@sandia.gov](mailto:mjtorre@sandia.gov), 328-3591 or 294-7273, or Talbot Smith, [tlsmith@sandia.gov](mailto:tlsmith@sandia.gov), 844-9535.

# Hispanic Heritage Month

Hispanic

Heritage

## Sept 16 Kickoff Breakfast – 7:30am

### Mountain View Club

Speaker: Dr. Cheo Torres, UNM VP for Student Affairs  
Mariachi music and cultural dance.  
Tickets are \$10

## Sept 17 Diversity Plática – 11:30am

### Building 810 Auditorium

## Sept 30 Diversity Day

### Steve Schiff Auditorium

#### Art Contest Judging – 10am-2pm

Serve as a judge and review excellent student art!

#### Leadership Panel – 10:30am

Learn from our own leaders! Panelists include:

- ❖ Bonnie Apodaca (CFO and Vice President for Business Operations, SNL)
- ❖ Joseph Oder (Executive Director, AFNWC)
- ❖ Jim Chavez (Director, SNL)
- ❖ Sid Gutierrez (Director, SNL)
- ❖ Anthony Medina (Director, SNL)

#### Cultural Dance Performance – 11:30am

Tierra Adentro of New Mexico Student Flamenco Performers

#### Hispanic Foods Contest

Open tasting at 11:30am. Categories include:

- ❖ Salsa
- ❖ Red Chile
- ❖ Green Chile
- ❖ Dessert
- ❖ Otra Comida.

To enter contact [amampar@sandia.gov](mailto:amampar@sandia.gov)

#### Sodexo BBQ – 11am-1pm

Have lunch with us. Cash only.

#### Diversity Activity – 1-2pm

Explore diversity in a new way during this interactive session.

## October 10 Latin Night – 6-10pm

### Mountain View Club

Includes dance instruction

This is a free event open to all ages! Food is available for purchase.  
Cash bar open to those 21+

## Oct 14 Finale Diversity Celebration - 11am-1pm

### Hardin Field (east)

- ❖ Keynote Speaker: Brigadier General Andrew Salas, NM National Guard
- ❖ Cultural Music provided by The Abel Lucero Band
- ❖ Student art contest display!

#### Food & drink provided by Garcia's Kitchen

#### \$10 advanced tickets only

Includes: Red Cheese & Green Chile Chicken Enchilada, Taco, Refried Beans, Spanish Rice, Biscochitos, Tortillas and Passion Fruit Tea

#### Tickets for Oct 14<sup>th</sup> Finale Diversity Celebration

Purchase from the following before Oct 9<sup>th</sup>:

#### Sandia Area 1

802: Valerie Salim-Meza, 845-0735  
810: Rebecca Lopez, 845-9848  
823: Emily Baca, 284-4143  
858S: Erin Akinnikawe, 845-9097  
890: Bernadette Ramirez, 845-3164  
892/880: Dorothy Saucedo, 844-0920  
MO86: Erika Barraza, 844-4800

#### Sandia Area 2

MO308: Bernadette Garcia de Rodriguez, 284-3189

#### Sandia Area 4

960: Laveryn Apodaca, 284-6727  
962: Damaris Hill, 284-2900

#### Sandia Area 5

6584: Diane Mendiola, 284-4141  
6585: Mary Lou Garcia, 845-3039

#### Sandia Science & Tech Park

IPOC: Janet Lovato, 844-0558  
IPOC: Veronica Maestas, 284-4093

#### KAFB

377ABW: Rebecca Auringer, 846-2411  
377ABW: Anna Encalada,  
[anna.encalada@us.af.mil](mailto:anna.encalada@us.af.mil)  
AFOTEC, 20130: Richard Quintanilla, 846-2812



### CONTACT:

Valerie Salim-Meza @ [vnsalim@sandia.gov](mailto:vnsalim@sandia.gov)



Sandia National Laboratories



Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.



# 49 individuals, 73 teams

2013 Employee Recognition Awards program honors teams, individuals for exceptional contributions

Sandia's prestigious Employee Recognition Awards are presented to individual employees and teams nominated by their peers and chosen by a division selection committee with final approval by the division VP for their accomplishments during the past year.

The ERA winners are honored for their exceptional contributions to Sandia mission success to underscore the importance placed on individual and team contributions. ERA winners are honored for their exceptional service, leadership, technical accomplishments, or teamwork.

Sandia this year recognizes 49 individuals and 73 teams for their outstanding contributions to mission success.

## Individual honorees



Catalina Acosta  
9525



Susan Altman  
6915



Tod Amon  
9525



Bonnie Antoun  
8256



Reid Bennett  
5955



Carol Blanch  
9548



Donald Campbell  
4826



Chris Camphouse  
6211



Joe Chiu  
0428



Gloria Christensen  
8225



Michael Coltrin  
1121



Christine Cooper  
10654

## Team honorees

### Executive Support Division

#### B61-12 Quality Engineering Team Supports Major NNSA Milestones

The B61-12 QE Team led development, Fagan Inspection review, and release of a system-wide baseline of qualification plans and ESR2s that met NNSA Milestones

Team members: Imani Adams, Shauna Adams, J. Douglas Clark, Dwayne L. Knirk, Robert Lundberg, Meredith Macha, Cynthia Pepe, Monica Yolette Ruiz, James T. Sanchez, John Eldon Smoot, Alan Sonntag, Rahul Vashdev Barwani, Tye D. Esho, Jennifer D. Lindblom, Vanessa W. Miles, Jeannette M. Moore, Martha Nayeli Perez, Leslie Simmons, Lorraine Joy Stephenson, Raymond Stepnoski, Leslie Sullivan, Maria L. Walsh, Jeffrey Bernard West, Richard E. White, Barbara Anne Yerganian.

#### Design Improvement Team

The work of the very unique Design Improvement Team (DIT) had a significant and positive impact on the FY13 Performance and Compensation review.

Team members: Frederick Bermudez, James M. Chavez, Lynn Fitzpatrick, Pablo Garcia, Stanley D. Garrison, L. Hermina, Heather R. Kraemer, Jacqueline E. Ramirez, Susan Howarth, Imane Khalil, Robert Lill, Cindy Lovato-Farmer, Robert Eugene Nelson, Kelly O'Bryant, James M. Phelan, Elizabeth Roll, Carla Ulibarri, Caren A. Wenner, David R. White.

#### National Security Speaker Series Planning Team

The team implemented several process improvements that have greatly expanded the reach and impact of NSSS in support of Strategic Objective 5.

Team members: Darleine Marie Barboa, Ellen F. Cook, John P. Franklin, Steven M. Handy, James M. Redmond, Russell D. Skocypec.

#### NW SMU, SWPR and WS&T Business Office Program and Funding Analysts

During the "lapse of appropriations" period of October 1 - 17, the team provided excellent financial information to enable and positively influence Executive and SMU Management decision-making.

Team members: Tony J. Baca, Emily Louise Barnhart, Douglas M. Cotter, Elouise Dickenson, David James Diller, Carol L. Ferguson, Louis Griego, Valerie Marie Jimenez, Lyle D. Lininger, Philip C. Montoya, Hong N. Nguyen, Yvonne Petrova, Cody Steele, Deborah Knewitz, Carla Moncayo.

### Division 1000

#### Amphenol Evaluation Team

The Amphenol Evaluation Team evaluated non-conformances affecting hundreds of NW products, established the potential impact to the NW stockpile, and positively resolved all discrepancies.

Team members: Perry J. Cowen, Michael T. Dugger, Stacy L. Kerns, Raivo A. Leeto, Brian A. Miller, Roger David Rasberry, John Eldon Smoot, Neil R. Sorensen, Nicholas B. Wyatt, William G. Yelton, Howard L. Anderson, Larry A. Andrews, Leah Appelhans, Nicolas Argibay, Robert Bernstein, Lisa Anne Deibler, David Enos, Kevin G. Ewsuk, James M. Hochrein, Linda Kay Jones, Edward M. Russick, Ricardo A. Sarfaty, LeRoy L. Whinnery Jr., David L. Zamora.

