

W88 ALT program performs successful flight, drop tests

By Sue Major Holmes

The first flight and drop tests for the latest variant of the W88 nuclear warhead are providing data for Sandia to validate designs, improve computer modeling, and update component specifications.

Tests in June and July were successes and provide data for the program, the W88 ALT 370 (alternate), to move forward, says Tim Edwards, manager for the program's technical basis and qualification activities.

The Critical Radar Arming and Fuzing Test (CRAFT) was the first flight test of a prototype radar for the W88 ALT 370. CRAFT demonstrated how the radar performed during re-entry through plasma generated by the hypersonic speeds at which the warhead travels.

The new radar functioned as expected after launch on a Trident II missile from a Navy submarine, Tim says. Sandia and its partners are analyzing results to validate requirements and radar design.

A major milestone

The June test was the first of several planned flight tests to demonstrate the upgraded system's performance. It also represented a milestone: the first flight test unit Sandia and its partners, Los Alamos National Laboratory (LANL), the Kansas City Plant (KCP), and Pantex, delivered to the Navy for full-scale testing under the program.

A month later, the first drop test of the W88 ALT 370 program mimicked a crane dropping the reentry body onto a concrete surface to develop evidence that it would remain safe during an accident. Sandia conducted the test in partnership with LANL, KCP, and Pantex at Sandia's 185-foot Drop Tower Facility, using the same handling gear a crane would use to move the weapon, making the test as realistic as possible.

It was the W88 program's first abnormal drop test since the system's original qualification test in 1987. An abnormal environment is one that is unexpected, such as an accident.

"The weapon is not required to function after that, just to stay safe," Tim says.

Sandia will use vibration and shock measurements from the test to update specifications for components in the weapon, he says. It also will use the information to validate computer models designed to apply the results to other drop scenarios, since it's not possible to replicate every possible accident in tests.



DROP TEST — Sandia performed a drop test for the W88 ALT 370 program, designed to replicate a crane dropping the reentry body onto a concrete surface. The test was conducted at the Labs' 185-foot Drop Tower Facility, using the same handling gear a crane would use to move the weapon.

(Photo by Mark Nissen, 1535)

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Sandia Management Model offers insight into Labs' structure

By Tim Deshler

Sandia's management structure is complex and continually evolving. It is important for managers and staff to understand how Sandia operates, from how the Labs fulfills its role as a Federally Funded Research and Development Center (FFRDC) and a government-owned, contractor-operated (GOCO) facility to how organizations and individuals fit into the overall structure.

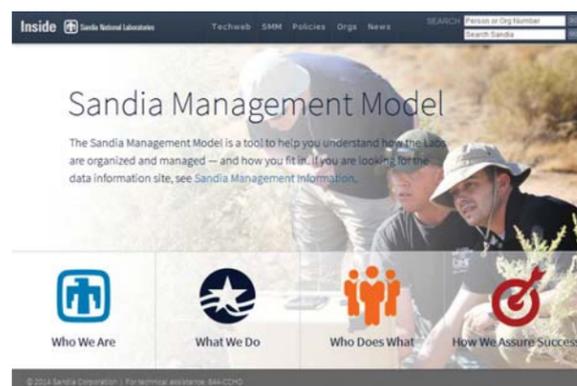
To help further that understanding, Sandia leadership has launched the Sandia Management Model (SMM), a new tool for the workforce that describes the Labs' structure in a high-level, comprehensible way. This tool was developed to address FY14 Corporate Milestone 3.1.2, to "define a 21st century integrated management system that reflects Sandia's quality management system and that is concise, straightforward, and clear."

Sandia President and Labs Director Paul Hommert championed the creation of the SMM, citing a need to distinguish Sandia's purpose and its unique role within the nation both as an FFRDC and as a GOCO facility. Paul also wanted the SMM to capture the changes to Sandia's management structure already reflected in the Labs' Strategic Plan.

A simple, clear, stand-alone description

Paul's vision for the SMM was to provide a simple, clear, stand-alone description of how Sandia manages and operates. "The framework by which we manage a laboratory as large and diverse as Sandia can seem complex and difficult to understand," Paul says. "We wanted to use the full power of current information technology to provide a tool that allows the various dimensions of the framework to be explored in an easy-to-use and highly informative format. We're calling that tool the Sandia Management Model."

Knowing how Sandia accomplishes its work is key to understanding how the management elements work together and how each organization aligns with the



YOU CAN REVIEW the new Sandia Management Model website at <http://info.sandia.gov/smm>.

Labs' strategy. The SMM offers a fresh, dynamic illustration of how Sandia functions. "The new model describes how Sandia operates today," says Mission Support and Corporate Governance director and SMM Team director lead Pat Smith (0700), "and it will continue to evolve as Sandia evolves."

Signifying a break from the past, the new SMM relies more on images and visual representations to describe Sandia's management structure and to visually demonstrate how Sandia is changing. The site engages users with a modern, interactive, web-based design that communicates simply to help managers and staff better understand where they fit in. "The team that worked the SMM effort took on a very significant and somewhat amorphous challenge," Paul says. "In my view, they did a great job of producing a product that is easy to use, informative, and instructive."

Employees and managers are invited to review the new SMM website at <http://info.sandia.gov/smm> to learn more about how Sandia is organized to achieve its mission objectives and discuss how the model applies to everyday work at Sandia.

Sandia Management Information

In conjunction with the Sandia Management Model (SMM) launch on Sept. 29, activity is underway to change how information and tools are accessed on the internal web. Sandia Management Information (SMI) (see link on the left side of TechWeb) allows management and staff to access the tools and information they need to conduct work in accordance with the

established management system. However, changes are planned to make the site more dynamic and interactive. One of the key changes planned for FY15 is an updated user interface that will make searching for information on the site faster and easier. An FY15 corporate milestone will address some of these planned changes.

ECP campaign revs up

"Earlier in my career, I was skeptical of the value of the Community Fund and directed all my United Way contributions to specific agencies. But volunteering for the Community Fund allocation panels and seeing the extreme care with which those precious funds are distributed opened my eyes to many new causes I felt were worthy of my support."



JIM REDMOND

READ MORE about Sandia's annual ECP campaign, which runs through Oct. 24, on page 8.

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ENGINEERED SAFETY

Keeping trash bales safely corralled

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That's that

I came across this headline a few weeks back and filed it away for future consideration – "NASA: Humans will prove 'We are not alone in the universe' within 20 years."