#### AQUARIUS Adiabatic Quantum Computing Architectures Grand Challenge LDRD Team

For informative and timely research into the foundations of adiabatic quantum computing to establish its potential for robust, fault-tolerant, general purpose computing.

Team Members: Grant Biedermann, Ezra Bussmann, Stephen M. Carr, Malcolm S. Carroll, Aaron Hankin, Noah Tobias Jacobson, Yuan-Yu Jau, Andrew J. Landahl, Lambert Paul Parazzoli, Steven Rinaldi, Peter Schwindt, Joel R. Wendt, Amber Lynn Young, Aaron Joseph Blackwell, Constantin Brif, George Burns, Robert D. Carr, Tony Ray Carter, Jason James Dominguez, Anand Ganti, Shanalyn A. Kemme, Erik Nielsen, Sally Samora, Mohan Sarovar, Wayne Witzel, Kevin Young.

#### Engineering Prototype Impact Test

Successful planning and execution of a full-scale impact test of a transportation container engineering prototype Rocket Sled Track Facility, Feb. 16, 2013.

Team members: Mark Alan Cook, Ronald Jeffrey Focia, Tony King, Lucas Kyle Lebow, Steven Samuels, Michael Valentine Bejarano, Jeffrey G. Bobbe, Edward Bystrom, Byron Demosthenous, Michael J. Fleigle, Benjamin N. Huff, Richard Ivey, Quentin Kramer, Wesley Sadkin Kuhns, Amarante Martinez, Timothy J. Miller, Mark R. Nissen, Ronald D. Pedersen, Jason P. Petti, Phillip L. Reu, Mark Douglas Rynders, Richard Streit, Pasqual R. Vallejos, Michael J. Vigil, Scott Walkington.

#### BAE Tooling Opportunity

The BAE Tooling Opportunity Team evaluated semiconductor tools from the BAE Foundry, determined which tools would benefit MESA, and successfully won a bid for tools representing a cost savings of \$4M for the SSIFR project.

Team members: Marshall Alan Amend, Paul E. Dodd, Bruce L. Draper, Anthony J. Farino, James A. Smith, Gary D. Tipton, Charles Lynn Tomlin.

#### Cylindrical Platform for Equation of State Team

For developing a new platform, including diagnostics and analysis methods capable of reaching tens of Mbar pressure in solids exploiting cylindrical convergence.

Team members: Justin Brown, John H. Carpenter, Devon Dalton, Jean-Paul Davis, Eric Harding, Marcus D. Knudson, Raymond W. Lemke, Matthew Martin, Allen C. Robinson, Michael E. Cuneo, Bert Debusschere, Daniel H. Dolan III, Mark Herrmann, Patrick Knapp, Andrew Lopez, Ryan D. McBride, Keegan Paul Shelton, Daniel Sinars, Ian C. Smith, William A. Stygar, Laura Painton Swiler, Jose Manuel Villalva.

#### First Fully-Integrated Magnetized Liner Inertial Fusion Experiments on Z

For successfully designing and executing the first magnetized liner inertial fusion experiments on Z, which demonstrated that magnetization and laser heating can reduce fusion requirements.

Team members: Thomas James Awe, Gordon A. Chandler, Matthias Geissel, Matthew R. Gomez, Kelly Hahn, Stephanie B. Hansen, Eric Harding, Adam James Harvey-Thompson, Christopher Jennings, Owen Johns, Drew Johnson, Derek C. Lamppa, Matthew Martin, Ryan D. McBride, Albert Owen, Kyle Peterson, Dean C. Rovang, Carlos L. Ruiz, Adam B. Sefkow, Daniel Sinars, Stephen A. Slutz, Christopher Speas, John Mckenney, Grafton Kincannon Robertson, Ian C. Smith.

#### Improved Flywheel Materials Team

The Improved Flywheel Materials Team made substantial improvements to flywheel materials resulting in greater energy storage capacity thus achieving a major National Energy Storage goal.

Team members: Timothy J. Boyle, Nelson S. Bell, Timothy N. Lambert, Cody M. Washburn, William Miller, Benjamin John Anderson, Jill Blecke, Mathias C. Celina.

#### Ion Trap Realization Team

The Ion Trap Realization Team successfully planned, simulated, designed, fabricated, released, packaged, and delivered multiple new devices, advancing the state-of-the-art and exceeding customer expectations.

Team members: Jayne M. Bendure, Matthew G. Blain, Raymond A. Haltli, Edwin J. Heller, Andrew E. Hollowell, Stephanie Ann Johnson, Becky G. Loviza, Christopher Nordquist, Anthea C. Ortega, Jonathan David Sterk, Kathleen Jean Hines, Chris P. Tigges.

#### NG Environmental Test Team

A cohesive Neutron Generator environmental test team from organizations 1521, 1558, and 1557 is creating a cultural shift in operations to support production and development activities through strategic planning driven by safety and quality.

Team members: Sara Joanne Brown, Janet L. Couto, John Hofer, Charles Kahwajy, Dennis John Kenney, Colin McConnell, Thomas J. Lutz, Rudy Chavez Sedillo, Miguel Atencio, Fernando Bitsie, Edward P. Cordova, Robert Joseph Cordova, Randy L. Everett, Laura Diane Jacobs-Omalley, Evan P. Johnson, Thomas L. Martinez, Martin Alan Sanchez, Robert Anthony Sanks, Thomas M. Souther, Matthew A. Spletzer, Eric Carl Stasiunas, Gerald Thomason.

#### Rod Control Modification Team

Three projects were completed in parallel to address a reactor control rod motion anomaly at the ACRR to minimize down time and customer impacts, while assuring quality and safety were integral in every step.

Team members: James F. Arnold, Raymond D. Beets, Michael Kenneth Black, Matthew J. Burger, Ralph D. Clovis, Kevin Charles Dussart, Joshua Emmer, Shawn Cameron Howry, James Oscar Klein, Lonnie E. Martin, Anthony R. Matta, Ken Mulder, Kayla Chantel Nowlen, Norman F. Schweser, Patrick Snouffer, Robert K. Zaring, John T. Ford, Paul H. Helmick, Krista Iren Kaiser, Lance L. Lippert, Carol Suzanne Mistretta, Richard James Pratt.

#### Z Machine Pulse Forming Line Installation Team

For excellence in teamwork demonstrated by the Z operational research and engineering teams in the installation of the upgraded Pulse Forming Lines into the Z machine. This teaming resulted in significant reduced Z machine downtime.

(Continued on next page)



David Cox  
5550



Nathan Crane  
1542



Michael Daily  
1740



Bert Debusschere  
8351



Carrie Devonshire  
4800



Jason Dominguez  
1718



Abraham Ellis  
6112



Todd Embree  
5783

Not pictured among individual winners:  
Jerry Smith (9329)



Justin Griffin  
2723



Charles Hembree  
1344



Justin Hogan  
10245



Sandra Jiron  
1818



Lawrence A. Jones  
5418



Marc Kniskern  
5422



Wil Martin  
2996

(Continued from preceding page)

Team members: Thomas Avila, Matthew David Christison, Levi Cortez, Alfred Dennis Jojola, Andrew Kipp, Scott Alan Roznowski, Matthew Sceiford, Kevin N. Austin, Heidi M. Herrera, Jennifer M. Jenkins, Eugene L. Ross, John M. Santillanes, Thomas M. Schweitzer.

## Division 2000

### ARBEDL II Systems Engineering Team

The team successfully delivered two ARBEDL II mission units on schedule, despite significant budget and programmatic challenges.

Team members: David L. Armour, Charles S. Egbom, Debbie Griego, Nathan Wayne Holle, Norman N. Lee, Sergio Murrieta, Tram Nguyen, Hans W. Papenguth, Matthew W. Reading, David L. Trujillo, William A. Watkins, Daniel Edward Wesolowski, Shawn A. Kerr, Michael F. Rimbart, Robert C. Vargas, Randall Wells.

### B61-12 CAD Design for Tech Basis and Development Units

For continually being on the critical path, and meeting all scheduled commitments for the design and product definition for the B61-12 technical basis and development test units.

Team members: Jeffrey Dougan, Jonathan Lane Height, Nate Gordon Newton, Aaron E. Otzenberger, Colin Turner, Ronald C. Henry.

### B61-12 Radar Drop Test

In August of 2013 this team successfully executed two Radar Drop Tests in support of the B61-12 Life Extension Program at the Tonopah Test Range.

Team members: Gerald M. Boyd, Jeffrey Farrow, Nicola Jean Kinzie, Roman G. Martinez, Brandon James Moore, Aaron E. Otzenberger, Jeffrey Pankonin, Shelly Ann Sanchez, Robert L. Shirey, Gabriel A. Velasquez, Andrew Zeitler, Daniel Kevin Anderson, Gary Daniel Calhoun, Matthew C. Johnson, Jeffrey Alan Meador, Richard M. Scarine, Daniel C. Sprauer, Steve Terwilliger.

### Code Management System (CMS) Software Upgrades Team

For outstanding teamwork and dedication in the development and delivery of CMS software products and training materials to Pantex and the DoD.

Team members: Gabriela Aragon, Mario Joseph Chavez, Juan Espinoza, Wilbur R. Johnson, Elizabeth Lopez, Marianna E. Mauritz, Mabel J. Pecos, Steven L. Rezac, Alice E. Starcher, Melissa R. Wilson.

### Energetic Component Prototyping Team

The Energetic Component Prototyping Team has become integral to development activities for NW and WFO customers by meeting needs with an efficient and quality approach.

Team members: Benjamin Hanks, Cody Wade Love, Ryan T. Marinis, Duane Ross Richardson, Timothy Wallace.

### Model-Based Design Tool Development Team

The Model-Based Design Tool Development Team is recognized for their creativity and ingenuity in creating the tech base for the first model-based thermal battery design capability in Center 2500.

Team members: Patrick C. Benavidez, Dean Dobranich, Anne Grillet, Richard Heller, David Ingersoll, Hans W. Papenguth, Edward S. Piekos, Steven K. Showalter, Daniel Edward Wesolowski, Nicholas D. Streeter.

### Neutron Tube (NT) Production Team: Exceeding FY13 NIPP Requirements

The NT Production Team successfully met and/or exceeded all NG Integrated Program Plan (NIPP) NT requirements, ensuring all customer requirements were met/exceeded.

Team members: Ruth E. Bargman-Romero, Francine A. Barker, Anne A. Benz, Christian Campuzano, Amanda Dent, Brian C. Gutierrez, Gabrielle Herrera Gutierrez, Matthew G. Hankins, Allen R. Hurst, Marabeth D. Kellerman, Souvanny Kuthakun, Tanya Morenus, John C. Nguyen, Heather M. Richard, Ralph A. Romero, Michael Sabo, Diane Norma Sanchez, Misha V. Sahakian, Susan M. Shelton, William Yun Waller, Jason Garcia, John P. Lopez, Phyllis J. Mitchell, Mark Schultheiss, Lisa A. Walla.

### SNL/NM Engineering Data Management Team

The Engineering Data Management Team is recognized for outstanding contributions in support of Nuclear Weapons-related product realization and sustained excellence in customer service.

Team members: Gilbert D. Aragon, Donna H. Clock, Carmen L. Lucero, Juanita Marker, Susan A. Romero-Sosa, Debra L. Stephens, Jody Marie Thomas, Bennie R. Yazza, Opal C. Chavez, Rita Mary Chavez, Linda L. Gibson.

### Solenoid Modeling & Rigid Body Dynamics Integration for Stronglinks

This team significantly improved the ability to estimate Stronglink behavior by developing high fidelity dynamic solenoid models integrated into component-level rigid body dynamic models.

Team members: Jamey Bond, Sergio Gonzalez, Clinton Holtey, Matthew David Williams.

### The S (Nuclear Safety Critical) Process Redesign Team

The S Process Redesign Team developed and implemented a graded approach for change control and product verification of Nuclear Safety critical features.

Team members: Jamey T. Bond, Jimmy Brown, Thomas D. Brown, Kenneth Eras, Jeanne L. Evans, Jared McLaughlin, Scott E. Slezak, Seth Ryan Walker, Caren A. Wenner, Tommy D. Woodall, Gwendolyn J. Zon, Robert W. Boney, John R. DeBassige, William H. Greenwood, Dennis R. Helmich, Todd N. Hinnerichs, Christopher R. Landry, Marc A. Polosky, Harold D. Radloff, Elizabeth Roll, Sara Linn Szarka.

### W76-1 AF&F (Arming, Fuzing, and Firing) Team

The W76-1 AF&F PRT provided critical support to maintain production demands and implement improvements through the use of teamwork and applied technical resources.

Team members: Richard James Otten, Humberto Santacruz, Gilbert L. Theroux, Raymond Wolfgang, Robert B. Galloway, William Townsend Hyatt, Chase Tagart, Sean Timothy Weber.

### W87 SFENG FPU

The iHVB team implemented problem solving methodology and coordinated resources under time pressure to identify and implement a recovery plan.

Team members: Christopher R. Barth, Carla C. Busick, Robert Ferrizz, Moses L. Jones, Saskia H. King, Keith W. Meredith, Matthew Neidigk, R. Allen Roach, Adrian C. Romero, Marco Alvares, Gary D. Baker, Randy M. Clarin, Kory Lee Craig, Christopher Diantonio, Laura L. Halbleib, Maryanne J. Heise, Joseph Sean Howard, Kathleen C. Johns, Paul Lari, Alfonso Lopez-Gaston, James M. Morris, Jason D. Morris, Christopher E. O'Malley, David S. Walsh.

### Weapon Intern Program Staff

The Weapon Intern Program staff overcame significant challenges in implementing a change in structure to double the capacity of the program.

Team members: Myra M. Buteau, Elizabeth A. Gallegos, Sharon Lujan, Larry A. Schoof, Cheryl Stephens, Peter Andrew Terrill, John B. Whitley, Ashley Blaise Wilkins.

## Division 3000

### Creative Services Interactive Campaign for Compensation and Health Benefits

Creative Services developed a first-of-its-kind Mobile App, Health Action Plan website, and Compensation & Performance Manager Portal, giving Sandia's top health risks.

Team members: Cheryl Ann Atkins, Laine Marisa Goldman, Cortney Rae Lohkamp, Frederick Bermudez, Renee L. Holland, Sara E. Hollett, Kayleen R. Kaszas, Kristen Lee Meub, Robert Eugene Nelson, Deborah J. Nunez, Kelly O'Bryant, Mark C. Olona, Tiffany T. Pegues, Brent L. Peterson, Mary Romero Hart, Michael P. Vittitow.

### Maintaining the Health of the Workforce: HBE

#### Health Action Plans Team

HBE's Preventive Health and Health Management teams implemented Division Health Report Cards and Health Action Plans to address and improve Sandia's top health risks.

Team members: Jessica Brown, Johanna Marie Grassham, Renee L. Holland, Kalina Leilani Jinzo, Peter Keegan, Callie D. Lovato, Jennifer L. Perea, Jon C. Pier, Debra Sanchez, Lisa Teves, Amy Elizabeth Cincotta, Laura K. Foreman, Laine Marisa Goldman, Kayleen R. Kaszas, Joy MacPherson.

### Sandia Research Magazine Team

In 2013, the team launched Sandia Research, a significant science magazine with national-caliber content, writing, graphic design, and production values.

Team members: Stephanie Hobby, Sue Major Holmes, Randy J. Montoya, Douglas Gene Prout, Marianne Nancy Salem, Neal E. Singer, Michael P. Vittitow, Michelle Fleming, Patricia Brady Koning, Christopher C. Miller, Karla Weaver, Lloyd Roger Wilson.

## Division 4000

### 840 North Renovation Construction Team

For constructing 20,000 square feet of laboratory, testing, and office space to support nuclear weapons-related activities in Building 840, essential to the NNSA commitment.