That prospect itself is remarkable enough, but what really got me to thinking was one of the comments in the story. A senior scientist involved with NASA's James Webb Space Telescope Project – the incredible instrument NASA plans to launch in 2018 as the successor to the Hubble telescope – is quoted as saying, "Just imagine the moment when we find potential signatures of life. Imagine the moment when the world wakes up and the human race realizes that its long loneliness in time and space may be over."

This is heady stuff, for sure. If – and we really don't know how big an "if" it is – but if we find other lifeforms in the universe, it will certainly be exciting news. If we make a connection with intelligent life, the potential for sharing knowledge and expanding our understanding of the universe could be immense – if sharing information across interstellar distances is really possible.

But to the question at hand: Will such a discovery – that is, proof that we are not alone – really have a transformative effect on humanity? Allow me a little good-natured skepticism, at least for the short term.

It seems to me that for most human history, the vast majority of people did not assume we are alone. To the contrary, they assumed, they believed, that the universe (as they understood it) teemed with life: spirits, angels, demons, demigods, gods. It is largely people of the modern era, and only a subset of those people, at that, who have suffered the existential angst of loneliness.

Even in the contemporary world, belief in extraterrestrial life has been pretty widespread, a belief seemingly propped up by "science."

In the mid-1870s, Italian astronomer Giovanni Schiaparelli observed features on Mars – networks of long straight lines – that he called canali, which was translated into English as "canals." Schiaparelli never meant to suggest the features were "canals" – that is, purpose-built channels for conveying water – in the English language sense. In any case, subsequent observations demonstrated convincingly that the canali features described by Schiaparelli were optical illusions.

But with the use of the word "canals" the Italian scientist inadvertently set in motion a misunderstanding that lasted for decades.

American astronomer Percival Lowell, working from his telescope in Flagstaff, seized on the "canal" notion and ran with it. Or maybe I should say "let his imagination run away with it." Based on his telescopic observations, Lowell convinced himself – and a lot of other people – that the canals were just that, an irrigation network built by an advanced race of Martians. Lowell and others caught up in his vision produced fantastic drawings based on their observations. The canal believers created an entire narrative around a plucky, advanced civilization struggling to survive in what was clearly an increasingly arid and hostile environment.

Right from the start, most scientists were skeptical of Lowell's claims, and over time, as observational tools and techniques got better, whatever shreds of credence the proposals may have had were debunked and set aside.

My point isn't that Lowell was wrong; it's that millions of people around the world believed him to be right. They took it as a given that we were not alone, that we had intelligent neighbors, that there was life "out there." These weren't ancient peoples trapped in "the demon-haunted world" (to use Carl Sagan's phrase): these were in many cases modern sophisticates who thought they had science on their side.

I'm arguing, that is, that there is not a widespread sense of loneliness about our place in the universe; I think a case can be made that from ancient to modern times, there has been a presumption among the majority of people that we are not alone.

It seems to me there's a notion that the discovery of life beyond our earthly shores will have a disruptive sociological effect, undermining centuries-old faith systems and sabotaging our sense that we are unique in the universe. I doubt it; I think we'll mostly take such a discovery in stride. We'll find it interesting. And mostly get on with our lives, integrating this new information into our world view. We're a resilient bunch, we people. That's why we're still around.

I'm all for exploring the cosmos; for a number of reasons I think it's one of the best things we can do as a society. And I think an emphasis on finding life beyond our shores should be a priority. Not because such a discovery will salve our pangs of cosmic loneliness, but because . . . well, it'd just be nice to meet the neighbors.

See you next time.

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

ENGINEERED SAFETY

Identify and control energy sources: Keeping trash bales safely corralled

The Solid Waste Collection and Recycling Center's (SWCRC) baler uses immense pressure to compress materials and wrap them in wire, but the resulting bale sometimes springs loose, knocking over the barrier surrounding the bales.

So SWCRC Operational Supervisor Ricardo Alvarado (4144) and his team used engineered safety principles and worked with Facilities Engineering to come up with



KEEPING BALES TOGETHER — The Solid Waste Collection and Recycling Center worked on an engineered safety solution to the problem of wires around heavy bales of solid waste sometimes snapping from the pressure inside the compressed materials. The solution includes a strong barrier of posts set into the concrete floor. (Photo by Linda Gonzales, 4144)

a more durable design to contain the bales.

The baler compresses such things as paper, cardboard, aluminum, and other recyclables, producing 4-6 bales per day for disposal or recycling. In 2010, a bale burst loose from its wires with such force that a worker standing next to it was knocked down. After that, two bollards, or metal posts, with mesh between them were installed at the bale ejection area. Stronger wire became standard, and foam, the main culprit in the incident, was removed before baling.

But bales, which can weigh more than 1,000 pounds, continued to knock the barrier loose as the baler ejected them, damaging the concrete floor and necessitating repairs. Concern also remained about pressure snapping the wires around the bales.

Workers installed stronger bollards closer together, set 3 feet deep into concrete, and replaced the mesh to contain any bursting wires and materials. Less than a week later, a bale burst. No one was injured, and the containment system worked as expected and was undamaged. — Sue Major Holmes



Take Note

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

Sandia LabNews



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MINER

demonstrates effectiveness in urban emergency response exercise

By Patti Koning

A nuclear device has been hidden in a high-rise building in a major metropolitan area. Emergency responders have intelligence that narrows the location to a single city block, but it isn't safe to do a door-to-door search. Can responders identify the exact location of the device in a reasonable time period without the adversaries realizing that a search is being conducted?

The answer is a definite yes. Last spring, Sandia's mobile imager of neutrons for emergency responders (MINER) system did just that at an emergency response exercise in downtown Chicago.

"The system performed exactly as we expected," says John Goldsmith (8127). "With an unshielded source, we pinpointed the location within 30 minutes. With more shielding, it took a couple of hours."

MINER, a project funded by DOE/NNSA, is a portable version of the Neutron Scatter Camera (see the April 10, 2009 issue of *Sandia Lab News*), which detects fast neutrons that emanate from special nuclear material to localize the source, even at significant standoff distances and through shielding. The original neutron scatter camera was quite large, standing about 5 feet tall and requiring a power source to operate.

MINER consists of 16 proton-rich liquid scintillator cells arranged inside a large cylinder. The scatter aspect comes into play as neutrons travel through the scintillator cells and bounce off protons like billiard balls. Those interactions between the different detector cells enable the instrument to determine the direction of the radioactive source that emitted the neutron.

Observing 'hot spots'

As a neutron scatter camera, MINER has several advantages over other types of detectors, including the device's effectiveness at discriminating uniform background radiation and imaging the spectrum of the neutrons.

"Simple neutron counters are unable to distinguish a threat source from an elevated neutron background. However, an imager such as MINER can do this by observing a 'hot spot' against the neutron background," says John. "In addition, MINER's ability to measure the neutron spectrum enables it to distinguish plutonium, a threat source, from AmBe [americium-beryllium, the most common commercial source of neutrons], which is not a threat source. Among imaging approaches, this capability is unique to MINER."

MINER is about 3 feet high, weighs about 90 pounds, can be set up and taken down in about 10 minutes, and most importantly, can operate on battery power. "Since MINER doesn't need to be tethered to a power source, it gives a lot of options to emergency responders," says John.

The Chicago field test focused on neutron detectors, so MINER was one of three neutron imagers along with several neutron counters. The field test wasn't a competition, says John, but a test of each detector's capabilities.

"There are tradeoffs with every kind of detector. If you are trying to localize a source, a backpack detector might be the fastest, but there are scenarios in which walking around is not possible," says John.

One of MINER's strengths is its ability to provide omni-directional (4π) imaging. "Other imaging detectors have a very fixed field of view, so they look at a specific spot," says Mark Gerling (8127). "MINER images a full 4π steradians, so all the way around and up and down. We imaged part of one side of an entire high-rise building at once and localized the source to a specific room. It's extremely effective in this situation."

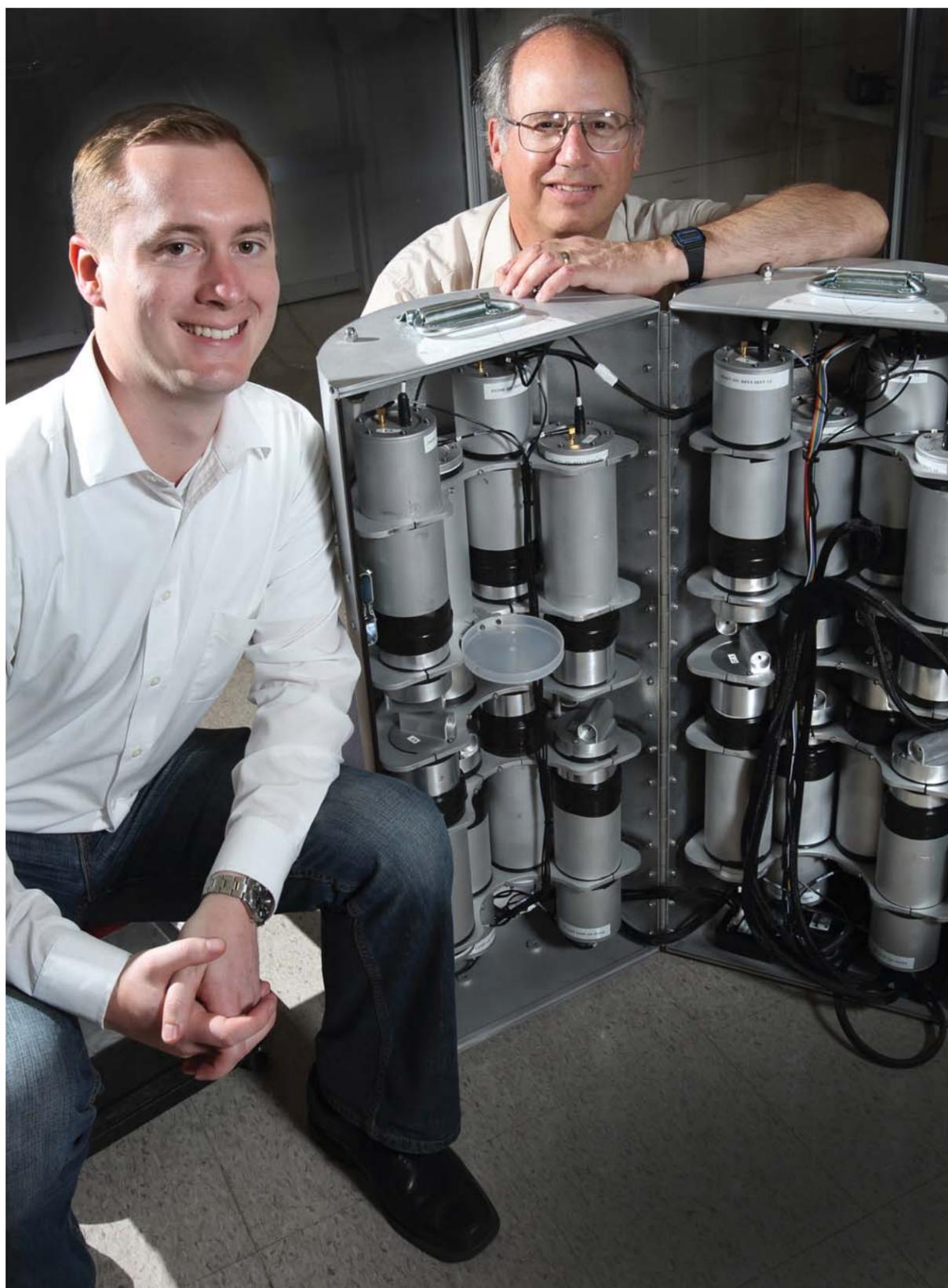
MINER is also a two-for-one detector. The system was designed to optimize its performance for neutron imaging and spectroscopy, but its proton-rich liquid scintillators can also capture gamma rays. While not the most efficient or

effective gamma ray detector, MINER's design makes it suitable for several unusual applications.

"To use it as a neutron scatter camera, MINER is closed. But if we open it up, we can position it near a radiation source and gather additional information about that source. This could be very useful in determin-

ing how to handle an object that is emitting radiation."

Future work on MINER includes developing a quantitative metric for characterizing detection significance, investigation of a neutron multiplication measurement capability, and potential participation in an at-sea maritime search scenario.



AT AN EMERGENCY RESPONSE EXERCISE in downtown Chicago, Mark Gerling, left, and John Goldsmith (both 8127) demonstrated the effectiveness of the mobile imager of neutrons for emergency responders (MINER) system at localizing a radiation source in an urban environment. (Photo by Dino Vournas)

Sandia California News

'Front door to Sandia'

C3 partnership center to boost collaboration and tech transfer — outside the fence

By Nancy Salem

Sandia will pursue a Center for Collaboration and Commercialization to strengthen partnerships, technology transfer, and ties to the community.