Team members: Christie Lynne Gleason, Gene G. Hidalgo, Greg C. Kirsch, Ronald A. Maes, Jeremy Michaels, Malia Orell, Patrick T. Ortiz, Ricardo I. Ortiz, Darell M. Rogers, Lynne H. Schluter, John D. Wharton, Bruce Bryant, Devin James DeMenno, Robert A. Dooley, James L. Handrock, Troy Holley, Victor J. Johnson, Willie Sidney Kitchings Jr, Christian C. O'Gorman, Michael A. Pacheco, Arthur C. Ratzel, Christine N. Riddle, Paul R. Romero, Douglas Schreiber, Bud H. Siple.

### Advanced Materials Laboratory (AML) Hazardous Materials Evaluation Team

For identifying a strategy to mitigate the hazards associated with the chemicals utilized at the Advanced Materials Laboratory and justifying the installation of a fire sprinkler system.

Team members: Timothy J. Boyle, Stephen A. Coffing, Julie V. Cordero, Perry E. D'Antonio, Laura D. Draelos, William F. Hammetter, Jeremiah Matthew Sears, Paul R. Smith, Timothy Scott Stirrup, Theresa Wallis, John L. Zich.

### Corporate Liquid Nitrogen Review Team

This team reviewed the existing liquid nitrogen systems across all SNL sites and developed specific and cost effective solutions to manage a significant safety risk.

Team members: Noel Crystal Duran, Orlando L. Griego, Kent L. Robbins, Lynne H. Schluter, Ryann E. Washburn, Randolph J. Castillo, Tanja Michelle Fitzgerald, John R. Garcia, Mark F. Smith.

### Hazardous Category-3 Nuclear Material Transportation Team

They safely and compliantly transferred the remaining Hazardous Category 3 materials from the Manzano Nuclear Facilities to the Auxiliary Hot Cell.

Team members: Jolene Davenport, Leroy G. Duran, Edward Allen Finley, Stanley G. Laktasic, Michael Moore, Phillip W. Zelle, Rafe Campbell, Kraig Paul Deike, Bryan Green, Jeffrey F. Jarry, David Siddoway, Michael T. Spoerner, Michael A. Torneby.

### Sandia Active Shooter Resolution (ASR) Demonstration Team and Staff

For leadership and contribution in enhancing the safety and awareness on and during an Active Shooter Resolution demonstration.

Team members: Robert F. Brown, Joseph Branch, Alfred A. Garcia, Ruben C. Padilla, Tommy R. Serna, Andres S. Tabios.

### Security, Health Services, and Emergency Management total approach to Emergency Response

Exemplary performance and the collaborative efforts of saving a human life.

Team members: Gary D. Baldonado, Wendy Sue Cooper-Snow, Juan F. Delgado, Kelly Garvin, Dale Demetrio Larez, Victor Marquez, Chris Mullaney, Ricky L. Romero, Diego Trujillo, Robert M. Grothe, Charles Kahwajy, Colin McConnell, Teresa Mullins, Ricardo L. Paz, Frank W. Soto Jr., Manuel M. Valenzuela.

### Test Capabilities Revitalization Phase 2 (TCR Phase 2) Project Management Team

For the Test Capabilities Revitalization Phase 2 Project Management team successfully completing all project requirements for this \$57.8M design and construction Line Item project in support of Sandia's Major Environmental Test Facilities.

Team members: Patrick Earl Barnes, Devin James DeMenno, Craig Dickensheets, Vicki L. Frahm, Marc Ghattas, Carlos Giron, Edward Romero, Paul H. Schlavin, Adam M. Slavin, Timothy Scott Stirrup, Steven J. Beresh, Ronald G. Coleman, Thomas V. Faturos, Michael F. Hessheimer, Rodney A. May, Chad A. Twitchell, Michael J. Vigil.

## Division 5000

### Advanced S-Band Transmitter "ASTRA" Development Team

The ASTRA team developed the first radiation-tolerant multi-mode telemetry transmitter, successfully passed their Critical Design Review, and began transitioning to manufacturing at Honeywell NSMC.

Team members: John Douglas Denaple, Anthony J. Ernest, Vincent C. Hindman, Albert Hummel, Peter A. Kneee, Jesse Lai, Farrell Lynn Ostler, Robert R. Pierce, Ronald E. Ralson, Craig John Bennett, Chelsi Kovala, John Joseph Borchart, Shawn P. Garcia, Daniel McMurtrey, Kenneth W. Plummer.

### Buffalo Bill Hunt Team

For dominating the OPFOR (red team) forcing them to play a white card against us as part of the ARCYBER blue/hunt team.

Team members: Ryan Custer, Marshall Daniels, Kevin R. Dixon, Jason Juedes Haas, John Charles Jarocki.



Samuel McCord  
4144



Gary McGovney  
2622



Pamela McKeever  
710



B. John Merchant  
5752



Yvette Montoya  
10598-1



Noel Nachtigal  
8958



Kevin Nauer  
9312



Tim O'Hern  
1512



Shelley Overholt  
3521



Mark Pinkalla  
6813



Pamela Puissant  
4142



Charles Ringler  
6524

(Continued on next page)



Brendan Rogillio  
5418



Jeff Sniegowski  
5642



Paulette Solis  
4249-1



Ann Speed  
1463



Leigh Anna Steele  
2546



Daniel Urenda  
2244



Bob Waters  
0432



John Weaver  
10657



Barbara Zimmerman  
8240

(Continued from preceding page)

**Caravel - BSS Model Fidelity Improvement Team**

Applying creative cross-organization teaming, we completed a series of model fidelity enhancements to Caravel, whose performance now exceeds mission requirements by two orders of magnitude.

Team members: Jennifer Galasso, Richard M. Holman, Terry I. Jaramillo, John J. Jones, Joey Nirschl, Jean Grumblatt Pena, Paul C. Reeves, Nairong Nancy Wang, Christopher M. Howerter, Benjamin James Lawry, John J. Mason, Louis Romero.

**DPAT Development Team**

The DS&A Projection Analysis Tool (DPAT) was developed to automate, streamline, and improve the projection process for the DS&A PMU.

Team members: Sarah J. George, Stephen Michael Henry, Sheila A. O'Neill, Marissa Devan Reno, Bruce M. Thompson, Anthony L. Thornton.

**Flight Response Team**

A significant technical topic required an orchestrated triage, followed by a closely reviewed stabilization of the situation, and methodical execution of a path forward.

Team members: Ronald L. Akau, David Arpin, Vit Babuska, Patrick S. Barney, Edward J. Binasiwicz, Adam Brewer, Gregory L. Dinger, Mark S. Garrett, Glen I. Magee, John A. McClendon, Joseph Mulken, Otis M. Solomon Jr., Joseph John Sorochie JR, Paul T. Vianco, Rodney R. Woodstra, Michael V. Bredemann, James Bronder, Miranda Elizabeth Buckman, David Godsey, Theodore J. Kim, Rebecca Renfro McCloy, John Morasco, Mathew Napier, Rosemary Villanueva Studenny, Frank Young.

**Harpoon Data Analysis**

The Harpoon Data Analysis Team solved a significant problem that the community has been working on for years, enabling much needed capabilities for the US.

Team members: David James Carter, Ronald Espinoza, Leanne Felix, Robert Richard Mills.

**Harvester Team**

For the exceptional, cost-effective design, engineering, and qualification of the United States' next-generation worldwide air sampling capability supporting diverse national security missions.

Team members: Craig Crowder, Scott M. Davison, Eduardo A. Padilla, David Nikolaus Perkins, Joseph C. Sanders, Chisom Shawn Wilson.

**Joint Radar Module Development Team**

This team was successful in designing/developing a radar capable of enveloping the requirements of three weapon programs; reducing execution risk and achieving significant cost savings.