The center, known as C3, will support the city of Albuquerque's and the University of New Mexico's Innovation District and Innovate ABQ initiatives. C3 will offer programming and services to boost Sandia's interaction with partners in industry, academia, and government, and will promote technology commercialization.

"We view C3 as part of the city's Innovation District, as the eastern end of an innovation corridor that extends along Central Avenue from downtown east to Eubank Boulevard and the Sandia Science & Technology Park," said Julia Phillips, Deputy Chief Technology Officer and director of Research Strategy and Partnerships Dept. 7900. "C3 will be the front door to Sandia, providing access to the Labs and strengthening ties to the community."

The center was announced by Sandia President and Laboratories Director Paul Hommert at an Oct. 3 news conference at the National Museum of Nuclear Science & History. Speakers included Albuquerque Mayor Richard J. Berry and Lisa Kuuttila, CEO of UNM's Science and Technology Center and chief economic development officer.

"We are excited to have another great example of



INNOVATION PARTNERSHIP — Albuquerque Mayor Richard J. Berry, left, Sandia President and Laboratories Director Paul Hommert, and Lisa Kuuttila, CEO of the University of New Mexico's Science and Technology Center and chief economic development officer, spoke at a news conference announcing Sandia's planned C3 partnerships and tech transfer center. Paul said C3 will support the city's and UNM's Innovation District and Innovate ABQ initiatives. Berry and Kuuttila welcomed Sandia's participation in the innovate movement. (Photo by Linda von Boetticher)

collaboration in our community and the region that will increase collective impact for economic prosperity," Berry said. "C3 will provide even better access and interaction between Sandia's technology and the business community, and a process for commercialization with resources to support it."

The planned C3 facility in the Sandia Science & Technology Park will house Sandia employees and others

with internal and external partners on a user survey and feasibility study.

"Our goal is to join the city and UNM in strengthening the local economy. It's all about stimulating innovation, cultivating entrepreneurs, and generating jobs," Paul said. "Sandia is a leader in technology transfer and economic development through partnerships. Now we want to do more."

working together on partnerships and tech transfer. Sandia will look to a strong partnership with the private sector to realize the C3 vision.

"We envision co-locating some of our people there who provide programming and services that support our partnerships strategy, which includes tech transfer," said Jackie Kerby Moore, manager of Technology and Economic Development Dept. 7933. "We can imagine hosting cross-institutional functions and meetings as well as providing licensing support, small business assistance, and entrepreneurial exploration and training."

C3 is one element of an intellectual property strategy to deploy the results of Sandia's publicly funded research and development for the US public good.

"We welcome Sandia's participation in Innovate ABQ, and we foresee even more collaboration between our institutions," Kuuttila said.

C3 will offer easy access to Labs' staff and more opportunities for collaboration and commercialization, Paul said. Sandia is working

American Vacuum Society-NM: 50 years and climbing



Sandians have a long and rich tradition of supporting the American Vacuum Society (AVS). In the photo at left, former Sandians Bob Long, left, and Len Beavis, center, hosted then-AVS president R.F. Bunshah in Len's laboratory in 1971. Len was a founder of the New Mexico AVS chapter, an AVS Fellow, and former president of the New Mexico chapter and national society, and Bob was active in the local chapter, which celebrated its 50th anniversary in September. In the photo at right, 14 former chap-



ter presidents, 11 from Sandia and three from the University of New Mexico, were among 90 people who attended the celebration. Sandians have headed the New Mexico branch for 34 years of its history. The chapter offers symposiums and short courses, and members teach technical courses, volunteer as science fair judges, and give demonstrations in schools. Four graduating high school seniors each year receive chapter scholarships named after retired Sandian Warren Taylor, 1985-86 chapter president. Chapter historian Woody Weed (2126) says the branch has lasted so long because it attracts younger people so "the organization is restocked" as older members retire.

Sandia hosts congressional delegations

New Mexico labs welcome US senators



A congressional delegation from the Senate Armed Services Committee on Strategic Forces (SASC), including Sen. Angus King, I-Maine, and Sen. Deb Fischer, R-Neb., visited Sandia Oct. 6 for a series of briefings related to Sandia's national security mission under the jurisdiction of the committee. The delegation also included DOE Undersecretary for Nuclear Security and NNSA Administrator Gen. Frank Klotz, and Geoff Beausoleil, manager of the DOE/NNSA Sandia Field Office.

During the visit, the delegation toured Sandia's MESA facility and the Weapon Display Area and received briefings by Sandians including Ben Werner and Jeff Dabbling (both 2614) on Stronglinks, Gary McGoveny (2622) on Use Control, and Sean Hamilton and Michael Harcourt (both 2626) on Fire Control Units. Other presentations included Cyber, Space and Proliferation, Copperhead, and similar briefings. Such high-level interactions as part of visits to the Labs are a significant way in which Sandia and stakeholders share information, updates, and perspectives about Sandia's current work and the future of the Labs' national security mission. While in New Mexico, the senators also visited Los Alamos National Laboratory for a series of briefings.

CONGRESSIONAL DELEGATION VISIT —Left to right, Geoffrey Beausoleil, manager, NNSA Sandia Field Office; Jerry McDowell, Deputy Labs Director & Executive VP for National Security Programs; Gen. Frank Klotz, DOE Undersecretary for Nuclear Security and NNSA Administrator; Sen. Deb Fischer, R-Neb.; Paul Hommert, Sandia President and Laboratories Director; and Sen. Angus King, I-Maine.

House Armed Services Committee visit

House Armed Services Subcommittee on Strategic Forces Chairman Rep. Mike Rogers, R-Ala., Ranking Member Rep. Jim Cooper, D-Tenn., and subcommittee member Rep. Rick Larsen, D-Wash., visited Sandia late last month for a series of briefings related to Sandia's national security mission under the jurisdiction of the subcommittee. During their visit, the members met with recent university graduates from their respective states. The delegation heard presentations from Sandia staff who also briefed the members of the Senate Armed Services Committee on Oct. 6 (see item above).