Team members: Keith Burton Albers, Ron Anderson, Thomas G. Brown, Kurt Conover, Michael Matthew Elsbury, Christopher L. Gibson, Clinton Lloyd Haslett, Vincent C. Hindman, Lung-Hwa Hsieh, Nicola Jean Kinzie, Richard T. Knudson, Johnson Liu, Matthew Thomas Martinez, Roman G. Martinez, Jeffrey Pankonin, Christopher T. Rodenbeck, George R. Sloan, Frank Reginald Smith, Matthew Samuel Starosta, Jeremy James Stearns, Mandy S. Younger, Peter Deng, Bruce Edwin Guffey Jr., Garth Kraus, Richard McClanahan, Joseph H. Perry.

**Multi Polarization and Change Detection LDRD**

For the development of novel fine resolution polarimetric SAR change detection products, from proof of concept through airborne fully-polarimetric fielding and data collection.

Team members: Wallace J. Bow, Billy C. Brock, Dale F. Dubbert, Justin Wayne Enderle, Dale Lipke, Stephen Jack Neff, Robert Riley, Martin E. Thompson, Jonathan Tran, Roger Derek West, Joseph Chirieleison, Kristina Rodriguez Czuchlewski, Scott M. Devonshire, Michael Gardner, Gregg K. Jones, Mark Walter Learn, Ward E. Patitz, Tanya Heather Peters, Judd A. Rohwer, April Disch Sweet, Nathan Sweet, Michael Taylor, Charles T. Vincent, Kyle R. White, Kathie Woods.

**PF - Royal Flush QRRI Core Team**

Team provided IWFO Sponsor with a new technical solution to a persistent national security concern, including novel utilization of a complex technology with seamless results.

Team members: Matthew Allen, John Cates , Adam Ryan Church, Juan-Carlos Jakaboski, Luis Obando, Jerry D. Strother, Cody M. Washburn, James Carroll, Lucas Feldner, Edward A. Henry, Bernhard Jokiel Jr., Ronald E. Kidner, Lee H. Marshall, Harold R. Ortiz.

**Space Based Infrared System Geosynchronous Starer Processor (GSP) project team Geostarar**

GSP team successfully enhanced existing real-time processing capabilities by redesigning to provide sensor agnostic capability and demonstrating those capabilities as applied to SBIRS GEO system.

Team members: Sherman M. Begay, Jose L. L. Guillen, Ernest H. Helmer, Steven Jorgensen, David S. Strong, Robert S. Warrick, Caroline Rachel Daniels, Erik L. Ellis, Andrew Freer, Michael Grow, Phillip Anthony Hermanns, Nancy H. Irwin, Steven Elden Miller, Kevin D. Modglin, Jonathan Nation, Bryan Ray Olivas, Brian Mark Philpot, Eric L. Pollard, Marshall K. Riley, Jeffrey Stuart Sallade, Ron L. Schmidt, David I. Toledo, Mark A. Trujillo, Julius Yellowhair, Stephen Young.

**USNDS Future Architecture Study Team**

For outstanding teamwork, dedication, and pursuit of excellence in performing the USNDS Future Architecture Study for the Air Force Space and Missile Systems Center.

Team members: Joseph C. Chavez, Stephanie J. Eras, Park Hays, Scott A. Jones, Nathan Michael, Hyeung-Sik Jason Min, Edward Sams, Andrew J. Scholand, Kara Danel-Hartup Williams, Ian Cooke, Brice A. Fisher, Susan A. H. Jean-Pierre, Richard J. Kominek, Ryan Prescott, Betty K. Roush.

**Division 6000**

**AWG-711 Engineering Test Integration**

Successfully completing the AWG-711 transportation package proof-of-concept, impact and fire tests, leak checks, and demonstrating the ability to meet stringent certification requirements; Energy & Climate Nuclear Energy & Fuel Cycle Program.

Team members: Douglas J. Ammerman, Eric David Boatman, Lyman Wes Chilton, Victor G. Figueroa, Thomas R. Gallegos, Steven Samuels.

**Emergency Response Software Development Team**

The Emergency Response Software Development Team develops and provides innovative software solutions of the highest quality for the nation's Emergency Response organizations through the IHNS WMD Counterterrorism & Response Program.

Team members: John Fulton, Linda K. Gallagher, Gregory J. Madrid, Richard Reed Schetnan, Dustin Heath Whitener.

**Limited Area Production and Storage Complex (LAPSC) Team**

The LAPSC Team successfully supported DoD's installation of the Command, Control, Communications, Computers, and Intelligence (C4I)/Electronic Security System (ESS) Intrusion Detection System (IDS) in this state-of-the-art facility.

Team members: Elizabeth Ann Affeldt, Richard Contreras, Joshua Michael Daley, Paul C. Haddock, Michael J. Hamill, Rickey Hartzell, Todd A. Haverlock, Pamela Kiskoek, Edward J. Klaus, Florian C. Lucero, Thomas Kimball Mack, David Mackovjak, Carrie O'Hara, Kathleen P. Pierson, William D. Pregent, Charles B. Richardson, Charles E. Ringler, David Joseph Tarbell, Christian Turner, Dale T. vanDongen, R. A. Williams, Edward L. Witzke.

**Scaled Wind Farm Technology (SWIFT) Facility Safety and Construction Team**

For exceptional service and dedication to engineered safety in construction of the unique Scaled Wind Farm Technology Facility supporting Sandia's Energy & Climate Renewable Energy Program.

Team members: Jonathan Charles Berg, Joseph M. Bonaguidi, Steven Wayne Cox, Carolyn David, Yasmin Dennig, Lorenzo Gutierrez, Wesley D. Johnson, Bruce Philip LeBlanc, Candle M. Martinez, Sunni Elizabeth Moore, Joshua Paquette, Mario A. Pino, Randolph T. Shibata, Danny P. Donald, Dolores Gonzales-Limon, Melony Kay Hildebrandt, Suzette B. Howey, Vincent M. McRoberts, Douglas E. Otts, Brian R. Resor, Stephanie A. Salinas, Cynthia Denis Stogsdill, Kristina Sullivan.

**Highly Enriched Uranium -Transparency Program (Megatons to Megawatts) Team**

Successfully completed critical work as part of the 20-year program that downblended 500 metric tons of Russian weapons-origin highly enriched uranium for use in US civilian nuclear power plants.

Team members: Dianna S. Blair, Connie Bodmer, Dennis A. Nelson Jr., Todd A. Culp, Frank L. Lucero, Yolanda Sofia Marrufo, Alfred L. Romo, Michael V. Strosinski, Manuel M. Trujillo, Tamara A. Ulbarri.

**Division 7000**

**Wide Bandgap Advanced Manufacturing Innovation Institute (WAMII) Proposal Team**

For the preparation and submission of the Wide Bandgap Advanced Manufacturing Innovation Institute (WAMII) proposal, the first "Hub-scale" proposal to be led by Sandia.

Team members: Michael E. Coltrin, Idabelle Elizabeth Courtney, Todd D. Heinrichs, Robert Kaplar, Sheila L. Pounds, Richard Peter Schneider, Rene Gonzales Sells, Jerry A. Simmons, Peter Rist Atherton, J. Charles Barbour, Michael Beckett, Tara Renee Camacho-Lopez, Alyssa J. Christy, Duane B. Dimos, Vipin P. Gupta, Jacqueline Kerby Moore, Stanley A. Orrell, Julia M. Phillips, Erik M. Ridley, J. Stephen Rottler, Amanda Saba, Valerie Natherah Salim-Meza, Regan W. Stinnett, Tristan Wren Walters, Robert Thomas Westervelt.

**Division 8000**

**CA SCN Diskless Windows 7 Migration Team**

Recognition of the effort to transition the CA SCN Diskless environment to the Windows 7 OS that vastly improved the CA SCN user experience.

Team members: Todd Howe, Kevin C. King, Jennie L. Lebow, William D. Richmond, Young S. Seiden.

**Electronic Metal-Organic-Framework Discovery Team**

For discovery and explanation of a new class of electronic materials based on guest molecule infiltration into an insulating metal-organic-framework.

Team members: Mark D. Allendorf, Farid El Gabaly Marquez, Michael E. Foster, Vitalie Stavila, Albert Alec Talin, Alexandra Caroline Ford, Francois Leonard.

**Exercise Test Unit Team**

For technical excellence and dedicated teamwork in successfully delivering a prototype test unit for a critical field exercise overcoming challenging technical and scheduling obstacles.

Team members: Brad S. Altman, James F. Curtin, Paul A. Gabaldon, Richard A. Plass, Todd Barnett, Jerry Brewer, Tina Chou, Delmar Arnold Eldredge, Jennifer Founds, Douglas L. Gehmlich, Bryan Loyola, Robert A. Oteri, Matthew Theron Roddewig, James F. Stamps, Kai Shing Tsang, Andrew Vance, Kenneth Wallace, John A. Warmouth Jr., Chu-Yeu Peter Yang, Jeannette Chang, Timothy W. Gilbertson, Jacob Goodwin, Jerry Inman, Walter A. Kruse.

**Life of (a) PI Workshop Development and Execution Team**

For recognizing the need for, developing, and executing a Sandia training workshop for new Principal Investigators to learn from those with more experience.

Team members: Melissa S. Betz, Craig A. Smith, Jonathan A. Zimmerman, Tamara G. Kolda.

**LVOC Alternative Finance Proposal Team**

For exceptional creativity and dedication to advancing alternative finance as a mechanism to recapitalize Sandia's infrastructure.

Team members: Bruce Balfour, Stephanie Beasley, Neal R. Fornaciari, David J. Hopman, Barbara L. Larsen, Howard J. Royer, P. Douglas Vrieling, Tracy R. Walker, John R. Garcia, William Kitsos, Candle M. Martinez, Jack H. Mizner, John Paulson, Charles Pechewly, Devon Powers, Cynthia Denise Stogsdill, Jennifer Jacquelyn Wohleber.

**Nuclear Warhead Conceptual Studies for Long Range Standoff (LRSO) Missile**

Delivered major conceptual warhead study results to upper NNSA and DoD management and a preliminary Interface Control Document (ICD) essential for Air Force missile designers.

Team members: Jerry L. Adams, Dante M. Berry, Owen Stephen Bryk, Douglas M. Deming, Maria Josephine Rosado, Steven M. Schafer, Ron Wild, Lee Druxman, Joyce Ching Liang, Alvin H. Leung, Bryn Miyahara, Andrew D. Shugard, Janson Wu, Nydia Enid Brazeau, Will Alan Roesch, Andrew Van Blarigan.

**Urban Shield Radiation Detection Scenario Team**

With support from DHS/DNDO, the team developed a radiological and nuclear detection exercise for Urban Shield, a first responder preparedness exercise held October 26-28, 2013.

Team members: Amanda Christine Askin, Willard R. Bolton Jr., Donna J. O'Connell, Steven P. Orth, Meghan Peterson, Steven Farmer, Lawrence R. Carrillo, Troy E. Delano, Ann Hammer, Christopher L. Kunz, Stacy Mui, Jacqueline Marie Reardon, Jason Christian Reinhardt, Matthew Sumner, Craig R. Tewell.

**Division 9000**

**Data Center Consolidation Team**

The Data Center Consolidation (DCC) team stood up and executed the DCC program, resulting in significant savings and improved productivity for the mission.

Team members: Jason Crenshaw, Samuel E. Jones, Laura L. Lenberg, Carol L. Meincke, David Anthony Perea, Timothy D. Seigler, Mark A. Stilwell, Jeffrey J. Anastasio, Bob D. D'Spain, Mark L. Holbrook, Philip S. Kuhlman, Michael A. Kurtzer, Joseph H. Maestas, David J. Martinez, Sandra Lee Varro.

**Enterprise Cyber Security Team**

The Enterprise Cyber Security Team has made outstanding and exceptional contributions to Sandia's Cyber program as well as to outside agencies performing a sensitive investigation.

Team members: David Michael Anthony, Bob D. D'Spain, William Dean III, Eunsil Han, John Charles Jarocki, Laura L. Lenberg, Jonathan Jacob Chaim Mandeville, Alex Nicholas Pease, Dominic E. Salas, Justin Cofield Selleck, James C. Stromberg Roger A. Suppona, Joseph Richard Tulino, Todd Bruner, Jason Crenshaw, Jeffrey G. Heller, Luis G. Martinez Jr., Randy McClelland-Bane, Nicholas Ryan Peterson, Alex A. Quintana.

**Microsoft Business Intelligence System Implementation**

To celebrate all the hard work to replace the outdated Business Objects system with a best in class Microsoft-based self-service BI system.

Team members: Richard M. Bell, Carol Joy Blanch, Norma L. DeAnda, James P. Fernandez, Michael L. Hagengruber, Thomas A. Heisel, Jane Hillman, Paula J. Jernigan, Jayson Lane, Arthur Joel Macthinger, Sonia Marie Martinez, Joshua Blair Mitchell, John R. Moleres, Marin A. Noriega, Kimberly A. Roesch, Adrian Sanchez, Laurel Jean Taylor, Lindsey Paige Wareham, Brandon Showers, Brian Kirk Snyder, Scott A. Stephens.

**Sandia Enterprise Project Management (sEPM)**

The sEPM team designed, implemented and deployed a corporate Earned Value solution which addresses the directives outlined by NNSA and DOE.

Team members: Lora A. Bonano, William Brett Brizzee, Karen S. Current, Thomas Cuyler, Jeremy D. Dencklau, Rebecca Ann Lopez, Jeremy R. Plake, Sebastian Rael, Sean Evan Rhodes, Sandra Lynn Ryan, John Damon Shaw.

**Division 10000**

**10668 International Logistic Dream Team**

Performs with excellence and pride to provide flawless event management for the Department of Energy, International, and Sandia National Laboratories' Business and Technical Partners in supporting the Defense Nuclear Nonproliferation programs.

Team members: Kelly S. Collins, Janine Donnelly, Stephanie C. Kelly, Marisela M. Sanchez.

**Accrual Automation**

Automated the Year End Purchase Order (PO) Accrual Process by replacing an intensely manual, paper-bound process with an easy-to-use, well understood, labor-saving web application.

Team members: Donna J. Bauer, Timothy J. Bridge, Vonda Coleman, Kim P. Gallagher, Bernadette Marie Garcia de Rodriguez, Matthew Esequiel Martinez, Jeanne Bisconte, Leland J. Clise, Paul R. Graham, Bernadette Houghton, Hue D. Lai, Marissa U. Ramirez, Kelly E. Westlake, Amy S. Woolley.

**Burden Model Implementation Team**

The team shaped the future of Sandia's burden structure by redefining how burdens are applied thereby increasing simplicity of the model and its compliance with Cost Accounting Standards.

Team members: Joseph Patrick Carney, Jennifer Gonzales, Kimberly N. Hallatt, Matthew David Plummer, Victoria Griego Stanley, Stephen Vender, Michael K. Widmer.

**Nonproliferation Technologies R&D Business Office Team**

Providing Creative Business Solutions within the DOE/NNSA Enterprise.

Team members: Nikki L. Angus, Valerie C. Cotinola, Jose Javier Ruiz.

**The Accounts Payable Team**

For outstanding service and spirits of partnership and teamwork during the potential FY14 shutdown and debt ceiling crisis. The Accounts Payable team processed \$72M in payments in one day to ensure all members of the workforce were paid benefits and liabilities prior to a potential debt ceiling crisis which would have disabled SNL from drawing down on the U.S. Treasury.

Team members: Sarah Ann Bachicha, Timothy J. Bridge, Sharon Ann Chino, Carrie Haugen, Carol L. Marable, Marie C. Miller, Candice Montoya, Karla J. Simoes, Renee M. Urquidez, William P. Vigil, Tonya Lynn Griego.

**Division 11000**

**The Patent Prosecution Team**

Sandia's Intellectual Property team, supporting a new Labs' IP strategy, implemented approaches and counseling to assist inventors while increasing protection and impact of Sandia inventions.