SEVERAL HOUSE ARMED SERVICES Committee members visited Sandia Sept. 30 for briefings on a wide range of the Labs' mission work. Visitors included, bottom row, left to right, Rep. Jim Cooper, D-Tenn., Ranking Member of the House Armed Services Subcommittee on Strategic Forces; Rep. Mike Rogers, R-Ala., chairman of the House Armed Services Subcommittee on Strategic Forces; and Rep. Rick Larsen, D-Wash., member of the House Armed Services Subcommittee on Strategic Forces. The distinguished visitors were joined by former constituents who now work at Sandia. They included, back row, left to right, Delores Black (1356), who earned a PhD at Vanderbilt University in Nashville, Tenn.; Chris Harmon (5544), who earned a BS and MS from Auburn University in Alabama; and Cesar Silva Monroy (6113), who earned a PhD at the University of Washington.



Mileposts

New Mexico photos by
Michelle Fleming
California photos by
Dino Vournas



Rob Allen
35 8100



Chris Gutierrez
35 10595



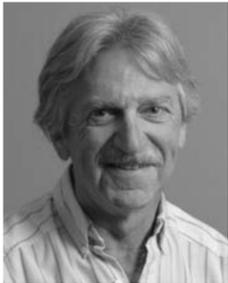
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25 99



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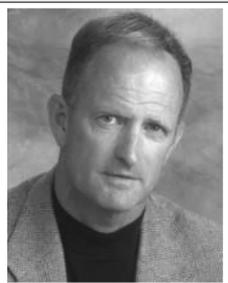


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Toby Townsend
15 5790

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38 5962



Bill Richard
38 5562



Mike Griesmeyer
31 5521



Alan Carlson
30 1675



Gary Cordes
27 2521



Jay Kratochvil
26 6112



David Dirks
12 8944

Safety, repository science and engineering are focus of US-German workshop

By Dina Howell

Recent developments at the Waste Isolation Pilot Plant (WIPP) in Carlsbad, N.M., provided a timely context of safety to the 5th annual US-German workshop on salt repository research, design, and operation. About 50 participants from Germany and Sandia attended the workshop in Santa Fe last month.

The workshops emphasize collaboration between US and Germany on salt repository issues. The event was sponsored by Sandia and German organizations Karlsruhe Institute of Technology (KIT) and DBE Technology GmbH (DBE Tech).

Sandia staff members in Carlsbad and Albuquerque have participated in these events the past five years along with German scientists and engineers and other professional colleagues from across the US.

"Collaboration with German researchers on salt repositories ensures that science and engineering at the state of the art is accomplished," says senior scientist Frank Hansen (6910). "Bringing together the best minds in salt repository research, design, and operation lets us address a wide breadth of subjects and dive deeply into selected issues."

Frank was one of the organizers of this year's workshop, along with technical manager Christi Leigh (6212), Walter Steining (KIT), Thilo von Berlepsch, and Wilhelm Bollingerfehr, both of DBE Tech.

In addition to addressing issues of repository design and operations, this year's conference considered the thermomechanical behavior of salt, plugging and sealing, and safety issues.

"More than a year ago, US/German collaborators identified operational safety as a focus area for the fifth workshop. In view of events at WIPP, the topic of operational safety is even more vital today," Frank says, referring to the recent truck fire and radiological release at the WIPP site.

In his keynote address, Sandia Div. 8000 VP Steve



ATTENDEES at the 5th US-German Workshop participated in weeklong sessions in Santa Fe on salt research emphasizing collaboration with US colleagues.

Rottler (8000) spoke on engineered safety at Sandia and its applicability to repository operations, a theme that was explored in depth by representatives from DOE, the US Environmental Protection Agency, the US Nuclear Waste Technical Review Board, the Nuclear Regulatory Commission, US national labs, German national labs and universities, and the German Federal Ministry of Economic Affairs and Energy.

Other Sandia speakers included Ernie Hardin (6224), Steve Wagner (6211), Bob MacKinnon (6224), Jonathan Icenhower (6212), Lupe Arguello (1554), Chris Camp-house (6211), Glen Hammond (6224), David Sevougian (6224), Kris Kuhlman (6224), and Geoff Freeze (6224).

Workshop co-organizer von Berlepsch emphasizes the value of international cooperation.

"The importance of the collaboration with our US partners is twofold," he says. "For one thing, of course, it just makes sense to join forces, to use synergies. We face similar problems, so let's tackle them together. For another thing, it is important for us to be able to show to the German stakeholders, i.e., the public and politicians, that we are not the only ones in the world who

believe that salt is an ideal host rock for radioactive waste repositories."

Steining says WIPP-related research will be useful when considering repository options in Germany.

"In the past," he says, "Germany has focused its salt research solely on domal salt. Nonetheless, there is bedded salt available in Germany as well. In the future this fact may become of importance. The expertise and experience our American colleagues have gained during the last years, especially regarding WIPP, could be really helpful and supportive."

Steining also says Steve's presentation on engineered safety was important "because when these workshops began no one was aware this would become so relevant."

According to von Berlepsch, "It became obvious at the workshop that there already are strong bonds between Sandia and German institutions. In my opinion, our collaborative work generally results in important and relevant knowledge and experience. There is tremendous value in continuing our collegial and successful collaboration activities. And I should stress, too, that we shall keep up discussions on operational safety and application to real cases, because the latter two are real and obvious benefits, which can't easily be gained anywhere else."

Next year the workshop is to be held in Dresden, Germany, and the organizers agree the future for collaboration in salt research is assured.

"We spent the last day of the workshop in small working subgroups discussing topics for future collaboration," says Christi. "The results are exciting as there are overlaps in the US and German programs in the areas of operational safety, establishing the case for long-term safety, and fully understanding the behavior of salt acting alone as a barrier to release and interfacing with man-made and geologic features of a repository to establish a barrier to release. The sub-groups proposed specific collaborations in these areas with associated timelines over the next year. We will have a content-rich interaction again when we meet in Dresden."