Team members: Helen Song Baca, Kevin W. Bieg, Martin Ivan Finston, Daniel James Jenkins, Najat Mishalanie, Lynette Rocheleau, Olivia J. Tsai, Michael Beckett, Diana Cates, Gregory Michael Doudnikoff, Madelynne J. Farber, Lori L. Holslin.

**Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads Sandia Classified Ads**

**MISCELLANEOUS**

BABY GRAND PIANO, \$5,000; Little Giant ladder, 19-ft., new, \$500. Romero, 350-5811.

FOOTBALL TICKETS, New Orleans Saints at Dallas Cowboys, Sept. 28, 1 pair, section 147, row 10. Bowen, 575-770-1729.

BED PAD SYSTEM, air pressure, to prevent bed sores, new, \$100. Vigil, 220-6938.

GAZEBO-OUTDOOR ROOM, by Arrow, 10'W x 10'L x 10'H, weather resistant, good condition, \$100. Barnaby, 255-5624, ask for Bruce.

UPRIGHT FREEZER, Tappan, 12-cu. ft., \$150; Craftsman lawnmower w/catcher, \$75; Mantis tiller/cultivator, \$75; Los Lunas area. Sloan, 505-363-7750.

STORAGE SALE, glass tables, decorative lamps, leather chair, futon, call for details, very good condition. Roesch, 505-281-9751.

LIVING ROOM SET, suede/leather sofa, loveseat/recliners, 2 end tables, 1 coffee table, \$500. Casias, 505-814-4866.

TRAILER HITCH, Shelton, \$100; Craftsman 10-in. table saw, 2.5-hp, \$100; 2-drawer steel filing cabinet, good condition, \$30 OBO. Garcia, 280-5815.

MOTORCYCLE JACKET, street, warm weather mesh, black, XL, Ballistic brand, \$20. Eller, 505-417-4390.

RECLINER CHAIR, Lane, suede/cloth, salmon, \$100; walnut mid-century room divider/entertainment cabinet, \$150, 2-drawer locking cabinet, 2, \$50 ea. Allen, 856-7891.

TREADMILL, AFG 3.0, speed & incline intervals, like new, \$550. Bachmann, 379-0740, ask for Art.

CAMPING/HUNTING EQUIPMENT, Plumb, 681-1846.

SWIVEL ROCKER RECLINERS, 2, La-Z-Boy, brick red w/matching spare arm & headrest covers, gently used, \$200/both. Thompson, 292-2877.

APPLIANCES: side-by-side refrigerator, ice maker, 25-cu.ft., \$360; gas stove, \$265; dishwasher, \$69; negotiable, excellent condition. Ward, 836-3663.

QUEEN MATTRESS, memory foam, box spring, \$125/both; queen oak head & foot board, \$50; sofa, faux leather, \$280. Brewster, 238-4704, ask for Julie.

TABLE SAW, 10-in., 3-hp, cabinet style, mobile base, \$400; woodworkers work bench, \$75. Bobbe, 350-9544.

GPS, Garmin, nuvi 275T, North American & Europe lifetime maps (transfer), Bluetooth, \$75. Sutherland, 345-1183.

SATELLITE ANTENNA, Winegard Carryout, \$375; 2 DISH VIP 612 DVR receivers, \$75 ea.; Slingbox PRO-HD, \$75. Kercheval, 505-266-5833.

SCUBA GEAR, large men's Night Hawk BC w/Air 2; integrated weight pockets, regulator & dive computer, \$900. Rodriguez, 505-379-8273.

ENTERTAINMENT CENTER, dark oak, mission-style, American Home, 2 tall cabinets, TV base, bridge, \$175. Weber, 573-8965.

SCANNER, Epson, works w/Windows XP, \$30 OBO. Roberts, 275-2941.

2014 FIESTA GONDOLA CLUB TICKETS, sold-out-sessions, 2 for Oct. 3, 4 p.m. session, 2 for Oct. 4, 5 a.m. session, no parking pass, \$300. Fondren, 463-5572.

GARAGE SALE, Saturday, Sept. 13, 9 a.m., 4501 Canyon Ct. NE. Stubblefield, 263-3468.

ACTIVITY JUMPER, Bright Starts, Cute Critters, sounds, lights, activities, like new in box, \$55. Zaffery, 858-0954, ezaffery@comcast.net.

SECURITY DOORS, 2, 72" x 80", heavy, wrought iron, black, \$200 OBO. Leonard, 505-298-5184.

HD PROJECTOR, Pioneer Elite KURO, high end, like new, only 131 hrs., paid >\$7,000, asking, \$1,300. Laskar, 856-7806.

DINNER WARE, 1950's, Franciscan Starburst, 6 dinner plates, 4 cups w/saucers, \$75. Langwell, 350-1313.

GRAND PIANO, Baldwin, black, w/bench, built in 1956, great condition, \$3,200 OBO. Ratzer, 410-7269.

**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.

'02 FORD TAURUS, 132.5K miles, good condition, runs great, great commuter or second car, \$3,000. Maheras, 281-3660.

'65 PLYMOUTH SATELLITE, race car, pro street, 440 AT, fresh orange paint, call for info/photos, \$10,000. Jaramillo, 505-615-4891, ask for Fred.

'64 CHEVROLET CORVETTE ROADSTER, 327 V8, 4-spd., maroon, hard/soft tops, very good condition, \$31,000. Craig, 350-7146.

**RECREATION**

'00 PACE ARROW MOTOR HOME, 37-ft., 2 slides, lots of power for towing, \$39,000 OBO. Hibray, 821-3455.

'12 NINJA 250R MOTORCYCLE, 2,400 miles, excellent condition, ready to go, perfect first bike, \$3,500. Mullaney, 366-1886.

'09 SUZUKI C50 MOTORCYCLE, cruiser-style, 10.9K miles, fuel injected, shaft drive, liquid cooled, like new condition, book value \$5,300, asking \$4,500 OBO. Griego, 859-2227.

TWO BMW F650GS TWIN MOTORCYCLES, both have <4.3K miles, \$9,500 ea. Ryan, 505-934-0684.

'08 SUZUKI GSXR600, Yoshimura, geared, front & rear stands, 11K miles, riding gear, gorgeous bike, \$6,500. Mays, 505-440-2436.

'12 FOREST RIVER FLAGSTAFF V-LITE TRAVEL TRAILER, 30WRKSS, 2 slides, 1-1/2 baths, extras, mint condition, \$22,500 OBO. Sandoval, 505-269-6650.

'01 NEWMAR RV, Triton V10, 37-ft., Banks power system, slide, 2 TVs, 2 ACs, 7-kv generator, levelers, extras, clean. Dyer, 505-821-5324.

MOUNTAIN BIKE, Santa Cruz Blur classic, full suspension, XT group, Avid disc brakes, 120 mm Marzocchi fork, \$800. Rector, 286-1217.

**TRANSPORTATION**

'07 SATURN SKY REDLINE, 5-spd., AC, convertible, gray, red/black leather, alarm, power mirrors & driver's seat, CD, 81K miles, excellent condition, \$13,500. Baca, 771-8656.

'10 NISSAN ROGUE, AWD, black, new tires, 44K miles, 27-mpg, very clean, excellent condition, \$11,500. Mack, 977-6229.

**REAL ESTATE**

3-BDR. HOME, 2-1/2 baths, 1,675-sq. ft., 2-car garage w/shelving, quiet Vista del Norte Street, MLS#815674, \$184,900. Chavez, 505-750-8276.

2 ACRE LOTS, w/utilities on property, Edgewood, NM, near schools & businesses. Sanchez, 980-3532.

2 OR 4 ACRE HOME BUILDING LOTS, Sandia Park, electric, phone, well, fenced, level, not rocky, \$105,000/\$160,000, low down, easy terms. Mihalik, 281-1306.

4-BDR. HOME, 3-1/2 baths, 2,195-sq. ft., quiet NW cul-de-sac, near Cottonwood, \$282,000. Carter, 681-6312.

3-BDR. HOME, 2 baths, single-story, quarter acre lot, 2-car garage, 1,795-sq. ft., 2028 Vernon Drive SE, MLS#822955, \$262,500. Edwards, 575-932-8295.

**WANTED**

ROOMMATE(S), Volterra, 5 min. to KAFB, \$500/mo., utilities & WiFi included, no pets. Guillen, 505-385-8189.

BOX TURTLE, daughter's 15-yr.-old turtle passed away, looking for replacement. Atkins, 264-2191.

BOOKS IN ITALIAN, preferably novels. Norwood, 331-8608, ask for Fred.

GOOD HOME, 2 adult indoor cats, wife & baby seem to be getting more allergic, great cats. Martin, 623-687-7673.



**Mileposts**

New Mexico photos by Michelle Fleming



John Vandyke  
45 1423



Ruth Bargman-Romero  
35 2712



Jane Poppenger  
35 5794



Ed Binasiwicz  
30 2632



Tony Bryce  
30 2522



Lyle Golightly  
30 4847



Margaret Harvey  
30 3657



Joseph Castillo  
25 4237



Linda Jaramillo-Alfaro  
25 10656



Randy Schunk  
25 7911



Richard Aguilar  
20 1386



James Gruetzner  
20 5444



Curt Ober  
20 1446



Geoff McGirt  
15 9328

# Three for the road

## Triplets push each other to academic success and Lockheed Martin scholarships

By Nancy Salem

Stephanie, Alicia, and Megan Williams share more than a birthday. They each speak a second language, excel in a sport, give back to the community, and carried higher than a 4.0 grade-point average at Albuquerque Academy.

Being triplets fueled a lot of that success. “We have a competitive edge. We’re tiger sisters. We push each other forward,” Stephanie says. “It’s always been that way. We support and are proud of each other, but we feel compelled to get on the same level.”

All three Academy seniors applied for Lockheed Martin Foundation scholarships in the 2014 National Merit Scholarship program. All three got a letter back in July and all three got a yes.

“I was very proud and grateful,” says their dad, Steve Williams (5954). “I know how hard they’ve worked and how well they’ve done.”

The Williams family is changing fast. Steve and his wife Jayne, a former Sandian, will have an instant empty nest when their triplets leave New Mexico for colleges in California, Illinois, and New York, and the girls will live away from each other for the first time in their lives.

“I’m trying not to think about our empty nest after they’re gone,” Jayne says. “I’m excited for them that they’re heading off and getting settled in their new lives.”

Steve says he and Jayne wanted their daughters to make their own choices and go to the colleges that best fit their interests. The girls say they briefly considered attending the same school, the University of California Los Angeles, but really wanted to head in different directions.

“We talked and it was a hard decision,” Alicia says. “But our interests are not the same.”

Stephanie will attend the University of Chicago majoring in genetics and philosophy. Alicia is going to Cornell University in Ithaca, NY, to study statistics. And Megan is already settled in at UCLA studying computer science like her mom and dad.

### An ultrasound surprise

Steve, a Virginia native, came to Sandia in 1980 with a master’s degree in computer science from Purdue University. He has worked in different departments but always in computing. Jayne, of Missouri, joined the Labs in 1984 with bachelor’s degrees in mathematics and computer science and a master’s in computer science from the University of Missouri Rolla. They met in 1986 and married three years later. Jayne was promoted to manager of Secure Communications (SECOM) not long after.

The triplets were born in 1996. “In an early ultrasound they saw one baby, then another, then said there was a third. I said, ‘Wait, let me see that screen!’” Jayne says. “We were very excited about it. I worked up to the last month, and the girls were each over 5 pounds and healthy. We were very blessed.”

Jayne left Sandia to be a stay-at-home mom. She went to work in administration and community outreach at Albuquerque Academy after the girls started middle school there. They attended Albuquerque Public Schools through fifth grade.

“Raising triplets is all we know,” Jayne says. “It was wonderful. They were their own little play group, and they had so much fun.” Steve says when the girls were up late studying calculus or other tough subjects in high school, “we’d hear them cracking up laughing. They could enjoy themselves even under pressure.”

Megan says conflicts were few. “We were very close,” she says. “It was nice to have people around at all times who knew what was going on and what you were going through.”

### Sports, art, and music

The girls all gravitated to science and math but developed different activities. Alicia and Stephanie played club volleyball, and Megan captained varsity golf, making all-state the past two years. Megan and Alicia studied Chinese and went on a class trip to China, and Alicia is teaching herself Korean. Stephanie studied Spanish and visited Spain with Alicia. Alicia is an artist, Stephanie



THE WILLIAMS TRIPLETS, from left, Alicia, Megan — on Skype from Los Angeles — and Stephanie, are flanked by their parents Steve (5954) and Jayne. “I’m trying not to think about our empty nest after they’re gone,” Jayne says. “I’m excited for them that they’re heading off and getting settled in their new lives.” (Photo by Randy Montoya)

excels in writing, and Megan plays guitar.

They did summer internships at Sandia and the University of New Mexico in materials, biomedical engineering, and nanoparticles. They heard about the Lockheed Martin scholarship from Steve, and say they are thrilled to have won it. “We all went, ‘Yes!’” Stephanie says. “We were very happy about it, and very grateful.”

About a month ago, Jayne, Stephanie, and Alicia drove Megan to Los Angeles. “It was sad,” Alicia says.

“We spent so much time together growing up. It’s been hard. We FaceTime every single night.”

Steve stayed home, where he said it was “quiet and eerie.” “You realize how much you will miss them,” he says. “But I know the excitement that lies ahead for them.”

The family is already planning reunions at Thanksgiving and Christmas. “Oh, we plan to see a lot of each other,” Jayne says. “I’m already watching the airline specials. And thank goodness for Skype.”

## Lockheed Martin scholarship winners

Nineteen high school seniors who are the children of Sandians are among 100 students to win Lockheed Martin Foundation scholarships in the 2014 National Merit Scholarship program. The scholarships are awarded to qualifying National Merit Finalists and to students who scored extremely well on the PSAT/National Merit Scholarship Qualifying Test but did not become finalists in their states. The winners are academically within the top one-half of 1 percent of all US high school graduates.

The children of current full-time and part-time employees of Lockheed Martin and its subsidiaries can compete for the scholarships. To be considered, high school students must take the Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/ NMSQT) in the fall of their junior year and submit an application and essay to the Lockheed Martin Foundation. Of the 1.4 million students who take the PSAT each year, about 16,000 are named semifinalists.

The scholarship awards \$3,000 a year for up to four years of undergraduate study. A National Merit Scholarship Corp. (NMSC) committee chooses the recipients by evaluating several academic and extracurricular factors about each candidate.

The National Merit Lockheed Martin Academic Scholarship Program is an annual competition conducted by the NMSC, an independent, not-for-profit organization. For more information on the scholarship, visit the Community Involvement website at

<http://community.sandia.gov/employee-focused-programs/>.

The 2014 Sandia scholarship recipients and their parents are:

### National Merit Lockheed Martin Academic Scholarship

- Lucy Bartel — Timothy Bartel (6233)
- Nathan Chael — Eric Chael (5752) and Marianne Walck (6900)
- Shelley Dai — Steve Dai (1833)
- Jessica Depoy — Rodney Depoy (2955) and Jennifer Depoy (5628)
- James Erikson — William Erikson (1516)
- David Hatley — John Hatley (6622)
- Nickolas Spahn — Olga Spahn (1766)
- Sylvie Tran — Hy Tran (2543)
- Alicia Williams — John S. Williams (5954)
- Stephanie Williams — John S. Williams (5954)
- Rachel Price — Laura Price (6224)
- Eric Deng — Yalin Hu (8136)

### Lockheed Martin Academic Scholarship

- Donna Bacon — Larry Bacon (5443)
- Julia Lu — Ping Lu (1819)
- Emma Vaitkus — Daniel Vaitkus (9324)
- Alison Watkins — Sheryl Hingorani (260) and Randy Watkins (1532)
- Megan Williams — John S. Williams (5954)
- Monica Walker — Tracy Walker (8949)
- Steven Chen — Ken S. Chen (8237)