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

MISCELLANEOUS

FRONT-LOAD WASHER & GAS DRYER, Maytag Neptune, runs, excellent condition, \$225/pair. Lebien, 505-459-4074.
 FULL FUTON FRAME/MATTRESS, like new, 2 covers, 1 neutral beige, 1 orange, hardwood, \$350 OBO. Czuchlewski, 359-8241.
 BLUETOOTH HEADSET, Beats, new w/accessories, \$150; 20-ft. ladder, Little Giant, w/step & window bar, \$275. Ayers, 505-349-1793.
 TIRE, brand new, Toyo Open Country, 225/65 R17, fits '06-'12 RAV4, retails for ~\$200, asking \$125. Fugate, 505-750-0176.
 PLAY TABLE, wooden Thomas & Friends Railway, new-in-box, retails for \$250, asking \$175. Martinez, 857-9724.
 GYM SET, Hoist HF985, http://tinyurl.com/q74ot6q, \$2,500 OBO; '06 KitchenAid refrigerator, \$150 OBO. England, 602-738-0308.
 LUGGAGE: garment bag, new, Delsey Blue, lightweight, 24" x 18", \$440 (Macy's) asking \$100; suitcase, 18" x 22", \$360 (Macy's), asking \$75. Wilson, 505-296-8112.
 ADMIRAL WASHER, top-load, used 8 mos., \$250; dryer, Whirlpool, front-load, \$100; both white. Reneau, 505-850-7180.
 ALL-IN-ONE TOOL, Shopsmith Mark V, band saw/lathe/drill press/jointer/disc sander/table saw, \$500 OBO. Brothers, 296-5980, ask for Jay.
 TIMESHARE, Durango, 1-bdr., sleeps 4, Dec. 5, 2 nights, ride Polar Express train w/kids, \$200. Fernandez, 505-238-4722.
 SLEIGH BED FRAME, twin, light wood, & 2 drawer set, pink tinted wood, w/hearts, great condition, \$325. Lobato, 505-507-9171.
 POOL TABLE, w/ping pong attachment, balls, cue sticks, \$150. Norwood, 331-8608, ask for Fred.

POPEJOY TICKETS, "How the Grinch..." 2, Sunday, Nov. 16, 6:30 p.m., orchestra, \$63 ea.; "Chicago", 2, Sunday, Jan. 18, 2015, orchestra, \$45 ea. Hoyal, 823-1421.
 RIMS, Ford, for 4x4, \$45; camper shell, for '94-'97 Ford, short bed, gray, \$250 OBO. Schroeder, 917-4516.
 LAPTOP, Toshiba, w/mouse, speakers, wireless modem, etc., very good condition, make offer. Brown, 459-5030.
 'HOW THE GRINCH...' TICKETS, 2, Popejoy, Nov. 13, mezzanine, \$100. Colgan, 344-3776.
 FREE TALK, alternative & holistic vet care for cats, Oct. 26, 2 p.m., details, http://fabulousFelines.org. Stubblefield, 263-3468.
 MOVING SALE, refrigerator, \$1,400; dishwasher, white, \$250; gas stove, white, \$300; pub-style table, w/6 chairs, \$350; TV, 52-in., \$100; Maestas, 459-7650.
 COUCH, brown, faux leather, high back, cushiony, very comfortable, great condition, \$275. Brewster, 238-4704, ask for Julie.
 SCANDINAVIAN FESTIVAL, Nov. 1, 10 a.m.-4 p.m., Immanuel Presbyterian Church, 114 Carlisle SE, Norwegian/Swedish folk art, dancing, food. Richard-Franco, 294-5739.
 DINING ROOM TABLE, 68" x 40", w/3 12-in. leaves, solid wood, 8 chairs, photos available, \$400. Graham, 379-8798.
 SLEEPER SOFA & CHAIR, Southwestern pastel pattern, sofa has small tear on arm, thin mattress, \$150. Lewis, 884-1761.
 BEDROOM SET, w/king-size platform, 1 large dresser, 2 small dressers, photos available, \$600 OBO. Barraza, 520-208-3709.

How to submit classified ads
DEADLINE: Friday noon before week of publication unless changed by holiday. Submit by one of these methods:
 • EMAIL: Michelle Fleming (classads@sandia.gov)
 • FAX: 844-0645
 • MAIL: MS 1468 (Dept. 3651)
 • INTERNAL WEB: On internal web homepage, click on News Center, then on Lab News link, and then on the very top of Lab News homepage "Submit a Classified Ad." If you have questions, call Michelle at 844-4902. Because of space constraints, ads will be printed on a first-come basis.

- Ad rules
1. Limit 18 words, including last name and home phone (If you include a web or e-mail address, it will count as two or three words, depending on length of the address.)
 2. Include organization and full name with the ad submission.
 3. Submit ad in writing. No phone-ins.
 4. Type or print ad legibly; use accepted abbreviations.
 5. One ad per issue.
 6. We will not run the same ad more than twice.
 7. No "for rent" ads except for employees on temporary assignment.
 8. No commercial ads.
 9. For active Sandia members of the workforce, retired Sandians, and DOE employees.
 10. Housing listed for sale is available without regard to race, creed, color, or national origin.
 11. Work Wanted ads limited to student-aged children of employees.
 12. We reserve the right not to publish any ad that may be considered offensive or in bad taste.

TRANSPORTATION

'97 BMW 328i, 5-spd., PW, PL, cold AC, silver, 162K miles, runs great, <KBB, \$2,200. Bixler, 505-856-3555.
 '07 VW JETTA 2.0T, 4-cyl., 68K miles, very well maintained, \$10,500 OBO. Baiardo, 250-3425.

'08 MERCEDES 280 SLK, 10 Edition, retractable hardtop, silver, black leather, 66K miles, clean, \$19,000. Somuk, 505-869-9435.
 '12 NISSAN ROGUE, <10K miles, perfect condition, \$17,500. Owens, 839-4286 or 980-6796, ask for Norman.
 '07 TOYOTA 4RUNNER LIMITED, 4WD, rare V-8, fully loaded, 86K miles, 1 owner, \$21,000. Sikkink, 681-4161.
 '02 SILVERADO LIMITED, 4WD, 2500HD, ext. cab, trailer & camper pkg., brake controller, loaded, 166K miles, \$8,700. Stone, 869-7106.

RECREATION

'12 KAWASAKI 250 NINJA, 10,555 miles, \$3,000 or reasonable offer. Millard, 239-0179, ask for Cheri.
 '02 HONDA RUBICON FORMAN 500 ATV, rear seat w/storage, 4-ft. snow plow, winch, great condition, \$2,495. Speir, 321-514-1558.
 '08 KEYSTONE COPPER CANYON 5th WHEEL, Bunk House, 36-ft., 1-1/4 baths, 2 slides, sleeps 8, \$25,000 OBO. Rankin, 238-9963, leave message.
 '08 HARLEY-DAVIDSON ULTRA CLASSIC, red, new rear tire, extras, 65K miles, \$15,495 OBO. Smith, 208-520-7875.

REAL ESTATE

3-BDR. HOME, 2 baths, 1,958-sq. ft., Los Lunas, 1180 Parkview Drive, nice area, near high school, \$195,800. Armijo, 903-8627.
 2.9 ACRE LOT, gorgeous view, electric, located in Zamora Heights, Cedar Crest, \$45,000. Smith, 505-620-8978.
 5-BDR. HOME, 3 baths, 3,933-sq. ft., 3-car garage, La Cueva district, MLS# 824799, \$420,000. Billau, 440-5374.

2 WOODED ACRES, The Woodlands, Sedillo Hill, great views, flat lot, underground utilities & water, paved roads, 20 mins. to SNL, \$160,000. Duncan, 271-2718.
 3-BDR. HOME, 2-1/2 baths, 1,565-sq. ft., NE Heights, Tramway & Candelaria, http://tinyurl.com/k5bseby, \$179,000. Walker, 918-244-3898.
 3-BDR. HOME, 2-1/2 baths, 2,265-sq. ft., finished basement, updated, La Cueva district, MLS#825199, \$309,000. Atchison, 235-5651.
 3-BDR. HOME, 2-1/2 baths, 11508 Kings Canyon Rd., near SNL, open house Oct. 17, 4-6 p.m., FSBO. Dinge, 505-818-8933.
 3-BDR. HOME, 1-3/4 baths, 1,879-sq. ft., 2-car garage, 1-car detached garage/shop, MLS#825462, \$229,000. Cordova, 288-7888.

WANTED

FEMALE HOUSEMATE, share 3-bdr. home, 2 baths, near Wyoming & Indian School, available immediately. Skaggs, 505-681-5585.
 OLD VIDEO GAMES, new game collector wanting N64, Nintendo & Gameboy games. Bleier, 505-463-2952, ask for Grant.
 VINTAGE SAFETY RAZORS, Gillette, Gem, etc., shavers from 1900-1970's, wanted for collection. McElhanon, 505-321-1732.
 OLDER FULL-SIZE LONG BED PICKUP, good running condition. Mozley, 884-3453.
 ROOMMATE(S), Volterra, 5 min. to KAFB, no pets, \$475/mo., utilities & WiFi included. Guillen, 505-385-8189.
 SKI CABIN MEMBERSHIP, in North Lake Tahoe, for 2014-15 ski season, Dec.-April, \$800/season. Sheaffer, 925-997-7947.

2015 Open Enrollment Benefits Fairs

- Active Open Enrollment runs Monday, Nov. 3, through Thursday, Nov. 20
- PreMedicare Open Enrollment runs Wednesday, Oct. 15, through Friday, Nov. 21
- Medicare Open Enrollment runs Wednesday, Oct. 15, through Saturday, Dec. 6

Fair information is as follows:



Sandia/New Mexico Active Open Enrollment Benefit Fairs				
Date	Tuesday, Nov. 4	Tuesday, Nov. 11	Saturday, Nov. 15	Monday, Nov. 17
Location	Steve Schiff Auditorium Building 825	IPOC — 2 nd floor break room and Thunderbird Conference Room	Sandia Laboratory Federal Credit Union at 3707 Juan Tabo Blvd	Steve Schiff Auditorium Building 825
Audience	Employees	Employees	Employees and Spouses	Employees
Fair Time	9 a.m.-2 p.m.	10 a.m.-2 p.m.	9 a.m.-2 p.m.	9 a.m.-2 p.m.

Sandia/California Open Enrollment Benefit Fairs			
Date	Thursday, Nov. 6	Thursday, Nov. 6	Thursday, Nov. 6
Location	904 Auditorium, 7011 East Avenue, Livermore, CA		
Audience	Employees and Spouses	PreMedicare Retirees	Medicare Retirees
Fair Time	12:15-2:30 p.m.	8:30 a.m.-noon	8:30 a.m.-noon
Presentation Time	N/A	10:15 a.m.-noon	9-10 a.m.
Presenters	N/A	Towers Watson/OneExchange, BCBSNM, Kaiser Permanente, UHC	Towers Watson/OneExchange, Kaiser Permanente

SNL-NM Retiree Open Enrollment Benefit Fairs				
Audience	PreMedicare Retirees	PreMedicare Retirees	Medicare Retirees	Medicare Retirees
Date	Tuesday, Oct. 28	Wednesday, Nov. 12	Tuesday, Oct. 28	Wednesday, Nov. 12
Location	UNM Continuing Education Building, 1634 University Blvd., Albuquerque, NM 87102			
Fair Time	9-11:30 a.m.	1-3:30 p.m.	1-3:30 p.m.	9-11:30 a.m.
Presentation Time	10-11 a.m.	2-3 p.m.	2-3 p.m.	10-11 a.m.
Presenters	Towers Watson/OneExchange, BCBSNM, UHC	Towers Watson/OneExchange, BCBSNM, UHC	Towers Watson/OneExchange, Lovelace, Presbyterian	Towers Watson/OneExchange, Lovelace, Presbyterian

ECP campaign kicks into gear with agency fair, fundraising events



By Nancy Salem

The Employee Caring Program (ECP) got off to a strong start with a goal to bring more people into Sandia's culture of philanthropy.

"The campaign is off to a great start," says campaign chairman Grant Heffelfinger, director of Physical, Chemical and Nano Sciences Center 1100. "Across the Labs people are showing their interest in getting involved. There is a strong desire to help our community."

ECP, which raises funds for the United Way of Central New Mexico (UWCNM), launched Oct. 6 with an event at the Steve Schiff Auditorium that showcased local nonprofit agencies where Sandians volunteer. Hundreds turned out. "We had more than 40 agencies and about 200 people," Grant says. "Everyone was very appreciative."

The ECP campaign runs through Oct. 24. This year's goals are:

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

Fundraising events are planned including book fairs Oct. 14-16 at the Steve Schiff Auditorium from 10 a.m.-2 p.m. and Oct. 21-23 in the IPOC second floor break room from 10 a.m.-3 p.m.

Sandia employees and retirees in 2013 increased donations by 8.2 percent over the previous year, giving

\$6,050,426 to the charitable organization. The total eclipsed the goal of \$5.75 million and set a record. The retiree share was \$809,128.

Grant's goal this year is to increase contributions to the Community Fund, which supports a range of nonprofit agencies and programs that help people in Bernalillo, Sandoval, Torrance, and Valencia counties.



REACHING OUT — Members of Sandia's Laboratory Leadership Team visited the Albuquerque Ronald McDonald House, which helps the families of sick children. Back row, left to right, Ronald McDonald House Executive Director Kristin Rortved, 2014 ECP Campaign Chair Grant Heffelfinger (1100), Jeffrey Isaacson (5000), Duane Dimos (1600), Tom Zipperian (2700), David Corbett (6500), David Williams (100). Front row, left to right, Sandia President and Labs Director Paul Hommert, Nancy Davis (10200), Joselyne Gallegos (9500), Ronald McDonald, and Bruce Fetzer (3600).

(Photo by Stephanie Blackwell)

"I encourage people take a minute and look at the way the Community Fund is managed and what it does, and give it a shot, think about it," he says. "It's like a zero-load managed mutual fund, aiming for the biggest return on investment for our community. The fund's 'Results-Based Accountability' investment strategy is managed by volunteers led by our very own Jim Novak, Sandia senior manager (5950), as United Way Community Impact Council chairman. It supports education, health, and self-sufficiency initiatives — three things identified as foundational for long-term positive change in our central New Mexico community."

Grant says he is very optimistic as ECP moves along. "Enthusiasm is picking up," he says. "We at Sandia feel a responsibility to help the community when it needs it most."

Pam Catanach (3652), the Community Involvement specialist who coordinates the ECP, says center representatives will reach out to people who do one-time donations instead of recurring, and newer employees who might not have signed up. There is also an active retiree campaign. "Giving is a tradition that doesn't stop when an employee leaves Sandia," she says. "Our retirees are so giving."

Donations can be directed to any nonprofit worldwide or to the Community Fund. All UWCNM administrative expenses are covered by companies that direct their gifts to the Corporate Cornerstone program, so 100 percent of employee donations go to the chosen nonprofits. Employees can make changes to their donation online until Oct. 24 and later in the year using a paper form.

"Sandians are amazing," Grant says. "We continually deliver, and I am confident this year will be no exception."

Ski dream

Program brought Sandian's son out of his shell and onto the slopes

By Nancy Salem

Joe Sorroche's son Michael was born in 1994 with spina bifida, a condition that damages the spinal column causing leg weakness and paralysis. "It was a shock to everybody," says Joe (5336). "I'm a very active person and thought Michael couldn't participate in sports. I thought those doors were closed."

Michael was left out of physical education at school, and lost self-confidence. He was shy. But his life changed when the family discovered the Adaptive Ski Program of New Mexico offering alpine ski lessons at the Sandia and Santa Fe ski areas to people with disabilities. Michael was just 6 years old.

"I asked him if he wanted to try it, and he did. He loved it," Joe says. "It was a life-changing experience for Michael. It gave him the confidence to reach out and do other things."

Michael, now 20, water skis, kayaks, sails, hand cycles, and scuba dives. "The change was miraculous," Joe says. "Adaptive ski was the key."

The program, which has received support from the United Way of Central New Mexico's Community Fund, changed Joe's life as well. He became a volunteer instructor so he could ski with Michael, joined the board of directors, and is now vice president.

"Money cannot buy the rewards I get," Joe says. "You feel you are really making a difference in someone's life. They come in shy and unsure of their skills. They don't say much. By the end of the season they are outgoing, talking to other students, and can't wait for next season. It brings them out."

Joe has seen the program grow. In the summer of



DOWNHILL RACER — Michael Sorroche, center, prepares for a day of skiing at the Santa Fe Ski Area alongside his dad Joe and Adaptive Sports of New Mexico volunteer Christine Sandoval. "He's good," Joe says. (Photo courtesy of Joe Sorroche)

2011, it added a water sports program for Wounded Warriors, military veterans injured in combat. It was a big success and became a permanent offering, leading the group to change its name to the Adaptive Sports Program of New Mexico.

"The Wounded Warriors are a wonderful bunch of people and add a great dimension to the program," Joe says. "They also mentor the children and adults with disabilities. They can relate to them and communicate. It's mutually beneficial."

When Joe joined Adaptive Sports in 2000, fewer than 100 children and adults participated in the winter ski program. Last year there were more than 300 students, including Wounded Warriors, in the winter and summer programs. The volunteer corps numbers about 125.

The program headed by executive director Katya Franzgen was founded in New Mexico in 1985 by Ken Ley, a paraplegic who wanted to ski. Joe says the program owes a great debt to the Abruzzo family, who hosts it at the Sandia and Santa Fe ski areas and offered critical support from the beginning. "The Abruzzos have been a huge help and champions of the cause," Joe says. The ski program has grown to include the Pajarito and Sipapu ski areas.

Michael is still in Adaptive Sports, winter and summer, and excels at water and snow skiing. "He's good," Joe says. "He's able to say he can do the same things others can do."

Learn more about the Adaptive Sports Program of New Mexico at www.adaptiveski.org.

I give . . .

"I have contributed and worked with United Way for many years. I have chaired and participated in allocation panels for the Community Fund. I have gone on site visits and seen how many of the organizations requesting funds operate and how important they are to our community. I know that our money is going to the ones most in need. In 2001, I lost a brother to leukemia. This past November, I lost my other brother to pancreatic cancer. I am proud to be able to support organizations that directly impact cancer and cancer research. It doesn't matter how much you give. Every dollar counts and helps."

— Marlene Brown (2958)



"Earlier in my career, I was skeptical of the value of the Community Fund and directed all my United Way contributions to specific agencies. But volunteering for the Community Fund allocation panels and seeing the extreme care with which those precious funds are distributed opened my eyes to many new causes I felt were worthy of my support. Later on, my wife and a friend started an agency, Camp Rising Sun, with a Community Fund grant, and they were overwhelmed by the help and support they received from United Way. They really do ensure our resources are effectively used."

— Jim Redmond (1550)

"My support of United Way goes back almost three decades, and the importance of giving seems to grow stronger with each year. In various volunteer positions, I've seen first-hand what a positive difference United Way can make in the lives of people, whether it's a victim of domestic violence finally gaining security and independence, or an economically struggling teen getting a chance for a college education. I especially appreciate the chance to direct 100 percent of my donation to the Community Fund, because I know that my contribution will be put to work in the areas where the need is the greatest. It's an easy decision for me each year to donate, and the convenience of payroll deduction makes it even easier. Giving generously is an investment in making our community a better place to live."

— Valerie Smith (3651)

